IMPORTANT NOTICE

THIS OFFERING IS AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (1) A PERSON WHO IS BOTH A "QUALIFIED INSTITUTIONAL BUYER" ("QIB") (AS DEFINED IN RULE 144A UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT")) AND A "QUALIFIED PURCHASER" ("QUALIFIED PURCHASER") (AS DEFINED IN SECTION 2(A)(51) OF THE U.S. INVESTMENT COMPANY ACT OF 1940, AS AMENDED, AND RELATED RULES), IN EACH CASE PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF A QIB WHO IS ALSO A QUALIFIED PURCHASER AS TO WHICH THE PURCHASER EXERCISES SOLE INVESTMENT DISCRETION, IN RELIANCE ON THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT PROVIDED BY RULE 144A, OR (2) A NON-U.S. PERSON AS DEFINED IN REGULATION S ("REGULATION S") UNDER THE SECURITIES ACT PURCHASING OUTSIDE THE UNITED STATES IN AN OFFSHORE TRANSACTION THAT MEETS THE REQUIREMENTS OF REGULATION S.

IMPORTANT: You must read the following before continuing. The following applies to the offering memorandum following this page (the "Offering Memorandum") and you are advised to read this carefully before reading, accessing or making any other use of the Offering Memorandum. In accessing the Offering Memorandum, you agree to be bound by the following terms and conditions, including any modifications to them any time you receive any information from us as a result of such access.

NOTHING IN THIS ELECTRONIC TRANSMISSION CONSTITUTES AN OFFER OF SECURITIES FOR SALE IN ANY JURISDICTION WHERE IT IS UNLAWFUL TO DO SO. THE SECURITIES HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE SECURITIES ACT, OR THE SECURITIES LAWS OF ANY STATE OF THE U.S. OR OTHER JURISDICTION AND THE SECURITIES MAY NOT BE OFFERED OR SOLD WITHIN THE U.S. OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE LAWS OF OTHER JURISDICTIONS.

PROHIBITION OF SALES TO EEA RETAIL INVESTORS. THE SECURITIES DESCRIBED IN THE OFFERING MEMORANDUM ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA ("EEA"). FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "EU MIFID II"); OR (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE (EU) 2016/97 (AS AMENDED, THE "INSURANCE DISTRIBUTION DIRECTIVE"), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF EU MIFID II, OR (III) NOT A QUALIFIED INVESTOR AS DEFINED IN REGULATION (EU) 2017/1129 (AS AMENDED, THE "PROSPECTUS REGULATION"). CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 (AS AMENDED, THE "PRIIPS REGULATION") FOR OFFERING OR SELLING THE SECURITIES OR OTHERWISE MAKING THEM AVAILABLE TO RETAIL INVESTORS IN THE EEA HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE SECURITIES OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE EEA MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

PROHIBITION OF SALES TO UK RETAIL INVESTORS. THE SECURITIES ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN THE UNITED KINGDOM ("UK"). FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT, AS DEFINED IN POINT (8) OF ARTICLE 2 OF REGULATION (EU) NO 2017/565 AS IT FORMS PART OF DOMESTIC LAW BY VIRTUE OF THE EUROPEAN UNION (WITHDRAWAL) ACT 2018 ("EUWA"); OR (II) A CUSTOMER WITHIN THE MEANING OF THE PROVISIONS OF THE FSMA AND ANY RULES OR REGULATIONS MADE UNDER THE FSMA WHICH WERE RELIED ON IMMEDIATELY BEFORE EXIT DAY TO IMPLEMENT DIRECTIVE (EU) 2016/97, WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT, AS DEFINED IN POINT (8) OF ARTICLE 2(1) OF REGULATION (EU) NO 600/2014 AS IT FORMS PART OF DOMESTIC LAW BY VIRTUE OF THE EUROPEAN UNION (WITHDRAWAL) ACT 2018; OR (III) NOT A QUALIFIED INVESTOR AS DEFINED IN ARTICLE 2 OF REGULATION (EU) 2017/1129 AS IT FORMS PART OF DOMESTIC LAW BY VIRTUE OF THE EUWA. CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 AS IT FORMS PART OF DOMESTIC LAW BY VIRTUE OF THE EUROPEAN UNION (WITHDRAWAL) ACT 2018 (THE "UK PRIIPS REGULATION") FOR OFFERING OR SELLING THE SECURITIES OR OTHERWISE MAKING THEM AVAILABLE TO RETAIL INVESTORS IN THE UK HAS BEEN PREPARED AND THEREFORE OFFERING OR SELLING THE SECURITIES OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE UK MAY BE UNLAWFUL UNDER THE UK PRIIPS REGULATION.

IN ADDITION, IN THE UK, THE OFFERING MEMORANDUM AND ANY OTHER MATERIAL RELATING TO THE SECURITIES DESCRIBED HEREIN ARE ONLY BEING DISTRIBUTED TO, AND ARE DIRECTED ONLY AT, (I) PERSONS HAVING PROFESSIONAL EXPERIENCE IN MATTERS RELATING TO INVESTMENTS FALLING WITHIN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005 (THE "ORDER"), OR (II) PERSONS WHO FALL WITHIN ARTICLE 43(2)(B) OF THE ORDER, OR (III) HIGH NET WORTH ENTITIES FALLING WITHIN ARTICLE 49(2)(A) TO (D) OF THE ORDER, OR (IV) PERSONS TO WHOM IT WOULD OTHERWISE BE LAWFUL TO DISTRIBUTE THEM (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). THE SECURITIES ARE ONLY AVAILABLE TO, AND ANY INVITATION, OFFER OR AGREEMENT TO SUBSCRIBE, PURCHASE OR OTHERWISE ACQUIRE THE SECURITIES WILL BE ENGAGED IN ONLY WITH, RELEVANT PERSONS. THE OFFERING MEMORANDUM AND ITS CONTENTS ARE CONFIDENTIAL AND SHOULD NOT BE DISTRIBUTED, PUBLISHED OR REPRODUCED (IN WHOLE OR IN PART) OR DISCLOSED BY ANY RECIPIENTS TO ANY OTHER PERSON IN THE UK ANY PERSON IN THE UK THAT IS NOT A RELEVANT PERSON SHOULD NOT ACT OR RELY ON THE OFFERING MEMORANDUM OR ITS CONTENTS THE FOLLOWING OFFERING MEMORANDUM MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS.

THE FOLLOWING OFFERING MEMORANDUM MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS.

Confirmation of Your Representation: In order to be eligible to view the Offering Memorandum or make an investment decision with respect to the securities, investors must be either (i) QIBs that are also "qualified purchasers" (as defined in Section 2(a)(51) of the Investment Company Act) or (ii) non-U.S. persons (within the meaning of Regulation S under the Securities Act) outside the United States. This Offering Memorandum is being sent at your request and by accepting the e-mail and accessing the Offering Memorandum you shall be deemed to have represented to us that (i) you and any customers you represent are either (a) QIBs that are also "qualified purchasers" (as defined in Section 2(a)(51) of the Investment Company Act) or (b) non-U.S. persons (within the meaning of Regulation S under the Securities Act) outside the United States; and (ii) you consent to delivery of the Offering Memorandum by electronic transmission.

You are reminded that the Offering Memorandum has been delivered to you on the basis that you are a person into whose possession the Offering Memorandum may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located and you may not, nor are you authorized to, deliver the Offering Memorandum, electronically or otherwise, to any other person.

The materials relating to the offering do not constitute, and may not be used in connection with, an offer or solicitation in any place where offers or solicitations are not permitted by law. If a jurisdiction requires that the offering be made by a licensed broker or dealer and the initial purchasers or any affiliate of the initial purchasers is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by the initial purchasers or such affiliate on behalf of the issuer in such jurisdiction.

The Offering Memorandum has been sent to you in an electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of electronic transmission, and, consequently, neither the initial purchasers, nor any person who controls them nor any of their directors, officers, employees nor any of their agents nor any affiliate of any such person, accept any liability or responsibility whatsoever in respect of any difference between the Offering Memorandum distributed to you in electronic form and the hard copy version available to you on request from the initial purchasers.

3R LUX

(a private limited liability company incorporated under the laws of the Grand Duchy Luxembourg)

U.S.$500,000,000

9.750% Senior Secured Notes due 2031

Unconditionally and Irrevocably Guaranteed by 3R Petroleum Óleo e Gás S.A and its Subsidiary Guarantors

Interest payable on February 5 and August 5

Issue price: 99.379%

This offering memorandum (the "Offering Memorandum") relates to 9.750% senior secured notes due 2031 (the "Notes") to be issued by 3R Lux, a private limited liability company (*société à responsabilité limitée*) incorporated under the laws of the Grand Duchy of Luxembourg, having its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, Grand Duchy of Luxembourg, and registered with the Luxembourg Trade and Companies Register (*Registre de Commerce et des Sociétés, Luxembourg*) (the "RCS") under number B 268.764 (the "Issuer"), a wholly owned subsidiary of 3R Petroleum Óleo e Gás S.A., a Brazilian corporation ("3R"), and secured by the Collateral (as defined herein). The Notes will mature on February 5, 2031. Interest will accrue from February 5, 2024, and the first interest payment date will be August 5, 2024.

The Notes will be redeemable at the option of the Issuer, in whole or in part, at any time on or after February 5, 2027, at the redemption prices set forth in this Offering Memorandum, together with accrued and unpaid interest, if any, to the date of redemption. The Issuer may, at its option, also redeem up to 35% of the Notes at a redemption price of 109.750% of the principal amount, *plus* accrued and unpaid interest, using the proceeds of certain equity offerings completed prior to February 5, 2027. In addition, at any time prior to February 5, 2027, the Issuer may redeem some or all of the Notes at a redemption price equal to 100% of the principal amount, *plus* accrued and unpaid interest, *plus* a "make-whole" premium. The Issuer may also redeem the Notes upon certain changes in tax laws. If the Issuer sells certain of its assets or experiences specific kinds of changes of control, the Issuer must offer to purchase the Notes. See "*Description of Notes*."

The Notes will be senior secured obligations of the Issuer, secured by a first-priority lien on the Collateral and will be fully and unconditionally guaranteed on a senior secured basis by corporate guarantees (individually, a "Note Guarantee" and, collectively, the "Note Guarantees") issued by 3R and 3R Potiguar S.A., 3R RNCE S.A. and 3R Bahia S.A. (collectively, the "Subsidiary Guarantors," and together with 3R, the "Guarantors"), as described under "*Description of Notes.*" The Notes and the Note Guarantees will rank (a) effectively senior to all unsecured debt of the Issuer and the Guarantors to the extent of the value of the Collateral (as defined herein), (b) equally in right of payment with all senior existing and future obligations of the Issuer and the Guarantors, after the foreclosure of the Collateral, (c) senior in right of payment to all existing and future subordinated indebtedness of the Issuer and the Guarantors, as further described in this Offering Memorandum, (d) junior to any future secured obligations of the Company, the other Guarantors and any of their subsidiaries with a security interest on assets not constituting Collateral, in each case, to the extent of the value of the collateral securing such obligations, and (e) structurally subordinated to any existing or future debt or other obligations of any subsidiary of the Company that is not the Issuer or that does not guarantee the Notes.

The obligations of the Issuer with respect to the Notes and the Guarantors with respect to the Note Guarantees and the performance of all other obligations of the Issuer and the Guarantors under or relating to the Indenture (as defined herein), as well as obligations of the Issuer and the Guarantors under the Debentures (as defined herein), the Oil Hedge Agreements (as defined herein), as applicable, and, subject to certain conditions, future Additional Debt (as defined herein) (collectively, the "Intercreditor Secured Debt"), will be secured by a first-priority security interest on (i) the Share Collateral (as defined herein); (ii) the Concessions Collateral (as defined herein), and (iii) the Credit Receivables Collateral (as defined herein). The Intercreditor Secured Debt will be secured by a first-priority security interest (upon completion of customary registration and perfection requirements, as well as fulfillment of the conditions for effectiveness thereof, in accordance with and as required under the Security Agreements) on the Collateral (which shall be shared on a *pari passu* basis among the Secured Debt Providers) to the extent the aggregate principal amount of the Notes, together with the Fourth 3R Potiguar Debentures (as defined herein), does not exceed US$1,000,000,000. All of the foregoing security interests will be granted on the Issue Date and in effect and perfected within the timeframes set forth herein and in the Security Documents. See also See "*Description of Notes—Collateral"* and "*Description of Notes—Additional Matters Relating to Collateral."* In the event that the security interest in the Share Collateral, in the Concessions Collateral and in the Credit Receivables Collateral is not perfected on or before the timeframes specified under "*Description of Notes—Default and Remedies—Events of Default,*" we will be in default under the Indenture. See "*Description of Notes—Default and Remedies—Events of Default.*" In the event of a failure to create and perfect liens on the Collateral, the Notes will not be secured by such Collateral, and the holders of the Notes will not be entitled to the proceeds from the sale of all or any of the proposed Collateral or any other remedies in connection therewith. See "*Description of Notes—Default and Remedies—Events of Default*."

See "*Risk Factors*" beginning on page 26 for a discussion of certain risks that you should consider in connection with an investment in the Notes.

The Notes and the related Note Guarantees have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "Securities Act"), or under any state securities laws and may not be offered or sold in the United States or to U.S. persons(as defined in Regulation S under the Securities Act ("Regulation S"), except in transactions exempt from, or not subject to, the registration requirements of the Securities Act. The Issuer has not been and will not be registered under the U.S. Investment Company Act of 1940, as amended (the "Investment Company Act") in reliance on the exemption set forth in Section 3(c)(7) of the Investment Company Act. Accordingly, the Notes are being offered and sold only to: (1) persons that are qualified institutional buyers (as defined in Rule 144A under the Securities Act ("Rule 144A")) that are also qualified purchasers (as defined in Section 2(a)(51) of the Investment Company Act of 1940, as amended (the "Investment Company Act") and (2) outside the United States, to certain persons, other than U.S. persons, in offshore transactions meeting the requirements of Rule 903 of Regulation S. Prospective purchasers that are qualified institutional buyers are hereby notified that the sellers of the Notes may be relying on the exemption from the provisions of section 5 of the Securities Act provided by Rule 144A. For a description of the Volcker Rule implications of this offering, see "*Presentation of Financial and Other Information—Volcker Rule*." For a description of certain restrictions on transfer, see "*Transfer Restrictions*."

There is currently no public market for the Notes. Application will be made for the listing and quotation of the Notes on the Singapore Stock Exchange Securities Trading Limited (the "SGX-ST"). The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this Offering Memorandum. Approval in-principle for the listing and quotation of the Notes on the SGX-ST is not to be taken as an indication of the merits of the Issuer, the Guarantors or any of their affiliates, the Notes or the Guarantee. For as long as any of the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, the Notes will be traded on the SGX-ST in a minimum board lot size of U.S.$200,000. There can be no assurance that a trading market in the Notes will develop or be maintained.

The delivery of the Notes is expected to be made to investors in book-entry form through The Depository Trust Company and its direct or indirect participants including Euroclear S.A./N.V. and Clearstream Banking, S.A. on or about February 5, 2024.

Morgan Stanley **BTG Pactual**

Citigroup **Deutsche Bank Securities** **HSBC** **Itaú BBA** **Santander** **UBS Investment Bank**

The date of this Offering Memorandum is January 29, 2024.

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In this Offering Memorandum, unless the context otherwise requires, references to: (1) "we," "us," "our," "3R Group" or "Company" refer to 3R Petroleum Óleo e Gás S.A. and its subsidiaries (including the Issuer); (2) "3R" refers to 3R Petroleum Óleo e Gás S.A.; (3) the "Guarantors" are to 3R Petroleum Óleo e Gás S.A. and the Subsidiary Guarantors; (4) "Subsidiary Guarantors" are to 3R Potiguar S.A., 3R RNCE S.A., and 3R Bahia S.A.; and (5) the "Issuer" are to 3R Lux, a private limited liability company *(société à responsabilité limitée)* incorporated and existing under the laws of the Grand Duchy of Luxembourg, having its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, Grand Duchy of Luxembourg, registered with the RCS under number B 268.764, which is a direct, wholly owned subsidiary of 3R.

Reference to the "Initial Purchasers" are to Morgan Stanley & Co. LLC, Banco BTG Pactual S.A. – Cayman Branch, Citigroup Global Markets Inc., Deutsche Bank Securities Inc., HSBC Securities (USA) Inc., Itau BBA USA Securities, Inc., Santander US Capital Markets LLC and UBS Securities LLC. In addition, the term "Brazil" refers to the Federative Republic of Brazil, the phrase "Brazilian government" refers to the federal government of Brazil

and the term “Central Bank” refers to the Central Bank of Brazil (*Banco Central do Brasil*). All references to “*real*,” “*reais*” or “R$” are to the Brazilian *real*, the official currency of Brazil, and all references to “U.S. dollar,” “U.S. dollars,” “U.S.$” or “US$” are to U.S. dollars, the official currency of the United States of America.

CAUTIONARY NOTE TO INVESTORS CONCERNING PROSPECTIVE RESOURCES, CONTINGENT RESOURCES, RESERVES AND PROJECTIONS

PROSPECTIVE RESOURCES, CONTINGENT RESOURCES AND RESERVES

THIS OFFERING MEMORANDUM USES THE TERM "PROSPECTIVE RESOURCES" TO DESCRIBE THOSE QUANTITIES OF OIL AND CONDENSED AND NATURAL GAS THAT ARE POTENTIALLY RECOVERABLE FROM ACCUMULATIONS YET TO BE DISCOVERED. BECAUSE OF THE UNCERTAINTY OF COMMERCIALITY AND LACK OF SUFFICIENT EXPLORATION DRILLING, THE PROSPECTIVE RESOURCES CANNOT BE CLASSIFIED AS CONTINGENT RESOURCES OR RESERVES. PROSPECTIVE RESOURCES HAVE A GREAT AMOUNT OF UNCERTAINTY AS TO THEIR EXISTENCE. THERE IS NO CERTAINTY THAT ANY PORTION OF THE PROSPECTIVE RESOURCES WILL BE DISCOVERED AND, IF DISCOVERED, WHETHER THEY COULD BE DEVELOPED ECONOMICALLY. THIS OFFERING MEMORANDUM ALSO USES THE TERM "CONTINGENT RESOURCES" TO DESCRIBE THOSE QUANTITIES OF OIL AND CONDENSED AND NATURAL GAS THAT ARE POTENTIALLY RECOVERABLE FROM KNOWN ACCUMULATIONS BY APPLICATION OF DEVELOPMENT PROJECTS, BUT WHICH ARE NOT CURRENTLY CONSIDERED TO BE COMMERCIALLY RECOVERABLE DUE TO ONE OR MORE CONTINGENCIES. BECAUSE OF THE UNCERTAINTY OF COMMERCIALITY, THE CONTINGENT RESOURCES CANNOT BE CLASSIFIED AS RESERVES. CONTINGENT RESOURCES ALSO HAVE A HIGH DEGREE OF UNCERTAINTY WITH RESPECT TO THEIR COMMERCIAL VIABILITY. THIS OFFERING MEMORANDUM ALSO USES THE TERM "RESERVES" TO DESCRIBE THOSE QUANTITIES OF OIL AND NATURAL GAS ANTICIPATED TO BE COMMERCIALLY RECOVERABLE BY APPLICATION OF DEVELOPMENT PROJECTS TO KNOWN ACCUMULATIONS FROM A GIVEN DATE FORWARD UNDER DEFINED CONDITIONS. RESERVES ARE CATEGORIZED AS (I) PROVED RESERVES, (II) PROBABLE RESERVES AND (III) POSSIBLE RESERVES. INVESTORS ARE ADVISED THAT THE SECURITIES EXCHANGE COMMISSION, OR THE SEC, DOES NOT RECOGNIZE PROSPECTIVE RESOURCES OR CONTINGENT RESOURCES. IN CONNECTION WITH A SEC-REGISTERED SECURITIES OFFERING OF SECURITIES ONLY "PROVED RESERVES" MAY BE DISCLOSED TO INVESTORS. ESTIMATED QUANTITIES OF OIL AND CONDENSED AND NATURAL GAS MAY ONLY BE CLASSIFIED AS "PROVED RESERVES" IF GEOLOGICAL AND ENGINEERING DATA DEMONSTRATE WITH REASONABLE CERTAINTY THAT THEY ARE RECOVERABLE IN FUTURE YEARS FROM KNOWN RESERVOIRS UNDER EXISTING ECONOMIC AND OPERATING CONDITIONS. INVESTORS ARE CAUTIONED NOT TO ASSUME THAT ALL OR ANY PART OF OUR PROSPECTIVE RESOURCES EXIST, OR THAT THEY CAN BE DEVELOPED ECONOMICALLY, THAT ALL OR ANY PART OF OUR CONTINGENT RESOURCES WILL BE COMMERCIALLY VIABLE OR THAT THE ESTIMATES USED TO CLASSIFY THE RESERVES WILL PROVE TO BE TRUE. ACCORDINGLY, INFORMATION CONCERNING DESCRIPTIONS OF CONTINGENT RESOURCES AND RESERVES CONTAINED IN THIS OFFERING MEMORANDUM ARE NOT COMPARABLE TO INFORMATION PERMITTED TO BE MADE PUBLIC BY U.S. OR OTHER INTERNATIONAL COMPANIES SUBJECT TO THE REPORTING AND DISCLOSURE REQUIREMENTS OF THE SEC, ESPECIALLY REGULATION S-K UNDER THE SECURITIES ACT. SEE "PRESENTATION OF FINANCIAL AND OTHER INFORMATION."

PROJECTIONS

CERTAIN OF THE INFORMATION AND CONCLUSIONS SET FORTH IN THIS OFFERING MEMORANDUM ARE BASED ON PROJECTIONS. THESE PROJECTIONS WERE PREPARED FOR THE LIMITED PURPOSE OF ANALYZING THE POTENTIAL RISKS AND BENEFITS OF AN INVESTMENT IN THE SECURITIES BY ILLUSTRATING UNDER CERTAIN LIMITED ASSUMPTIONS OUR PROJECTED REVENUE, PROSPECTIVE RESOURCES, CONTINGENT RESOURCES, RESERVES, PROBABILITIES OF SUCCESS, CAPITAL EXPENDITURES, EXPLORATION COSTS, DEVELOPMENT AND ACQUISITION COSTS, PRODUCTION CAPACITY AND OPERATING EXPENDITURES. IN ADDITION, BECAUSE OF THE SUBJECTIVE JUDGMENTS AND INHERENT UNCERTAINTIES OF PROJECTIONS AND BECAUSE THE PROJECTIONS ARE BASED ON A NUMBER OF ASSUMPTIONS, WHICH ARE SUBJECT TO SIGNIFICANT UNCERTAINTIES AND CONTINGENCIES THAT ARE BEYOND OUR CONTROL, THERE CAN BE NO ASSURANCE THAT THE PROJECTIONS OR CONCLUSIONS DERIVED THEREFROM WILL BE REALIZED. OUR ACTUAL REVENUE, PROSPECTIVE RESOURCES, CONTINGENT RESOURCES,

RESERVES, PROBABILITIES OF SUCCESS, CAPITAL EXPENDITURES, EXPLORATION COSTS, DEVELOPMENT AND ACQUISITION COSTS, PRODUCTION CAPACITY AND OPERATING EXPENDITURES MAY BE SIGNIFICANTLY LESS FAVORABLE THAN THOSE PROJECTED. UNDER NO CIRCUMSTANCES SHOULD THE PROJECTIONS SET FORTH IN THIS OFFERING MEMORANDUM BE REGARDED AS A REPRESENTATION, WARRANTY OR PREDICTION THAT WE WILL ACHIEVE OR ARE LIKELY TO ACHIEVE ANY PARTICULAR FUTURE RESULT. THERE CAN BE NO ASSURANCE THAT OUR FUTURE RESULTS OR PROJECTIONS WILL NOT VARY SIGNIFICANTLY FROM THOSE SET FORTH IN THIS OFFERING MEMORANDUM. ACCORDINGLY, YOU MAY LOSE ALL OR PART OF YOUR INVESTMENT TO THE EXTENT THE PROJECTIONS OR CONCLUSIONS INCLUDED HEREIN ARE NOT ULTIMATELY REALIZED.

Neither the Issuer nor the Guarantors intend to update or revise these projections to reflect circumstances existing after the date of this Offering Memorandum. These projections do not constitute a guarantee of our future performance. The Reserves Report (as defined herein) do not comprise all the information that may be important for an investment decision. In view of these uncertainties, investors should not rely only on these projections to make an investment decision and are urged to carefully analyze all of the information included in this Offering Memorandum, including our financial statements and related notes. See “Risk Factors—Risks Relating to Us,” “Risk Factors—Risks Relating to the Oil and Natural Gas Industry,” “Forward-Looking Statements” and “Cautionary Note to Investors Concerning Prospective Resources, Contingent Resources, Reserves and Projections.”

NOTICE TO INVESTORS

None of the Issuer, the Guarantors and the Initial Purchasers have authorized anyone to provide you with information different from that contained in this Offering Memorandum. We and the Initial Purchasers take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information in this Offering Memorandum is accurate only as of the date on the front cover of this Offering Memorandum, regardless of time of delivery of this Offering Memorandum or any sale of the Notes. Our business, financial condition, results of operations and prospects may change after the date on the front cover of this Offering Memorandum. If given or made, any such other information or representation shall not be relied upon as having been authorized by the Issuer, the Guarantors or the Initial Purchasers. The Notes are being offered and the offers to buy are being sought only in jurisdictions where offers and sales are permitted. This document may only be used where it is legal to sell the Notes.

This Offering Memorandum is highly confidential and has been prepared solely for use in connection with the proposed offering of the Notes as described herein. This Offering Memorandum is personal to the prospective investor to whom it has been delivered and does not constitute an offer to any other person or to the public in general to subscribe for or otherwise to acquire Notes. Distribution of this Offering Memorandum to any person other than the prospective investor and those persons, if any, retained to advise that prospective investor with respect thereto is unauthorized, and any disclosure of any of its contents without our prior written consent is prohibited. Each prospective investor, by accepting delivery of this Offering Memorandum, agrees to the foregoing and agrees to make no photocopies of this Offering Memorandum.

There is currently no public market for the Notes. Application will be made for the listing and quotation of the Notes on the SGX-ST. We cannot assure you that the application will be approved. There can be no assurance that the prices at which the Notes will sell in the market after this offering will not be lower than the initial offering price or that an active trading market for the Notes after the completion of the offering will develop and continue after this offering. The SGX-ST assumes no responsibility for the accuracy of any of the statements made, opinions expressed, or reports contained in this Offering Memorandum. Approval in-principle for the listing and quotation of the Notes on the SGX-ST is not to be taken as an indication of the merits of the Issuer, the Guarantors or any of their affiliates, the Notes or the Note Guarantees. The offering and settlement of the Notes are not conditioned upon obtaining the listing.

Neither the SEC, any state securities commission nor any other regulatory authority has approved or disapproved the securities offered hereby nor have any of the foregoing authorities passed upon or endorsed the

merits of this offering or the accuracy or adequacy of this Offering Memorandum. Any representation to the contrary is a criminal offense.

We are relying on exemptions from registration under the Securities Act for offers and sales of securities that do not involve a public offering. The Notes offered are subject to restrictions on transferability and resale and may not be transferred or resold in the United States, except as permitted under the Securities Act and applicable U.S. state securities laws pursuant to registration or exemption from them. By purchasing the Notes, you will be deemed to have made the acknowledgments, representations, warranties and agreements described under the section of this Offering Memorandum entitled "*Notice to Investors*" and "*Transfer Restrictions*." You should be aware that you may be required to bear the financial risks of this investment for an indefinite period of time. In making an investment decision, you must rely on your own examination of our business and the terms of this offering, including the merits and risks involved.

Neither this Offering Memorandum nor any other information supplied in connection with the Notes should be considered as a recommendation by us or any of the Initial Purchasers that any recipient of this Offering Memorandum or any other information supplied in connection with the Notes should subscribe for or purchase any Notes. Each investor contemplating subscribing for or purchasing any Notes should make its own independent investigation of the financial condition and affairs, and its own appraisal of the creditworthiness, of the 3R Group.

This Offering Memorandum does not constitute an offer of, or an invitation by or on behalf of the Company, any Initial Purchaser or the Trustee (as defined herein) to subscribe or purchase, any of the Notes in any jurisdiction where such offer is not permitted. The distribution of this Offering Memorandum and the offering of the Notes in certain jurisdictions may be restricted by law. Persons into whose possession this Offering Memorandum comes are required by us, each of the Initial Purchasers and the Trustee to inform themselves about and to observe any such restrictions. Neither we, the Issuer, the Guarantors, the Initial Purchasers nor any of our or their respective affiliates represents that this Offering Memorandum may be lawfully distributed, or that any Notes or the Note Guarantees may be lawfully offered, in compliance with any applicable registration or other requirements in any such jurisdiction, or pursuant to an exemption available thereunder, or assumes any responsibility for facilitating any such distribution or offering. In particular, no action has been taken by us or any Initial Purchaser that is intended to permit a public offering of any Notes or distribution of this Offering Memorandum in any jurisdiction where action for that purpose is required. Accordingly, no Notes may be offered or sold, directly or indirectly, and neither this Offering Memorandum nor any advertisement or other offering material may be distributed or published in any jurisdiction, except under circumstances that will result in compliance with any applicable laws and regulations.

The Issuer has included in this Offering Memorandum, as Annex A, the Reserves Report (as defined herein) prepared by *DeGolyer and MacNaughton*, which contains certain financial and operating data relating to the operation of certain of our assets and market data and estimates relating to production volume, among others. The estimates and other information contained in the Reserves Report are for reference purposes only, and accordingly, investors are cautioned not to place undue reliance on these documents. In addition, information has been included in the Offering Memorandum that summarizes or is derived from these estimates or otherwise from the Reserves Report. Under no circumstances should the inclusion of such information in the Offering Memorandum be regarded as a representation or warranty by the Issuer, the Guarantors, the Initial Purchasers or any other person with respect to the accuracy of any such estimates or that our clusters will achieve any particular results. None of the Issuer, the Guarantors, the Initial Purchasers, the Guarantors' independent auditors, or any of their respective representatives or affiliates, can give any assurance that any such estimates will reflect the Guarantors' actual results of operations. Therefore, no representations are made or intended to be made, nor should any be inferred, with respect to the likely existence of a particular future set of facts or circumstances. The Guarantors' actual results may be materially less favorable than those inferred by these documents.

The Issuer and the Initial Purchasers reserve the right to withdraw this offering of the Notes at any time and the right to reject any offer to purchase, in whole or in part, for any reason, or to sell less than all of the Notes offered by this Offering Memorandum.

This Offering Memorandum summarizes certain documents and other information and we refer you to them for a more complete understanding of what we discuss in this Offering Memorandum. All such summaries are qualified in their entirety by such references. Copies of certain documents referred to herein will be made available to prospective purchasers of the Notes, free of charge, upon request to the Trustee or at the offices of any paying agent.

In making an investment decision, you must rely on your own examination of us and the terms of this offering and the Notes, including the merits and risks involved.

Neither the Trustee nor the Initial Purchasers accepts any liability in relation to the information contained in this Offering Memorandum or any other information provided by us in connection with the Notes. In addition, no representation, warranty or undertaking, express or implied, is made by any Initial Purchaser or the Trustee as to the accuracy or completeness of the information contained or incorporated in this Offering Memorandum or any other information provided by us in connection with the Notes, and nothing contained herein is or shall be relied upon as a promise or representation by any Initial Purchaser or the Trustee, whether as to the past or to the future.

You must comply with all applicable laws and regulations in force in any jurisdiction in which you purchase, offer or sell the Notes or possess or distribute this Offering Memorandum and must obtain any consent, approval or permission required for your purchase, offer or sale of the Notes under the laws and regulations in force in any jurisdiction to which you are subject or in which you make such purchases, offers or sales. None of the Issuer, the Guarantors, the Initial Purchasers or their affiliates will have any responsibility therefor.

This Offering Memorandum is intended solely for the purpose of soliciting expressions of interest in the Notes from qualified investors and does not purport to summarize all of the terms, conditions, covenants, and other provisions contained in the Indenture, the Notes and other transaction documents. Certain industry information in this Offering Memorandum has been obtained by the Issuer and the Guarantors from publicly available sources that we deem reliable. None of the Issuer, the Guarantors and the Initial Purchasers have independently verified this information. The Initial Purchasers accept no liability in relation to the information contained in this Offering Memorandum or its distribution or with regard to any other information supplied by us or on our behalf.

You hereby acknowledge that (i) you have been afforded an opportunity to request from the Issuer and the Guarantors to review and have received all additional public information considered by you to be necessary to verify the accuracy of, or to supplement, the information contained in this Offering Memorandum; (ii) you have not relied on the Initial Purchasers or any person affiliated with the Initial Purchasers in connection with any investigation of the accuracy of the information or your investment decision; and (iii) no person has been authorized to give any information or to make any representation concerning the Issuer, the Guarantors or the Notes (other than as contained herein and information given by duly authorized officers and our employees in connection with your examination of the Issuer, the Guarantors and the terms of this offering) and, if given or made, you should not rely upon any other information or representation as having been authorized by the Issuer, the Guarantors or the Initial Purchasers.

None of the Issuer, the Guarantors, the Initial Purchasers or any of their respective affiliates or representatives are making any representation to you regarding the legality of any investment by you under applicable legal investment or similar laws. You should not consider any information in this Offering Memorandum to be advice whether legal, business, accounting or tax. You should consult with your own advisors as to legal, tax, business, financial and related aspects of a purchase of the Notes.

Each person receiving this Offering Memorandum acknowledges that (1) this Offering Memorandum does not contain all the information that would be included in a prospectus for this offering if this offering were registered under the Securities Act; (2) our unaudited parent company and consolidated condensed interim financial information as of September 30, 2023 and for the nine-month period ended September 30, 2023 and 2022 were prepared in accordance with technical pronouncement CPC 21 (R1) (Interim Financial Reporting) and in accordance with the international standard IAS 34 Interim Financial Reporting issued by the International Accounting Standards Board, or IASB, and are included elsewhere in this Offering Memorandum; and that (3) our (i) audited parent company and consolidated financial statements as of and for the years ended December 31, 2022 and 2021 and our (ii) audited parent company and consolidated financial statements as of and for the years ended December 31, 2021 and 2020 have been prepared in accordance with the International Financial Reporting Standards, or IFRS, as issued by IASB and with accounting practices adopted in Brazil, or Brazilian GAAP, which are included elsewhere in this Offering Memorandum.

We maintain our books and records in *reais* and also prepare financial statements in accordance with Brazilian GAAP and IFRS. Brazilian GAAP includes accounting practices provided for in Brazilian Law No. 6,404, of December 15, 1976, as amended, or the Brazilian Corporation Law, the rules and regulations from the CVM and the

pronouncements, guidelines and interpretations issued by the Accounting Pronouncements Committee (*Comitê de Pronunciamentos Contábeis*), or the CPC, and approved by the CVM and by the Federal Accounting Council (*Conselho Federal de Contabilidade*), or CFC.

Notwithstanding anything in this Offering Memorandum to the contrary, except as reasonably necessary to comply with applicable securities laws, you (and each of your employees, representatives or other agents) may disclose to any and all persons, without limitation of any kind, the U.S. federal income tax treatment and tax structure of the offering and all materials of any kind (including opinions or other tax analyses) that are provided to you relating to such tax treatment and tax structure. For this purpose, "tax structure" is limited to facts relevant to the U.S. federal income tax treatment of the offering.

AVAILABLE INFORMATION

The Issuer is not subject to the information requirements of the United States Securities Exchange Act of 1934, as amended, or the Exchange Act. To preserve the exemption for resales and transfers under Rule 144A under the Securities Act, the Issuer has agreed, while any Notes remain outstanding, to make available, upon request, to any holder and any prospective purchaser of Notes who is designated by that holder and is a "qualified institutional buyer," as defined under Rule 144A, that are also qualified purchasers (as defined in Section 2(a)(51) of the Investment Company Act), upon the request of such holder or prospective purchaser, the information required pursuant to Rule 144A(d)(4)(i) under the Securities Act, during any period in which the Issuer (1) is not subject to, and in compliance with, Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or (2) becomes exempt from such reporting requirements pursuant to, and in compliance with, Rule 12g3-2(b) of the Exchange Act (as amended from time to time and including any successor provision).

Application will be made for the listing and quotation of the Notes on the SGX-ST. The SGX-ST assumes no responsibility for the accuracy of any of the statements made, opinions expressed, or reports contained in this Offering Memorandum. Approval in-principle for the listing and quotation of the Notes on the SGX-ST is not to be taken as an indication of the merits of the Issuer, the Guarantors or any of their affiliates, the Notes or the Guarantee. See "*Listing and General Information*." The Issuer will comply with any undertakings that it gives from time to time to the SGX-ST in connection with the Notes, and we will furnish to the SGX-ST all such information required in connection with the listing of the Notes.

NOTICES TO INVESTORS WITHIN THE EUROPEAN ECONOMIC AREA

MiFID II Product Governance / Professional Investors and Eligible Counterparties Only Target Market

Any distributor subject to Directive 2014/65/EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and Directive 2011/61/EU (as amended) ("MiFID II") that is offering, selling or recommending the Notes is responsible for undertaking its own target market assessment in respect of the Notes and determining its own distribution channels for the purposes of the MiFID II product governance rules. None of the Issuer, the Guarantors or any of the Initial Purchasers makes any representations or warranties as to a distributor's compliance with such rules.

Prospectus Regulation

This Offering Memorandum has been prepared on the basis that any offer of Notes in any Member State of the European Economic Area (each, a "Relevant Member State") will be made pursuant to an exemption under the Prospectus Regulation from the requirement to publish a prospectus for offers of Notes. Accordingly, any person making or intending to make an offer in that Relevant Member State of Notes which are the subject of the offering contemplated in this Offering Memorandum may only do so in circumstances in which no obligation arises for the Issuer or any of the Initial Purchasers to publish a prospectus pursuant to Article 3 of the Prospectus Regulation or

supplement a prospectus pursuant to Article 23 of the Prospectus Regulation, in each case, in relation to such offer. Neither the Issuer nor the Initial Purchasers have authorized, nor do they authorize, the making of any offer of Notes in circumstances in which an obligation arises for the Issuer or the Initial Purchasers to publish or supplement a prospectus for such offer.

The expression "Prospectus Regulation" means Regulation (EU) 2017/1129 of the European Parliament and of the Council of 14 June 2017 on the prospectus to be published when securities are offered to the public or admitted to trading on a regulated market, as amended.

Prohibition of Sales to EEA Retail Investors

The Notes are not intended to be offered, sold or otherwise made available to, and should not be offered, sold or otherwise made available to any EEA Retail Investor in the EEA. For these purposes an "EEA Retail Investor" means a person who is one (or more) of the following: (i) a retail client as defined in point (11) of Article 4(1) of MiFID II, or (ii) a customer within the meaning of Directive (EU) 2016/97 of the European Parliament and of the Council of 20 January 2016 on insurance distribution (recast), as amended (the "Insurance Distribution Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently, no key information document required by Regulation (EU) No 1286/2014 of the European Parliament and of the Council of 26 November 2014 on key information documents for packaged retail and insurance-based investment products, as amended (the "PRIIPs Regulation") for offering or selling the Notes or otherwise making them available to EEA Retail Investors in the EEA has been prepared and therefore offering or selling the Notes or otherwise making them available to any EEA Retail Investor in the EEA may be unlawful under the PRIIPs Regulation.

PROHIBITION OF SALES TO U.K. RETAIL INVESTORS

The Notes (and related Notes Guarantees) described in this Offering Memorandum are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the UK. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 ("EUWA"); (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (as amended, "FSMA") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA (the "UK Prospectus Regulation"). Consequently, no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the "UK PRIIPs Regulation") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation. This Offering Memorandum has been prepared on the basis that any offer of Notes in the UK will be made pursuant to an exemption under the UK Prospectus Regulation from the requirement to publish a prospectus for offers of notes. This Offering Memorandum is not a prospectus for the purposes of the UK Prospectus Regulation.

Notification under Section 309B of the Securities and Futures Act 2001 of Singapore, as modified or amended from time to time (the "SFA"): The Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

NOTICE TO INVESTORS IN BRAZIL

THE NOTES (AND THE RELATED NOTE GUARANTEES) HAVE NOT BEEN, AND WILL NOT BE, REGISTERED WITH THE BRAZILIAN SECURITIES AND EXCHANGE COMMISSION (*COMISSÃO DE VALORES MOBILIÁRIOS*) ("CVM"), AND MAY NOT BE PLACED, DISTRIBUTED, OFFERED OR SOLD IN BRAZILIAN CAPITAL MARKET, EXCEPT IN CIRCUMSTANCES THAT DO NOT CONSTITUTE A PUBLIC OFFERING, PLACEMENT OR UNAUTHORIZED DISTRIBUTION OF SECURITIES IN THE BRAZILIAN CAPITAL MARKET, UNDER BRAZILIAN LAWS AND REGULATIONS. DOCUMENTS RELATING TO THE OFFERING OF THE NOTES, AS WELL AS INFORMATION CONTAINED THEREIN, MAY NOT BE SUPPLIED TO THE PUBLIC IN BRAZIL, NOR BE USED IN CONNECTION WITH ANY OFFER FOR SUBSCRIPTION OR SALE OF THE NOTES TO THE PUBLIC IN BRAZIL. PERSONS WISHING TO OFFER OR ACQUIRE THE NOTES WITHIN BRAZIL SHOULD CONSULT WITH THEIR OWN COUNSEL AS TO THE APPLICABILITY OF REGISTRATION REQUIREMENTS OR ANY EXEMPTION THEREFROM.

NOTICE TO INVESTORS IN THE GRAND DUCHY OF LUXEMBOURG

This Offering Memorandum or any accompanying document has not been approved by and will not be submitted for approval with the Luxembourg Supervision Commission of the Financial Sector (*Commission de Surveillance du Secteur Financier*) for the purposes of a public offering or the sale of the Notes in the Grand Duchy of Luxembourg. Accordingly, the Notes may not be offered or sold to the public in the Grand Duchy of Luxembourg, directly or indirectly, and neither this Offering Memorandum, the Indenture nor any other circular, prospectus, form of application, advertisement or other material related to such offer may be distributed, or otherwise be made available in or from, or published in the Grand Duchy of Luxembourg except in circumstances where the offer of the Notes benefits from an exemption to or constitutes a transaction otherwise not subject to the requirement to publish a prospectus, in accordance with the Prospectus Regulation and the Luxembourg law of July 16, 2019 on prospectuses for securities.

FORWARD-LOOKING STATEMENTS

This Offering Memorandum includes estimates and forward-looking statements subject to risks and uncertainties, including, without limitation, in the sections entitled "*Summary*," "*Risk Factors*," "*Management's Discussion and Analysis of Financial Condition and Results of Operations*," "*Industry*," "*Regulatory Overview*" and "*Business*." Some of the matters discussed concerning our business, financial condition, results of operations and prospects include estimates and forward-looking statements within the meaning of the Securities Act and the Exchange Act.

Although we believe these estimates and forward-looking statements are based on reasonable assumptions, these estimates and statements are subject to several risks and uncertainties, are made in light of the information currently available to us and are based in large part on current expectations and projections about future events and financial trends that affect or may affect our business, industry, financial condition, results of operations, prospects or cash flows and the trading price of the Notes. As a result of these risks and uncertainties, such estimates and forward-looking statements are not guarantees of future results and may prove to be inaccurate or incorrect and our actual performance may differ significantly from those expressed in these estimates and forward-looking statements due to, among others, the factors below, many of which are beyond our control or ability to predict. Because of these uncertainties, you should not place undue reliance on these estimates and forward-looking statements to make a decision to invest in the Notes.

Several factors may adversely affect our estimates, assumptions and forward-looking statements, including, but not limited to:

- fluctuations in crude oil and natural gas prices, especially in light of the geopolitical conflicts around the world, such as the hijackings and assaults by Yemeni rebels on ships crossing the Red Sea (where a significant part of the world's seaborne crude oil flows through) and the conflicts between Russia and Ukraine, and between Hamas and Israel;
- Brazilian government intervention policies;
- potential changes to the political, tax or regulatory environment in Brazil;
- changes in general economic conditions in Brazil, including, for example, inflation, interest rates, employment levels, population growth, liquidity in the financial and capital markets and consumer confidence;
- exchange rate instability impacting the value of the *real* against the U.S. dollar;
- the impossibility or difficulty to implement new projects for the development, extraction and subsequent sale of our products;
- delays in, or excess or increased unpredicted costs for, the implementation or execution of our projects, including but not limited to operations and maintenance costs and regulatory and environmental charges;
- our capitalization and indebtedness levels and our ability to obtain financing for our projects and acquisition plans and implement our expansion plan;
- our ability to keep up with and adapt to technological innovations;
- competition in the sector, changes in demand for our services and products, pressures on price formation, introduction of new products and services by our competitors;
- leaks, oil splashes, gas release or soil contamination resulting from storage operations and activities;
- difficulties in identifying, acquiring, accessing new oil and natural gas reserves to support our growth strategy and the development of our production activities;
- our ability to manage our assets' portfolio, as well as to obtain the expected synergy and results therefrom;
- termination of, or intervention in, concessions, rights or authorizations granted by the Brazilian government to us;

- unforeseen technical difficulties in the operation of our equipment and the provision of our service, as well as unavailability of drilling units and other equipment;
- changes in laws and regulations, including those involving tax, labor and environmental issues;
- our ability to obtain, maintain and renew applicable governmental authorizations and licenses, including environmental authorizations and licenses that enable our projects; and
- other negative factors or trends that may affect our business, market share, financial condition, liquidity or results of operations, including risk factors discussed under the "*Risk Factors*" section in this Offering Memorandum.

The words "believe," "could," "may," "will," "estimate," "continue," "anticipate," "intend," "expect" and similar words are intended to identify estimates and forward-looking statements. Those estimates and forward-looking statements speak only as of the date they were made, and we undertake no obligation to update or to review any estimate and/or forward-looking statement because of new information, future events or other factors. Estimates and forward-looking statements involve risks and uncertainties and are not guarantees of future performance. Our future results may differ materially from those expressed in these estimates and forward-looking statements. In light of the risks and uncertainties described above, the estimates and forward-looking statements discussed in this Offering Memorandum might not occur, and our future results and our performance may differ materially from those expressed in these forward-looking statements. Because of these uncertainties, you should not make any investment decision based on these estimates and forward-looking statements.

PRESENTATION OF FINANCIAL AND OTHER INFORMATION

The financial information included in this Offering Memorandum should be read in conjunction with our unaudited parent company and consolidated condensed interim financial information as of September 30, 2023 and for the nine-month period ended September 30, 2023 and 2022, and our audited parent company and consolidated financial statements as of and for the years ended December 31, 2022 and 2021 and our audited parent company and consolidated financial statements as of and for the years ended December 31, 2021 and 2020, and related notes, included elsewhere in this Offering Memorandum and the sections "Summary Financial Information," "Selected Financial and Other Information," and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

General

The financial and related operating information contained in this Offering Memorandum presents the consolidated financial position of 3R, the ultimate parent of the Issuer and each of the Subsidiary Guarantors and other 3R entities named herein.

The Issuer was incorporated on June 13, 2022 as a private limited liability company (*société à responsabilité limitée*) incorporated under the laws of the Grand Duchy of Luxembourg, mainly for purposes of engaging in financing activities for the 3R Group. The Issuer does not have any operations. We have not included any financial statements for the Issuer in this Offering Memorandum. The Issuer does not, and will not, publish financial statements, except for such financial statements which the Issuer may be required to publish under the laws of the Grand Duchy of Luxembourg. In addition, the Issuer will not furnish to the Trustee or the holders of the Notes any financial statements of, or other reports relating to, the Issuer. The Issuer's obligations under the Notes will be fully and unconditionally guaranteed by the Guarantors named in this Offering Memorandum, as applicable.

Financial Information

We maintain our books and records in *reais*, the official currency of Brazil, which is our and our subsidiaries' functional and reporting currency.

The financial information included elsewhere in this Offering Memorandum has been derived from the following financial statements included elsewhere in this Offering Memorandum:

- our unaudited parent company and consolidated condensed interim financial information as of September 30, 2023 and for the nine-month period ended September 30, 2023 and 2022, and the notes thereto, or our unaudited interim financial information; and
- our audited parent company and consolidated financial statements as of and for the years ended December 31, 2022 and 2021, and the notes thereto, or our 2022 audited financial statements;
- our audited parent company and consolidated financial statements as of and for the years ended December 31, 2021 and 2020, and the notes thereto, or our 2021 audited financial statements and, together with the 2022 audited financial statements, our audited financial statements.

Our audited financial statements have been prepared and are being presented in accordance with IFRS as issued by IASB, and also in accordance with Brazilian GAAP, and our unaudited interim financial information were prepared in accordance with technical pronouncement CPC 21 (R1) (Interim Financial Reporting) and in accordance with the international standard IAS 34 Interim Financial Reporting issued by IASB.

Special Note Regarding Non-GAAP Financial Measures

The body of generally accepted accounting principles is commonly referred to as "GAAP." For this purpose, a non-GAAP (or non IFRS) financial measure is generally defined as one that purports to measure historical or future financial performance, financial position or cash flows but excludes or includes amounts that would not be so adjusted in the most comparable measure under generally accepted accounting principles.

We include in this Offering Memorandum certain non-GAAP financial measures, which are not recognized under IFRS or Brazilian GAAP, as part of our financial disclosure, specifically, our EBITDA and EBITDA Margin. Non-GAAP (or non IFRS) financial measures do not have standardized meanings or definitions and may not be directly comparable to similarly titled measures adopted by other companies. We believe that the non-GAAP (or non IFRS) financial measures allow investors to better understand our profitability.

Potential investors should not rely on information not defined under Brazilian GAAP or IFRS as a substitute for the IFRS measures of financial performance, earnings, cash flow or profit in making an investment decision. Even though these non-GAAP (or non IFRS) financial measures are used by our management to assess our financial position, financial results and liquidity and these types of measures are commonly used by investors, they have important limitations as analytical tools.

EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin

We calculate EBITDA (earnings before interest, tax, depreciation and amortization) in accordance with the guidelines in CVM Resolution No. 156, dated June 23, 2022, as net income (loss) for the year/period *plus* financial result (financial expenses net of financial income), current and deferred income tax and social contribution, and depreciation and amortization. We calculate EBITDA Margin as EBITDA for the year/period *divided by* net revenue for the year/period.

Adjusted EBITDA was calculated based on EBITDA with the aim of providing useful information to potential investors, financial analysts and the public in their review of our operating performance, by excluding the effects of (i) items that have no impact on the period's cash flow; (ii) items that are not part of the normal course of our operations; and (iii) items that our management considers to be non-recurring.

We calculate Adjusted EBITDA as EBITDA *plus* the following items:

(i) *Impairment (loss)/reversal in recoverable value of assets.* Impairment and reversal of impairment, which is the assessment that compares the recoverable value of the asset, determined by discounted cash flow assessment, in relation to the asset's book value. These expenses and expense reversals do not influence our cash generation, so we excluded them from our Adjusted EBITDA calculation;

(ii) *Expenses related to the return of concessions.* As part of our change in strategy to focus on increasing production and reserves in mature oil and gas fields, in 2019 and 2020, we (through 3R Candeias – now 3R Bahia) returned the exploratory blocks PNT-65, PNT-137, PNT-145, PNT-151, PNT-162 and PNT-165 to ANP. We incurred legal and regulatory expenses which were necessary to be able to return these concessions. These expenses are not part of the normal course of our business, following this strategic change and, therefore, we excluded them from our Adjusted EBITDA calculation;

(iii) *Adjustments to the abandonment provisions - Pescada*. Estimated costs for future environmental dismantling and restorations are calculated according to the updated information relating to costs and expected recovery plans available at the time of such calculation. These expenses are recognized at present value, using a discount risk-free rate adjusted by the "country-risk" premium rate. As a result of the long period of time until the abandonment, even slight variations in the discount rate may result in significant differences in the recognized amount. Since this item does not have a cash effect, we excluded it from our Adjusted EBITDA calculation;

(iv) *Exclusion of ICMS from the calculation basis of PIS/COFINS*. Recoverable amounts of PIS/COFINS of 3R Macau (now 3R RNCE) and 3R Pescada, of R$8.8 million and R$1.6 million, respectively, totaling R$10.4 million (of which R$10.2 million corresponds to principal and R$0.25 million corresponds to adjustment for inflation at the SELIC rate). These amounts relate to a tax credit resulting from a decision rendered by the Brazilian Federal Supreme Court (*Supremo Tribunal Federal*), or STF, in May 2021, excluding ICMS from the calculation basis of PIS/COFINS. As this item is nonrecurring and is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation;

(v) *Macau Cluster additional expense.* Additional expenses related to specific items identified following the closing of the acquisition of the Macau Cluster. We excluded these nonrecurring expenses from our Adjusted EBITDA calculation;

(vi) *Expenses earn-out to an old controller.* Expense related to the recognition of a liability for an additional payment to FIP Angel, the former controller of the concessions operated by 3R Offshore, 3R Candeias (now 3R Bahia) and 3R, in connection with the calculation of taxable profit for income tax and social contribution purposes. Under the terms of the purchase and sale agreement, if 3R and/or the abovementioned subsidiaries were to realize carry-forward tax losses, the former controller would be entitled to the equivalent value of up to one third of the benefit obtained as a result of their use. As this expense has no impact on the period's cash flow and is related to an income tax benefit, we excluded it from our Adjusted EBITDA calculation;

(vii) *Expenses on operator - Camarupim field.* As part of our change in strategy to focus on increasing production and reserves in mature oil and gas fields, we entered into an agreement for the sale of the *Camarupim* field, which was consummated in 2020. Prior to the closing of the sale, we continued to honor cash calls for the exploratory activities in this field, which were recognized as an expense. These expenses are not part of the normal course of our business following this strategic change and, therefore, we excluded it from our Adjusted EBITDA calculation;

(viii) *Expenses related to labor provisions*. This refers to expenses related to legacy labor proceedings from Ouro Preto, which we identified as being probable losses subsequent to their acquisition. As this effect is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation;

(ix) *Translation adjustments - OPE*. Due to the acquisition of 3R (then Ouro Preto) by Ônix on February 18, 2020, we changed the functional currency of 3R Offshore, from dollar to *real*, in accordance with technical pronouncement CPC 02(R2) and in order to align it with the 3R Group's functional currency. As this item is nonrecurring and is not part of the normal course of our business, so we excluded it from our Adjusted EBITDA calculation;

(x) *Expense related to the assignment of the Fazenda Pinaúna field*. 3R Offshore entered into a settlement of legal action No. 0179509-24.2016.8.19.0001, on August 25, 2020, pursuant to which it irrevocably assigned 100% of the working rights of the *Fazenda Pinaúna* field (a legacy field which did not fit with our change in strategy to focus on increasing production and reserves in mature oil and gas fields) to the authors of such action. As this is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation;

(xi) *Bonus linked to the IPO*. We granted bonuses to the members of our management and our employees as a result of our financial performance in connection with 3R's initial public offering of shares (IPO), in 2020. As item is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation;

We calculate Adjusted EBITDA Margin as Adjusted EBITDA for the corresponding year/period *divided by* net revenue for the year/period.

We also believe that disclosure of EBITDA, EBITDA Margin, Adjusted EBITDA and Adjusted EBITDA Margin provides useful information to investors, financial analysts and the public in general in their understanding of our operating performance and their comparison of our operating performance to the operating performance of other companies in the same industry and other industries. This is because EBITDA, EBITDA Margin, Adjusted EBITDA and Adjusted EBITDA Margin are perceived as more comparable measures of operating performance and liquidity without giving effect to decisions related to capital structure and the financing of the business. However, debt levels, credit ratings and, therefore, the impact of interest expense on earnings vary significantly between companies. Similarly, the tax positions of individual companies can vary because of their differing abilities to take advantage of tax incentives and the differing jurisdictions in which they transact business, with the result that their effective tax rates and tax expense can vary considerably. Finally, companies differ in the age and method of acquisition of productive assets, and thus the relative costs of those assets, as well as in the depreciation method

(straight-line, accelerated or units of production), which can result in considerable variability in depreciation and amortization expense between companies. Thus, for comparison purposes, our management believes that EBITDA, EBITDA Margin, Adjusted EBITDA and Adjusted EBITDA Margin are useful as comparable measures of operating profitability because they exclude elements of earnings that do not provide information about the current operations of existing assets.

EBITDA, EBITDA Margin, Adjusted EBITDA and Adjusted EBITDA Margin are not measures of financial performance in accordance with Brazilian GAAP, nor IFRS, issued by International Accounting Standard Board ("IASB"). These measures should not be considered as a basis for distribution of dividends, alternatives to net profit or as measures of operational performance, operating cash flow or liquidity; among others. Additionally, these measures do not have a standard meaning, and the definitions used in this Offering Memorandum may not be comparable with similar titles used by other companies.

For a reconciliation of our EBITDA to net income (loss) and for the calculation of our EBITDA Margin, see "*Selected Financial and Other Information—Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin*."

For a reconciliation of our Adjusted EBITDA to net income (loss) and for the calculation of our Adjusted EBITDA Margin, see "*Selected Financial and Other Information— Reconciliation of Adjusted EBITDA to Net Income (Loss) and Calculation of Adjusted EBITDA Margin*."

Reserves Report

The Reserves Report, which is included as Annex A to this Offering Memorandum, was independently prepared by *DeGolyer and MacNaughton* in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers.

Our management believes the Reserves Report was prepared on a reasonable basis, reflecting the current best estimates and judgments available to us, and present our expected plan of action in accordance with our best knowledge and opinion. However, because this information is highly subjective, you should not rely on it as indicative of future results. You are advised not to place undue reliance on any projected information included herein.

The Initial Purchasers have not compiled, examined or adopted any procedures regarding the projected financial information used to prepare the Reserves Report, and have not expressed their opinion on the Reserves Report. The Initial Purchasers do not assume any liability for, and deny any association with, the Reserves Report and any information derived from the same included elsewhere in this Offering Memorandum.

Independent Petroleum Engineers

Information in this Offering Memorandum regarding our proved, possible and probable reserves, developed reserves, undeveloped reserves, estimated reserves, gross reserves, net reserves, contingent resources, total contingent resources, gross contingent resources, net contingent resources, and prospective resources was derived from the Reserves Report, which is included as Annex A to this Offering Memorandum. See "*Reserves Report Summary*," and the Reserves Report, included elsewhere in this Offering Memorandum. These reports do not include all the information that may be important for an investment decision.

Projections

You should note that the projections contained in this Offering Memorandum reflect our judgment as to our future production, capital expenditures, operating expenditures, revenues and returns based on a number of assumptions. See "*Risk Factors—Risks Relating to Us—"—The internal projections, studies and evaluations that we rely on involve a significant degree of uncertainty and may be inaccurate"* and "*Cautionary Note to Investors Concerning Prospective Resources, Contingent Resources, Reserves and Projections*." Although we believe the

assumptions are reasonable, the reasonableness of these assumptions has not been independently verified, except to the extent indicated in "*Reserves Report Summary*."

ALTHOUGH WE BELIEVE THAT THE PROJECTIONS INCLUDED IN THIS OFFERING MEMORANDUM ARE BASED ON REASONABLE ASSUMPTIONS, INVESTORS SHOULD BE AWARE THAT THESE PROJECTIONS ARE SUBJECT TO MANY RISKS AND UNCERTAINTIES AND MAY BE MATERIALLY DIFFERENT FROM ACTUAL RESULTS.

We do not intend to update or revise these projections to reflect circumstances existing after the date of this Offering Memorandum. These projections do not constitute a guarantee of our future performance. The Reserves Report does not comprise all the information that may be important for an investment decision. In view of these uncertainties, investors should not rely only on these projections to make an investment decision and are urged to carefully analyze all the information included in this Offering Memorandum, including our financial statements and related notes.

Various assumptions are related to commercial, political and economic factors that might occur in Brazil or in other oil and natural gas-producing regions in the future and their potential impact on our business, as well as on commercial, political and economic factors that might occur or continue to occur in the Brazilian oil and natural gas market or in other oil and natural gas-producing regions, which are beyond our control. We cannot guarantee that the commercial, political and economic assumptions are accurate or accurately reflect the future projections. You should conduct your own investigations and make your own analysis of the projections included in this Offering Memorandum.

In addition, we cannot guarantee that our future operations involving exploration and production of oil and natural gas will not be materially adversely affected in the future by political, environmental, climate or other matters, many of which are beyond our control. Our estimates regarding our ability to discover reserves, to produce and generate revenue as well as the quantity and quality of oil and natural gas to be discovered in our exploration blocks are inherently uncertain. When projecting such future potential rates of production of oil and natural gas, we may have failed to take into account various relevant factors. See "*Risk Factors—Risks Relating to Us*," "*Risk Factors—Risks Relating to the Oil and Natural Gas Industry*," "*Forward-Looking Statements*" and "*Cautionary Note to Investors Concerning Prospective Resources, Contingent Resources, Reserves and Projections*."

Currency Information

Unless otherwise indicated, all financial information relating to us that is presented in U.S. dollars in this Offering Memorandum has been translated from *reais* using the commercial selling rate as reported by the Central Bank as of September 30, 2023 of R$5.0076 to US$1.00. As a result of fluctuations in the *real*/U.S. dollar exchange rate, the selling rate as of September 30, 2023 may not be indicative of current or future exchange rates. The U.S. dollar equivalent information presented in this Offering Memorandum is provided solely for the convenience of the reader and should not be construed as implying that the *real* amounts represent, could be or could have been converted into U.S. dollars at that rate or at any other rate. The U.S. dollar closing selling rate as reported by the Central Bank as of January 26, 2024 was of R$4.9125 to US$1.00.

Rounding

Certain percentages and other amounts included in this Offering Memorandum have been rounded for ease of presentation. Accordingly, any discrepancies between totals and the sums of the amounts listed are due to rounding.

Market Estimates

We make statements in this Offering Memorandum about market estimates, including statistical information and information relating to the industry in which we operate. We make these statements on the basis of information from sources that we believe are reliable, including, among others, independent consultants, governmental agencies and general publications such as of the (i) Central Bank, (ii) the Brazilian government, (iii) the Brazilian Institute of Geography and Statistics (*Instituto Brasileiro de Geografia e Estatística*), or IBGE, (iv) the Getúlio Vargas Foundation (*Fundação Getúlio Vargas*), or FGV, (v) CETIP S.A. – *Mercados Organizados*, or CETIP, (vi) the Brazilian National Petroleum, Natural Gas and Biofuel Agency (*Agência Nacional do Petróleo, Gás Natural e*

Biocombustíveis), or ANP, (vii) Agência EPBR, or EPBR, which is an oil and gas media organization, (viii) FactSet Research Systems Inc., or Factset, which is an U.S. financial data and software company, (ix) BP plc, or BP, which is a British multinational oil and gas company headquartered in London, England, (x) S&P Global Platts, which is a provider of energy and commodities information and a source of benchmark price assessments in the physical commodity markets, (xi) U.S. Energy Information Administration, or EIA, principal agency of the U.S. Federal Statistical System responsible for collecting, analyzing, and disseminating energy information, (xii) Brazilian Commission of Geological and Palaeobiological Sites (*Comissão Brasileira de Sítios Geológicos e Paleobiológicos*), or SIGEP, (xiii) Secretary for Production Development (*Secretaria de Desenvolvimento da Produção*), or SDP, which is a specific department of the Brazilian Ministry of Development, Industry and Foreign Trade, (xiv) C&C Reservoirs, which is an analytics company providing analogue intelligence for upstream subsurface application for the oil and gas industry, and (xv) Nasdaq.

Industry publications generally state that the information presented therein has been obtained from sources believed to be reliable, but the accuracy and completeness of the information is not guaranteed. Although we have no reason to believe any of this information is inaccurate in any material respect, neither the Issuer, the Guarantors nor the Initial Purchasers have independently verified this information or make any representation as to the accuracy or completeness of such information. The Initial Purchasers accept no liability in relation to any such information derived from such sources. Our in-house research and estimates, while believed to be reliable, have not been independently verified by the Initial Purchasers and neither the Issuer, the Guarantors or the Initial Purchasers can assure you that the information is accurate. Nothing in this Offering Memorandum should be interpreted as a market forecast.

Volcker Rule

Under the final regulations implementing Section 619 of the Dodd-Frank Wall Street Reform and Consumer Protection Act (commonly known as the "Volcker Rule"), "banking entities" are generally restricted from sponsoring, or acquiring "ownership interests" in, "covered funds." The definition of "covered fund" in the Volcker Rule includes any entity that would be an investment company under the Investment Company Act but for the exemption provided by Section 3(c)(1) or 3(c)(7) thereunder, unless an exception from the "covered fund" definition applies. Because the Issuer relies on the exemption provided by Section 3(c)(7) of the Investment Company Act, it may be considered a "covered fund" for purposes of the Volcker Rule. However, based on the characteristics of the Notes, including in particular the absence of any right of the holders thereof to (a) participate in the selection or removal of directors or management of the Issuer, (b) share in the income, gains or profits of the Issuer, or (c) have any claim on or interest in any assets of the Issuer or any of the proceeds thereof (excluding rights to exercise remedies upon occurrence of an event of default), and the existence of the Note Guarantees, the Issuer does not believe that the Notes will be considered "ownership interests" in the Issuer for purposes of the Volcker Rule. Moreover, under amendments to the Volcker Rule that became effective on October 1, 2020, a safe harbor has been added clarifying that an "ownership interest" does not include senior debt interests having certain characteristics, including that, generally: (1) under the terms of the interest the holders do not have the right to receive a share of the income, gains, or profits of the issuer, but are entitled to receive only (i) interest at a stated interest rate, as well as commitment fees or other fees, which are not determined by reference to the performance of the issuer's underlying assets, and (ii) repayment of a fixed principal amount, on or before a maturity date, in a contractually-determined manner (which may include prepayment premiums intended solely to reflect, and compensate holders of the interest for, forgone income resulting from an early prepayment); (2) the entitlement to payments under the terms of the interest is absolute and could not be reduced based on losses arising from the underlying assets; and (3) holders are not entitled to receive the underlying assets of the issuer after all other interests have been redeemed or paid in full (excluding the rights to exercise remedies upon the occurrence of an event of default). The Issuer believes that the Notes satisfy the conditions of this safe harbor.

CERTAIN TERMS AND DEFINITIONS

The following is a glossary of certain key industry and other defined terms used in this Offering Memorandum:

"1C" refers to uncertainty ranges for Contingent Resources categories, according to PRMS guidelines.

"1P" means proved reserves, according to PRMS guidelines.

"2C" refers to uncertainty ranges for Contingent Resources categories, according to PRMS guidelines.

"2P" means the sum of proved *and* probable reserves, according to PRMS guidelines.

"3C" refers to uncertainty ranges for Contingent Resources categories, according to PRMS guidelines.

"3P" means the sum of proved, probable *and* possible reserves, according to PRMS guidelines.

"3R" means 3R Petroleum Óleo e Gás S.A.

"3R Areia Branca" means the former corporate name of our wholly owned subsidiary 3R RNCE.

"3R Bahia" means our wholly owned subsidiary 3R Bahia S.A., formerly named 3R Candeias S.A.

"3R Candeias" means the former corporate name of our wholly owned subsidiary 3R Bahia.

"3R Fazenda Belém" means our former wholly owned subsidiary 3R Fazenda Belém S.A., merged into 3R RNCE.

"3R Macau" means our former wholly owned subsidiary 3R Macau S.A., merged into 3R RNCE.

"3R Offshore" means 3R Petroleum Offshore S.A., formerly named OP Energia Ltda.

"3R Pescada" means 3R Pescada S.A., formerly named OP Pescada Óleo e Gás Ltda.

"3R Potiguar" means our wholly owned subsidiary 3R Potiguar S.A.

"3R Rio Ventura" means our former wholly owned subsidiary 3R Rio Ventura S.A., merged into 3R Bahia.

"3R RNCE" means our wholly owned subsidiary 3R RNCE S.A., formerly named 3R Areia Branca S.A.

"Accumulation" is used to identify an individual body of moveable petroleum. A known accumulation (one determined to contain reserves or contingent resources) must have been penetrated by a well. The well must have clearly demonstrated the existence of moveable petroleum by flow to the surface or at least some recovery of a sample of petroleum through the well. However, log and/or core data from the well may establish an accumulation, provided there is a good analogy to a nearby and geologically comparable known accumulation.

"ANP" means the Brazilian National Petroleum, Natural Gas and Biofuel Agency (*Agência Nacional do Petróleo, Gás Natural e Biocombustíveis*).

"ANP Minimum Exploratory Program" represents the mandatory exploratory activities to be carried out by the concessionaire during the exploration phase, in the case of bidding rounds under the concession regime.

"API" means a measure for the relative density of petroleum created by the American Petroleum Institute.

"Areia Branca Cluster" means the cluster comprising two onshore oil fields, that is part of the Potiguar Complex, located at the Potiguar Sedimentary Basin, in the state of Rio Grande do Norte. The Areia Branca Cluster is formed by the *Ponta do Mel* and *Redonda* fields.

"Barrel" or *"bbl"* means a stock tank barrel, a standard measure of volume for petroleum corresponding to 158.98 liters.

"*bbl/d*" means barrel per day.

"*bcm*" means billion cubic meters of natural gas.

"*Block* or *exploration block*" means part of a sedimentary basin formed by a vertical prism of an indefinite depth, with a polygonal surface defined by the geographic location of the vertexes where oil and natural gas exploration and production activities are carried out.

"*BOE*" means barrels of oil equivalent, with volumes of natural gas converted to barrels of oil using a conversion factor of 1,000 m³ of natural gas to 6.28981 bbl, in accordance with ANP definitions. For reference purposes, one BOE is equivalent to 159 standard m³ of gas. 1.0 BOE is also equivalent to approximately 5,614.59 cubic feet, in accordance with ANP definitions.

"*BOEPD*" means barrels of oil equivalent per day.

"*bpd*" means barrels of oil per day.

"*Brent Oil Price*" means the price benchmark of Brent crude oil based on the ICE (Intercontinental Exchange).

"*Bcf*" means billions of standard cubic feet of gas.

"*BTG Pactual*" means BTG Pactual Investment Banking Ltda. (Banco BTG Pactual S.A.) or any of its affiliates.

"*Campos Sedimentary Basin*" means the sedimentary basin located in the north coast of the state of Rio de Janeiro, extending to the south of the state of Espírito Santo.

"*Cluster*" means a set of onshore or offshore natural gas and/or oil fields.

"*Condensate*" means a low-density, high-API gravity liquid hydrocarbon phase that generally occurs in association with natural gas. The API gravity of condensate is typically 50 degrees to 120 degrees.

"*Contingent Resources*" means quantities of petroleum and condensed and natural gas that are potentially recoverable from known accumulation by application of development projects, but which are not currently considered to be commercially recoverable due to one or more contingencies. Contingent Resources are further categorized in accordance with the level of certainty as 1C, 2C and 3C, according to the PRMS guidelines, and may be sub-classified based on project maturity and/or characterized by the economic status.

"*DBO*" means DBO 2.0 S.A., which is a wholly owned subsidiary of DBO Energia and a former direct shareholder of 3R Offshore, which was merged into Maha Energy Offshore (Brasil) Ltda. on December 5, 2022.

"*DBO Energia*" means DBO Energia S.A., which became our direct shareholder as a result of the swap of DBO Energia equity interest in 3R Macau S.A. (merged into 3R RNCE) for a then 19.2% equity interest in our common shares, which was consummated in November 2020, after the conclusion of our initial public offering.

"*Decommissioning*" means the abandonment and reclamation of the facilities used for the production of oil and natural gas reserves and the costs associated therewith.

"*DeGolyer and MacNaughton*" means the international petroleum industry consulting company *DeGolyer and MacNaughton Corp.*

"*Developed reserves*" means quantities of petroleum and condensed and natural gas that are potentially recoverable from existing wells and facilities. Reserves are considered developed only after the necessary equipment has been installed, or when the costs to do so are relatively minor compared to the cost of a well. Where required facilities become unavailable, it may be necessary to reclassify developed reserves as undeveloped.

"*E&P*" means exploration and production.

"*ECOMP*" means natural gas compression station (*Estação de Compressão de Gás Natural*).

"*Encumbered Concessions*" means the following oil and/or gas concessions: (a) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003808/97-62 entered between ANP and Petrobras on August 6, 1998 in relation to *Macau* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (b) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.03825/97-81 entered between ANP and Petrobras on August 6, 1998 in relation to *Salina Cristal* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (c) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48610.00007998/2004 entered between ANP and Petrobras on November 24, 2004 in relation to *Sanhaçu* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Six; (d) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003816/97-91 entered between ANP and Petrobras on August 6, 1998 in relation to *Ponta do Mel* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (e) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003818/97-16 entered between ANP and Petrobras on August 6, 1998 in relation to *Redonda* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (f) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003792/97-24 entered between ANP and Petrobras on August 6, 1998 in relation to *Canto do Amaro* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (g) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48610.004003/98 entered between ANP and Petrobras on August 6, 1998 in relation to *Benfica* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (h) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003784/97-04 entered between ANP and Petrobras on August 6, 1998 in relation to *Alto do Rodrigues* in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (i) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003799/97-73 entered between ANP and Petrobras on August 6, 1998 in relation to Fazenda Pocinho in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (j) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003800/97-51 entered between ANP and Petrobras on August 6, 1998 in relation to the *Guamaré* field in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (k) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003793/97-97 entered between ANP and Petrobras on August 6, 1998 in relation to the *Estreito* field, in the onshore portion of the Potiguar Sedimentary Basin, originating from Round Zero; (l) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003629/97-43 entered between ANP and Petrobras on August 6, 1998 in relation to the *Água Grande* field in the onshore portion of the Recôncavo Sedimentary Basin, originating from Round Zero; (m) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003638/97-34 entered between ANP and Petrobras on August 6, 1998 in relation to the *Candeias* field in the onshore portion of the Recôncavo Sedimentary Basin, originating from Round Zero; (n) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003641/97-49 entered between ANP and Petrobras on August 6, 1998 in relation to *Cexis* field in the onshore portion of the Recôncavo Sedimentary Basin, originating from Round Zero; (o) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003644/97-37 entered between ANP and Petrobras on August 6, 1998 in relation to the *Dom João* field in the offshore portion of the Recôncavo Sedimentary Basin, originating from Round Zero; (p) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003697/97-01 entered between ANP and Petrobras on August 6, 1998 in relation to the *Socorro* field, in the onshore portion of the Recôncavo Sedimentary Basin, originating from Round Zero.

"*Espírito Santo Sedimentary Basin*" means the sedimentary basin located along the north-central coast of the state of Espírito Santo and the extreme southern coast of the state of Bahia.

"*Farm-out agreement*" means a type of participation contract. For additional information, see "Regulatory Overview—Concessions—Farm-in and Farm-out Agreements."

"*Fazenda Belém Cluster*" means the cluster comprising two onshore oil fields, that is part of the Potiguar Complex, located in the Potiguar Sedimentary Basin, in the state of Ceará. The Fazenda Belém Cluster is formed by the *Fazenda Belém* and *Icapuí* fields.

"*Field*" means an oil and natural gas producing area resulting from a continuous reservoir or more than one reservoir, with varying depths.

"*Guamaré Industrial Asset*" means, collectively, all equipment and systems for the treatment, processing and refining of oil and gas integrated with the Potiguar Complex, including, but not limited to (i) the private waterway terminal facility (*Terminal de Uso Privado* – TUP), port and heliport, (ii) the natural gas processing units (UPGNs), individually referred to as UPGN I, UPGN II and UPGN III; (iii) the *Clara Camarão* refinery, formed by two refining units individually referred to as U260 and U270, (iv) gas collection and compressing stations to supply the UPGN, gas lift compressors and compressors for residual gas export; (v) oil treatment stations; (vi) water treatment stations; (vii) gas treatment and drying units; (viii) electrical substations; (ix) slug catcher and thermal oil treating of the Pescada Cluster; (x) pipelines; (xi) laboratory for tests and analysis of products; and (xii) integrated control rooms; administrative base, including lodging and dining amenities.

"*Guarantors*" means 3R and the Subsidiary Guarantors.

"*Hydrocarbon*" means a compound consisting exclusively of carbon and hydrogen. Oil and condensed and natural gas are hydrocarbons.

"*Issuer*" means 3R Lux, a private limited liability company (*société à responsabilité limitée*) incorporated under the laws of the Grand Duchy of Luxembourg, having its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, Grand Duchy of Luxembourg, and registered with the RCS under number B 268.764.

"*kboe/d*" means thousand barrels of oil equivalent per day.

"*Lifting Costs*" mean the costs to operate and maintain wells and related equipment and facilities per BOE of oil and gas produced by those facilities after the hydrocarbons have been found, acquired, and developed for production.

"*LNG*" means Liquefied Natural Gas.

"*m³*" means cubic meters.

"*m³/day*" means cubic meters per day.

"*Macau Cluster*" means the cluster comprising six onshore oil and gas fields that is part of the Potiguar Complex, located at the Potiguar Sedimentary Basin, in the state of Rio Grande do Norte. The Macau Cluster is formed by the *Macau*, *Salina Cristal*, *Carcará*, *Lagoa Aroeira*, *Porto Carão* and *Sanhaçu* fields.

"*Malombe Exploratory Block*" means the offshore exploration block BM-ES-21, located in deep waters at the Espírito Santo Sedimentary Basin, in the state of Espírito Santo, which is granted according to the BM-ES-21 concession agreement, or the Malombe Discovery Evaluation Plan (*plano de avaliação de descoberta de Malombe*).

"*Mature fields*" are those fields in which production passed its peak and is in the decline phase; however, they may have opportunities for revamping through the use of secondary recovery techniques or the optimization of operations.

"*Merger*" means the merger of 3R Petroleum e Participações S.A. into Ouro Preto, completed in November 2020, after which we started to operate under the name 3R Petroleum Óleo e Gás S.A. For additional information on the Merger, see "*Business—History*."

"*MMboe*" means million barrels of oil equivalent.

"*Natural Gas*" means a combination of light hydrocarbon that, in surface pressure and temperature conditions, is found in a gaseous state. It is found in underground accumulations (onshore or offshore) and may potentially be dissolved in oil or as gas caps (associated) or may be found in its gaseous state (non-associated).

"*Oil*" means a portion of petroleum existing in the liquid state under its original reservoir conditions and which remains liquid under surface pressure and temperature conditions.

"*Ônix*" means Ônix Petróleo e Gás Participações Ltda.

"*Ouro Preto*" means Ouro Preto Óleo e Gás S.A., 3R Petroleum Óleo e Gás S.A.'s former corporate name.

"*Papa-Terra Cluster*" means the cluster formed by the *Papa-Terra* offshore oil field, located at the Campos Sedimentary Basin, in the state of Rio de Janeiro.

"*Peroá Cluster*" means the cluster comprising two shallow water oil and gas fields, located in the Espírito Santo Sedimentary Basin, in the state of Espírito Santo. The Peroá Cluster is formed by the *Peroá* and *Cangoá* fields, and the deep water Malombe Exploratory Block.

"*Pescada Cluster*" means the cluster comprising three offshore oil and gas fields that is part of the Potiguar Complex, located at the Potiguar Sedimentary Basin, in the state of Rio Grande do Norte. The Pescada Cluster is formed by the *Pescada, Arabaiana* and *Dentão* fields.

"*Petrobras*" means Petróleo Brasileiro S.A., Brazil's national oil company.

"*Petrobras Divestment Plan*" refers to Petrobras' plan to divest its non-core onshore, shallow-water and offshore oil fields.

"*Petrogal*" means Petrogal Brasil S.A. – GALP.

"*Petroleum*" means natural compound made of a mixture of hydrocarbons found underground, in sedimentary rocks, in gas, liquid and solid states, generally mixed with impurities. Encompasses crude oil and condensed and natural gas. ANP defines petroleum as any hydrocarbon that is liquid in its natural state and that does not contain natural gas, *i.e.*, hydrocarbons that remain liquid in surface pressure and temperature conditions, for example oil and condensed.

"*Possible reserves*" means those additional reserves of oil and gas that, as per the analysis of geoscience and engineering data, are less likely to be recoverable than probable reserves. The total quantities ultimately recovered from the project have a low probability to exceed the sum of proved *plus* probable *plus* possible reserves (3P), which is equivalent to the high estimate scenario. When probabilistic methods are used, there should be at least a 10% probability that the actual quantities recovered will equal or exceed the 3P estimate.

"*Potiguar Sedimentary Basin*" is a sedimentary basin located along the coast of the state of Rio Grande do Norte and the extreme east of the state of Ceará.

"*Potiguar Cluster*" means the cluster comprising 19 onshore and three offshore oil and gas fields that is part of the Potiguar Complex, located at the Potiguar Sedimentary Basin, in the state of Rio Grande do Norte. The Potiguar Cluster includes the *Alto do Rodrigues, Angico, Estreito, Fazenda Pocinho, Guamaré, Monte Alegre, Serraria, Barrinha, Barrinha Leste, Barrinha Sudoeste, Benfica, Canto do Amaro, Fazenda Canaan, Mossoró, Pedra Sentada, Pintassilgo, Poço Verde, Serra do Mel, Serra Vermelha, Cioba, Oeste de Ubarana* and *Ubarana* fields.

"*Potiguar Complex*" means the Guamaré Industrial Asset and the group of five clusters located in the Potiguar Sedimentary Basin, namely the Potiguar, Macau, Areia Branca, and Pescada Clusters, located in the state of Rio Grande do Norte, and the Fazenda Belém Cluster, located in the state of Ceará.

"*Pre-salt*" means a layer of microbialites (carbonate rocks) located below a salt layer.

"*PRMS*" means the Petroleum Resource Management System, which is a system developed for consistent and reliable definition, classification, and estimation of hydrocarbon resources.

"*Probable reserves"* means those additional reserves of oil and gas that, as per the analysis of geoscience and engineering data, are less likely to be recovered than proved reserves but more likely to be recovered than possible reserves. It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated proved *plus* probable reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate.

"*Prospect"* means a potential accumulation mapped by geologists and geophysicists to indicate a probability of oil and/or natural gas accumulation ready to be drilled. The five elements (generation, migration, reservoir, seal and trap) must be present for an accumulation to exist, and if any of them are absent, neither oil nor natural gas will be present, at least not in commercial volumes.

"*Prospective Resources"* means quantities of oil and condensed and natural gas that are potentially recoverable from accumulations yet to be discovered.

"*Proved reserves"* means those additional reserves of oil and gas that, as per the analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable from a given date forward from known reservoirs and under defined economic conditions, operating methods, and government regulations. If deterministic methods are used, the term "reasonable certainty" is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the estimate.

"*PTAX Rate*" means the exchange rate, expressed as the amount of Brazilian reais per one Dollar, calculated at the end of each day by the Central Bank of Brazil.

"*Recôncavo Sedimentary Basin"* means the sedimentary basin located in the state of Bahia.

"*Recôncavo Cluster"* means the cluster comprising 12 onshore oil and gas fields that is part of the Recôncavo Complex, located in the Recôncavo Sedimentary Basin, in the state of Bahia. The Recôncavo Cluster includes the *Aratu*, *Ilha de Bimbarra*, *Massuí*, *Candeias*, *Cexis*, *Socorro*, *Dom João*, *Pariri*, *Socorro Extensão*, *São Domingos*, *Cambacica* and *Guanambi* fields.

"*Recôncavo Complex"* means the group of two clusters located in the Recôncavo Sedimentary Basin, in the state of Bahia, namely the Recôncavo and Rio Ventura Clusters.

"*Recovery factor"* means the recoverable amount of hydrocarbon initially in place, calculated as the production of oil and/or gas from the first day of production to date, *divided by* the total oil and/or gas in the reservoir.

"*Reserves"* means quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must satisfy four criteria: discovered, recoverable, commercial, and remaining (as of the evaluation's effective date) based on the development projects applied. Reserves are further categorized as 1P, 2P and 3P in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by development and production status.

"*Reserves Report"* means the report on reserves and revenue prepared by *DeGolyer and MacNaughton* dated as of December 31, 2022, included elsewhere in this Offering Memorandum.

"*Rio Ventura Cluster"* means the cluster comprising five onshore oil and gas fields, located in the Recôncavo Complex, in the state of Bahia. The Rio Ventura Cluster includes the *Água Grande*, *Bonsucesso*, *Fazenda Alto das Pedras*, *Pedrinhas* and *Tapiranga* fields.

"*Round Six"* means the sixth bidding round for blocks for exploration and production of oil and natural gas that was held by ANP on August 17th and 18th, 2004, with 154 blocks granted to 19 companies.

"*Round Zero"* means the series of negotiations, under the Brazilian Oil Law, that determined the end of Petrobras' monopoly in the oil exploration and production activities in Brazil, as well as the ratification of Petrobras' involvement in the fields where it was already active prior to the Brazilian Oil Law.

"Sale and Purchase Agreements" means agreements we entered into with Petrobras for the acquisition of oil and gas clusters.

"Subsidiary Guarantors" means 3R Potiguar, 3R Bahia, and 3R RNCE.

"Term Loan Facility" means the Credit and Guarantee Agreement, dated August 2, 2022, as amended on May 25, 2023 (as amended, supplemented, restated, modified, replaced or refinanced in whole or in part from time to time).

"*Undeveloped reserves*" means quantities of petroleum and condensed and natural gas that are potentially recoverable through future significant investments. Undeveloped reserves are to be produced (1) from new wells on undrilled acreage in known accumulations, (2) from deepening existing wells to a different (but known) reservoir, (3) from infill wells that will increase recovery, or (4) where a relatively large expenditure (e.g., when compared to the cost of drilling a new well) is required to (a) recomplete an existing well or (b) install production or transportation facilities for primary or improved recovery projects.

"*UPGN*" means Natural Gas Processing Unit.

SUMMARY

This summary of our activities and financial and operating information does not present all the information that you should consider before investing in our Notes. You should read this entire Offering Memorandum, including the information contained in the sections "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as in our unaudited interim financial information and our audited financial statements and explanatory notes, included elsewhere in this Offering Memorandum, before making an investment decision to invest in the Notes.

Overview

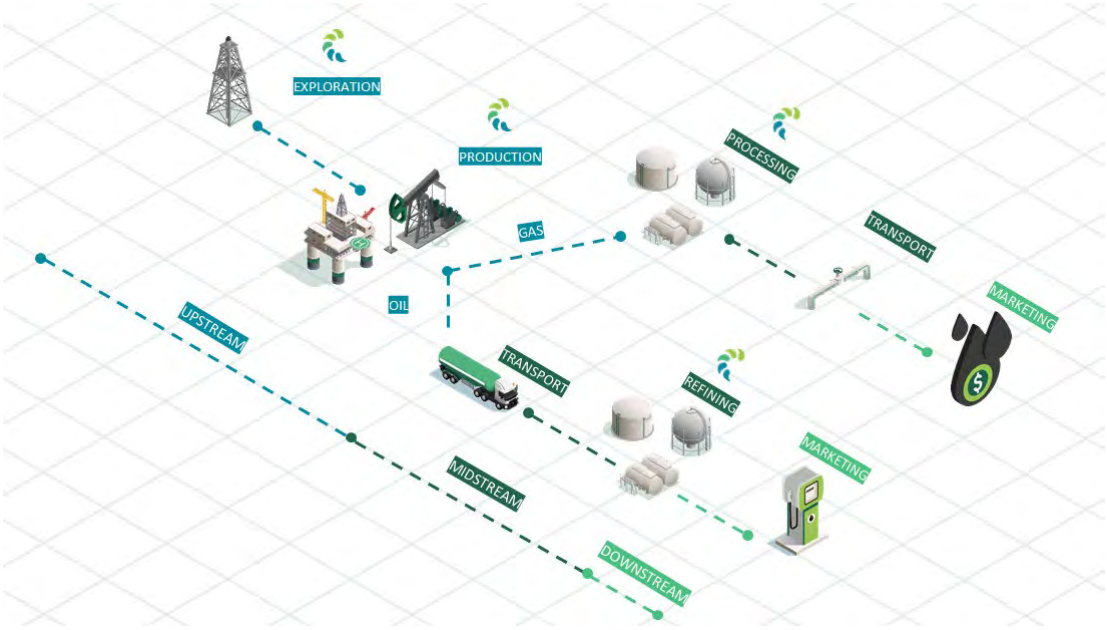
We are one of the largest publicly listed independent oil and gas producers in Latin America in terms of production volume and our main strategy is focused on the redevelopment of mature oil and gas fields.

"**R**edevelop, **R**evitalize and **R**ethink" are the three "R"s that form not only our identity, but also the pillars of our strategy to increase production and reserves in mature oil and gas fields, and to support our position as a leading independent oil producer in Brazil and Latin America.

We are ranked by the ANP as a class "A" operator, which enables us to operate in all types of oil and gas fields in Brazil, from onshore to ultra-deep-water offshore fields. We have a qualified technical team that has a successful track record in (i) revamping mature oil fields, and (ii) structuring complex mergers and acquisitions and funding transactions. As certified by *Degolyer and McNaughton*, our assets had proved and probable (2P) oil and gas reserves of 516.0 Mmboe as of December 31, 2022.

While our core business is the exploration, production and trading of oil and gas (upstream segment of the production chain, or the "exploration and production" or "E&P" segment), our portfolio includes assets in the processing, refining and marketing of oil and gas derivatives (midstream and downstream segment, or the "mid and downstream" segment), which diversifies the range of products we sell.

The following chart shows the flow of our oil and gas operations:



In accordance with our business plan, our strategy is to build our portfolio through opportunistic acquisitions of assets that (i) have been operational for many years; (ii) have proved oil reserves certifiable by independent experts; (iii) we may be able to increase production based on investments with accelerated returns (we use return on investment as a decision-making tool and, accordingly, we consider the time to achieve the expected returns and the

amount to be disbursed); (iv) have optimized infrastructure that can be operated with a lean structure; and (v) potentially have (a) synergy with our other assets and (b) can be operated at competitive lifting costs.

Throughout our history, we have acquired a comprehensive portfolio of oil and gas production assets in Brazil following a divestment plan of onshore, shallow-water and offshore oil fields executed by Petrobras, (the "Petrobras Divestment Plan").

In summary, we have positioned ourselves as a strategic company in the oil and gas sector, with a portfolio and an investment thesis anchored in oil and gas production. Our current focus is to integrate and optimize the operations of the assets in our portfolio.

The table below sets forth (i) the assets that are currently operated by us, (ii) the assets that are in process of being acquired by us and (iii) additional information regarding each one of these assets:

Cluster	Type and Reserves	Location in Brazil / Basin	% Working interest	Status	Concession Term/ Maturity
Macau Cluster	Onshore and Offshore (shallow water) – Oil & Gas	Potiguar Sedimentary Basin	100% held by 3R RNCE	In operation by 3R.	From 2025 to 2052 (depending on each field)
Rio Ventura Cluster	Onshore – Oil & Gas	Recôncavo Sedimentary Basin	100% held by 3R Bahia	In operation by 3R.	From 2025 to 2045 (depending on each field)
Areia Branca Cluster	Onshore – Oil	Potiguar Sedimentary Basin	100% held by 3R RNCE	In operation by 3R.	From 2025 to 2052 (depending on each field)
Recôncavo Cluster	Onshore – Oil & Gas	Recôncavo Sedimentary Basin	100% held by 3R Bahia[(1)]	In operation by 3R.	From 2025 to 2039 (depending on each field)
Fazenda Belém Cluster	Onshore – Oil	Potiguar Sedimentary Basin	100% held by 3R RNCE	In operation by 3R.	2025
Peroá Cluster	Offshore – Gas	Espírito Santo Sedimentary Basin	100% held by 3R Offshore[(2)]	In operation by 3R.	2025
Papa-Terra Cluster	Offshore – Oil & Gas	Campos Sedimentary Basin	62.5% held by 3R Offshore[(3)]	In operation by 3R.	2032
Potiguar Cluster	Onshore and Offshore (shallow water) – Oil & Gas	Potiguar Sedimentary Basin	100% held by 3R Potiguar	In operation by 3R.	From 2025 to 2052 (depending on each field)
Pescada Cluster	Offshore (shallow water) – Oil & Gas	Potiguar Sedimentary Basin	100% held by 3R Pescada[(4)]	In operation by Petrobras. Acquisition of 65% working interest by 3R pending consummation (expected for 2024).	2025

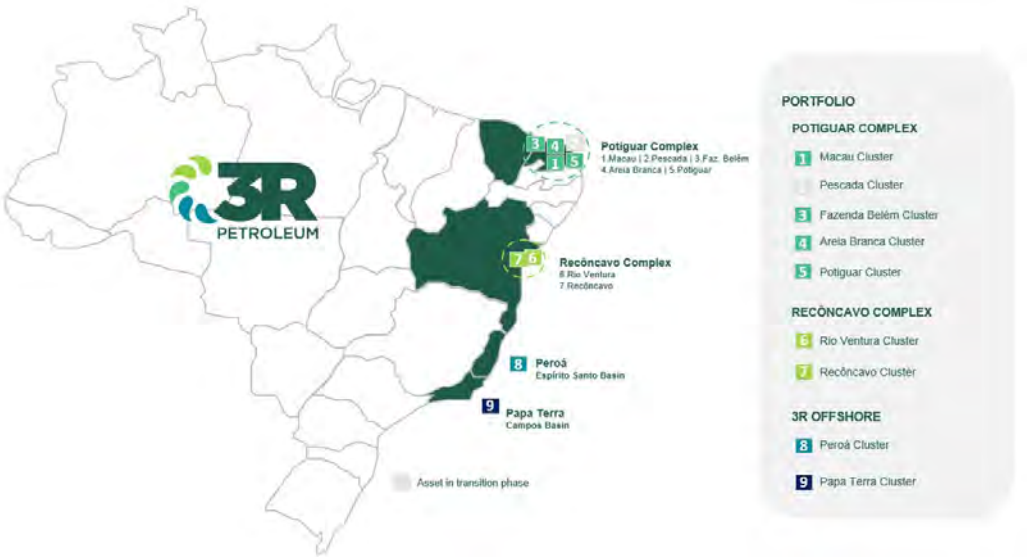
(1) Except for the Cambacica field, which is jointly held by 3R Bahia (75%) and Sonangol Hidrocarbonetos Brasil Ltda. (25%); and the Guanambi field, which is held by 3R Bahia (80%) and Sonangol Guanambi Exploração e Produção de Petróleo Ltda. (20%).
(2) 3R owns 85% of 3R Offshore's equity interest, which represents the equivalent of an 85% indirect working interest in the Peroá Cluster and related assets.
(3) 3R owns 85% of 3R Offshore's equity interest, which represents the equivalent of a 53.1% indirect working interest in the Papa-Terra Cluster and related assets.
(4) As of the date of this Offering Memorandum, we already own 35% of the Pescada Cluster and, on July 9, 2020, we entered into a Sale and Purchase Agreement related to the remaining 65% working interest in this asset. The closing of this transaction remains subject to the satisfaction of customary conditions precedent and is expected to occur in 2024. After such closing date, we will be the sole owner and operator of the Pescada Cluster.

In terms of concession rights, as of the date of this Offering Memorandum, we hold a (i) 100% working interest in the concession rights relating to the Macau Cluster; (ii) 100% working interest in the concession rights relating to the Rio Ventura Cluster; (iii) 100% working interest in the concession rights relating to the Areia Branca Cluster; (iv) 100% working interest in the concession rights (except for the *Cambacica* and *Guanambi* fields) relating to the Recôncavo Cluster, (v) 100% working interest in the concession rights relating to the Fazenda Belém Cluster, (vi) 100% working interest (held by 3R Offshore) in the concession rights relating to the Peroá Cluster (representing an 85% indirect working interest held by 3R), (vii) 62.5% working interest (held by 3R Offshore) in the concession rights relating to the Papa-Terra Cluster (representing a 53.1% indirect working interest held by 3R), (viii) 100% working interest in the concession rights relating to the Potiguar Cluster and (ix) 35% working interest in the concession rights relating to the Pescada Cluster.

On July 9, 2020, we (through 3R Pescada) entered into a Sale and Purchase Agreement with Petrobras to purchase the remaining 65% of the working interest in the concession rights related to the Pescada Cluster (the "Pending Acquisition"). Upon consummation of this acquisition, which is expected to occur in 2024, we will own a 100% working interest in and will be the sole operator of the Pescada Cluster.

For further information on our asset portfolio and our concession agreements, see "*Business—Concession Agreements.*"

The chart below illustrates the location of our operating assets, as of the date of this Offering Memorandum:



In connection with the acquisition of the Potiguar Cluster, we also acquired the Guamaré Industrial Asset, which has a complete oil and gas infrastructure in the state of Rio Grande do Norte, including the processing, refining, storage, transport and outflow of oil and natural gas. For more information on the Guamaré Industrial Asset, see "*Business—Our Distribution Process—Potiguar Cluster Oil and Gas Distribution.*"

Key Financial and Operating Indicators

The following table sets forth certain key financial information for the periods indicated below:

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	2023	2022	2022	2022	2021	2020
	(in millions of US$, except percentages) [1]	*(in millions of R$, except percentages)*		*(in millions of US$, except percentages)* [1]	*(in millions of R$, except percentages)*		
Net revenue	753.0	3,770.5	1,277.3	344.0	1,722.4	727.8	204.3
Cost of products sold	(517.5)	(2,591.4)	(548.5)	(166.8)	(835.5)	(319.5)	(106.2)
Gross profit	235.5	1,179.1	728.8	177.1	886.9	408.3	98.0
Net income (loss) for the year/period	3.6	18.0	166.7	25.5	127.7	16.0	(276.5)
Net margin[2]	0.5%	0.5%	13.1%	7.4%	7.4%	2.2%	(135.4)%
EBITDA[3]	233.2	1,167.9	591.9	109.9	550.4	532.4	(132.7)
EBITDA Margin[4]	31.0%	31.0%	46.3%	32.0%	32.0%	73.2%	(65.0)%
Adjusted EBITDA[5]	236.4	1,183.7	597.0	141.7	709.6	356.1	52.3
Adjusted EBITDA Margin[4]	31.4%	31.4%	46.7%	41.2%	41.2%	48.9%	25.6%

(1) Solely for the convenience of the reader, the Brazilian *real* amounts for the nine- month period ended September 30, 2023 and the year ended December 31, 2022 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

(2) Net margin is calculated as net income (loss) for the period/year *divided by* net revenue for the period/year.

(3) We calculate EBITDA (earnings before interest, tax, depreciation and amortization) in accordance with the guidelines in CVM Resolution No. 156, as net income (loss) for the year/period *plus* financial result (financial expenses net of financial income), current and deferred income tax and social contribution, and depreciation and amortization. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin*" and for a reconciliation of EBITDA to net income (loss) for the applicable period/year, see "*Selected Financial and Other Information—Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin*."

(4) We calculate EBITDA Margin as EBITDA for the year/period *divided by* net revenue for the year/period. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin*".

(5) We calculate Adjusted EBITDA as EBITDA *plus* (i) impairment (loss)/reversal in recoverable value of assets, (ii) expenses related to the return of concessions, (iii) adjustments to the abandonment provisions – Pescada, (iv) exclusion of ICMS from the calculation basis of PIS/COFINS, Macau Cluster additional expense, (vi) expenses earn-out to an old controller; (vii) expenses on operator – *Camarupim* field, (viii) expenses related to labor provisions, (ix) translation adjustments – OPE, (x) expense related to the assignment of the *Fazenda Pinaúna* field, and (xi) bonus linked to the IPO. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, EBITDA Margin, Adjusted EBITDA and Adjusted EBITDA Margin*," and for a reconciliation of Adjusted EBITDA see "*Selected Financial and Other Information —Reconciliation of Adjusted EBITDA to Net Income (Loss) and Calculation of Adjusted EBITDA Margin*."

(6) We calculate Adjusted EBITDA Margin as Adjusted EBITDA for the corresponding year/period *divided by* net revenue for the year/period. For more information, see "*Selected Financial and Other Information—Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin*.".

The following table sets forth historical operating information of the Macau, Pescada, Rio Ventura, Fazenda Belém, Recôncavo, Peroá, Papa-Terra, Areia Branca and Potiguar Clusters, taking into account 100% of the oil and gas production of these clusters in the periods indicated:

	For the year ended December 31,				
	2022	Variation	2021	Variation	2020
	(in BOEPD, except percentages)				
Production	**41,949**	**(24.0)%**	**55,210**	**(10.8)%**	**61,906**
Oil	33,154	(25.3)%	44,392	(12.6)%	50,786
Gas	8,794	(18.7)%	10,817	(2.7)%	11,121

The following table sets forth the net present value of the future generation of cash from certified reserves, based on the Reserves Report, taking into account the assets in which we hold and/or expect to hold working interests after consummation of the relevant acquisitions. The table (i) takes into account the entire production over the remaining exploration and production period of the assets that are part of the Potiguar Complex, Recôncavo Complex, Peroá Cluster and Papa-Terra Cluster, and (ii) assumes the consummation of the acquisition process of the Pescada Cluster, included in the Potiguar Complex.

	Certified volumes (1P)	Certified volumes (2P)	Certified volumes (3P)
	(in millions of BOE)	*(in millions of BOE)*	*(in millions of BOE)*
Potiguar Sedimentary Basin[(1)]	230.3	305.0	353.2
Recôncavo Sedimentary Basin	73.6	104.7	139.5
Espírito Sedimentary Santo Basin (85%)[(2)]	8.6	11.5	12.1
Campos Sedimentary Basin (53.1%)[(3)]	54.7	94.8	121.6
Total	**367.2**	**516.0**	**626.4**
Net present value (in billions of US$)[(4)]	**US$4.71**	**US$6.32**	**US$7.70**

(1) Includes the Pescada Cluster, in which the acquisition of a 65% working interest is pending consummation.

(2) The Reserves Report presented elsewhere in this Offering Memorandum, reports a net reserves volume (millions of BOE) of 10.1, 13.5 and 14.3 for 1P, 2P, 3P reserves, respectively, for the Espírito Santo Sedimentary Basin, considering the 100% working interest held by 3R Offshore. 3R owns 85% of 3R Offshore, which represents the equivalent of an 85% indirect working interest in the Peroá Cluster, located in the Espírito Santo Sedimentary Basin.

(3) The Reserves Report presented elsewhere in this Offering Memorandum reports a volume (millions of BOE) of 64.4, 111.6, and 143.1 for 1P, 2P, 3P reserves, respectively, for the Campos Sedimentary Basin, considering a 62.5% working interest of our subsidiary, 3R Offshore. 3R owns 85% of the equity interests of 3R Offshore, which represents the equivalent of a 53.1% indirect working interest in the Papa-Terra Cluster, located in the Espírito Santo Sedimentary Basin.

(4) The Reserves Report presented elsewhere in this Offering Memorandum reports a net present value of US$4.80 billion, US$6.47 billion, and US$7.89 billion, for the 1P, 2P, and 3P reserves, respectively, considering a 62.5% working interest in our assets located in the Campos Sedimentary Basin and a 100% working interest in our assets located in the Espírito Santo Sedimentary Basin.

Our Competitive Strengths

We believe that certain of our competitive strengths are:

Part of our business generates stable and predictable sales.

We have entered into off-take agreements containing take-or-pay provisions for the purchase of a certain amount of our production volume, subject to quality specifications. Those agreements provide us with stable and predictable sales for part of our oil and gas production. We also have off-take agreements to sell part of the oil derivative products output from the *Clara Camarão* refinery. The rest of our production is sold through sales contracts, with no minimum volume required, and through sales offers made by us. For more information, see "*Business—Our Oil and Gas Sale Agreements*."

Most of our revenue derives from the sale of oil, natural gas and the oil derivatives that we produce. In the nine-month period ended September 30, 2023, and in the year ended December 31, 2022, 42.1% and 81.6% of our net revenue derived from sales of oil, respectively, and 10.6% and 18.3% derived from the sale of gas, respectively. In the nine-month period ended September 30, 2023, by contrast, 46.0% of our net revenue derived from the sale of oil derivatives.

All of our off-take agreements may be extended for subsequent periods, by the mutual agreement between the parties. We have entered into off-take agreements with: (i) Dax Oil, to sell the oil production of the Rio Ventura Cluster, with expiration date in 2025, (ii) Companhia de Gás da Bahia, or Bahiagás, to sell the natural gas production of the Recôncavo and Rio Ventura Clusters, with expiration date in 2024, (iii) Companhia de Gás do Espírito Santo, or ES Gás, to sell the natural gas production of the Peroá Cluster, which expires in 2025, and (iv) Raízen, to sell the very low sulfur fuel oil (VLSFO) bunker production of the *Clara Camarão* refinery, which expires in 2028.

Our business model focuses on simple mechanisms for improving the recovery factor of under-explored mature oil and gas fields.

We conduct our operations based on well-known and simple mechanisms such as: (i) reactivating idle wells, (ii) pull-in interventions (to replace piping and well-bottom pumps), (iii) workover activities (executed to access less depleted reserves with a static pressure closer to the original pressure, blocking off reserves with high water production), (iv) repressuring oil wells by injecting water to offset extracted volumes, and (v) improving or

increasing the fluid injection volume, as well as increasing the drainage network by drilling new vertical, horizontal and directional wells in reserves considered proved or possible by the certifiers. Accordingly, we do not rely on any specific, ultra-modern or disruptive technologies, which would require significant investments.

According to data from ANP, the average recovery factor (which is the volume of extracted oil from a specific field reservoir compared to the total volume of oil in place in such reservoir) in Brazil is close to 20%, while the world average is close to 35%. In relation to our assets, the recovery factor of our portfolio is below the Brazilian recovery factor. As a result, our business plan is to increase the recovery factor as we improve the operational efficiency through the revitalization and redevelopment of those assets.

Since we took over the operation of the assets that comprise our portfolio, we have been able to implement strategies to optimize production processes, reducing costs as we increase production. The operational and financial results that we achieved since 2020 support the potential of the assets that we operate, and our technical capacity to increase the recovery factor of these assets will be further expanded as we implement a more focused and lean operation.

Our assets are strategically located.

We currently have nine clusters of oil and gas fields in our portfolio, five of which are located in the Potiguar Sedimentary Basin, two are located in the Recôncavo Sedimentary Basin, one is located in the Espírito Santo Sedimentary Basin and one is located in the Campos Sedimentary Basin. For more information, see "—Overview." Proximity among these assets allows us to gain scale in local production and develop operating and financial synergies through an integrated management. Potential optimization initiatives include the integration of teams and suppliers, and the centralization of logistics, telecommunications and field control. Additionally, our portfolio includes assets located in the Brazilian coast and/or shallow waters with implemented logistics infrastructure, as well as an asset located in deep waters, diversifying our portfolio and, therefore, minimizing operational risks.

Moreover, the integration of our assets in the state of Rio Grande do Norte (Macau, Potiguar, Areia Branca and Pescada Clusters), from which the total production is sent to the Guamaré Industrial Asset, allows the integration of upstream activities (exploration, production and trading) with midstream and downstream activities (processing, refining and marketing of oil and gas derivatives), which also creates value in our overall production process.

Our portfolio has a resilient profile.

We are a low-cost company in terms of operating, general and administrative expenses. Most of our assets are located onshore and in shallow-water and close to the coast, and our facilities are directly connected to the land, making them operationally efficient and with competitive lifting costs, especially when compared to Brazilian and international industry average market players. For instance, in the third quarter of 2023, our lifting costs were US$18.5 per BOE, as compared to the lifting costs of other players in the market, which can be as high as US$26.0. This makes us resilient in challenging scenarios of Brent Oil Price fluctuations. Most of the crude oil produced by our clusters is shipped through pipelines that connect wells to processing plants. Unlike deep and ultra-deep offshore wells, we do not need to use oil tankers to ship our production.

Our corporate structure, which is tailored for the entire asset portfolio, also allows for a broad dilution of fixed costs and integration of the organizational structure, with consequent gains in operational and financial efficiency. Finally, the proportion of production on land and shallow waters generates flexibility in the application of our capital expenditures, considering that the mobilization time for interventions in this area are significantly shorter than the capital expenditure plan for offshore operations. In this sense, we are able to better manage oil prices stress scenarios by calibrating our capital expenditure plan, supported by the possibility of selecting projects with better returns.

High ESG standards

We conduct our activities aiming to comply with the highest levels of corporate governance, sustainability, environmental protection and social responsibility practices.

We also seek to positively interact with the communities of the locations in which we operate, providing new opportunities for them to prosper through the creation of jobs and fostering the local economy. We offer to our employees a robust career plan, with personal and professional growth potential, including stock option plans and the opportunity to become our shareholders.

We are developing our ESG standards connecting our strategic plan with what we believe to be the best ESG guidelines. In 2023, we published our first sustainability report, for the year 2022, following the standards of the Global Reporting Initiative (GRI). The sustainability report encompasses environmental, social and governance aspects and indicators relating to the main material themes identified for the business plan. This is a relevant milestone in the evolution of our Sustainability Journey, as it increases transparency about the projects, initiatives and results achieved, as well as creating an opportunity for self-evaluation for a sustainable cycle of generating value for the entire society.

Our business model carries a series of opportunities that can contribute to the socio-environmental aspect, namely: (i) minimization of gas emissions and water disposal, (ii) generation of employment and income for communities adjacent to the operating zones, (iii) application of a strict ethics and integrity program in the industry as a whole, among others.

Our Strategy

Our main strategies are:

Position ourselves to continue to capture opportunities in the oil and gas sector.

We are the company that acquired the largest number of assets from Petrobras in the Petrobras Divestment Plan, which clearly shows our strong position as an oil and gas consolidator of assets in production, supported by the technical qualifications of our team in disruptive acquisitions. We maintain our fiduciary duty to evaluate opportunities that generate value for our investment thesis and may continue to conduct acquisitions in the future.

We are rated as a class “A” operator by ANP, and therefore we are authorized to operate production fields located both onshore, on shallow water and deep waters (offshore), including pre- and post-salt. This “A” qualification gives us flexibility to diversify our portfolio between different producing areas, favors our participation in the process of acquiring assets that require an “A” qualification, and creates opportunities for partnerships with other companies that require such qualification for its counterparties. Therefore, we are well-positioned to evaluate potential business opportunities in the oil and gas industry, as compared to our peers.

Continuously evaluate opportunities to optimize the monetization of our products.

Our portfolio includes oil and natural gas production assets. We believe that the exposure to both types of hydrocarbons minimizes the risk of concentration in a specific segment and diversifies our revenue sources. Our business plan is based on the strategy of increasing efficiency in assets that we operate, reducing costs and increasing production scale, through the revitalization of the mature fields and the infrastructure that supports their operation.

In relation to oil production, we constantly evaluate opportunities to: (i) access new clients and/or improve the terms of current take-or-pay and/or spot sales contracts with third parties, whether in the local market or through exports through our own infrastructure and (ii) refine the majority of the oil produced at the Potiguar Complex using our own refining units, the *Clara Camarão* refinery, and our own infrastructure to treat, store and sell the refined output.

Regarding gas production, we constantly evaluate opportunities to: (i) negotiate take-or-pay and/or spot sales contracts with third parties, and (ii) diversify the portfolio of clients, as we access companies that are focused on compressed natural gas (CNG), liquefied natural gas (LNG), and interested in power generation through gas, known as “gas-to-wire” players. Alternatively, the produced gas can be used as an input to improve production of some of the heavy oil fields that we operate, through the generation and injection of steam into the reservoirs.

In relation to the oil derivatives that are produced at the *Clara Camarão* refinery, those are traditionally sold to local distributors, but we also have commercial flexibility to export them to other regions through cabotage, using our private waterway terminal that is part of the Guamaré Industrial Asset.

Assess strategic partnerships to obtain complementary experiences, technical know-how and financial support and mitigate our risk exposure.

One of our strategies is to continue assessing strategic partnerships to add value to different aspects of our business and obtain complementary experiences, technical know-how, financial support and mitigate our risk exposure, among others, such as the partnership we entered to with DBO (now Maha Energy Offshore (Brasil) Ltda.) for the management of offshore activities through our subsidiary 3R Offshore (which equity interests are held 85% by 3R and 15% by Maha Energy Offshore (Brasil) Ltda.). We believe these strategic partnerships may be important to enhance our operational knowhow and increase our profits and cash flow.

Recent Developments

Receipt of Letter of Intent from Maha Energy (3R investor representing 5% of 3R total capital stock)

Background of Transaction

On January 17, 2024, we received a notice from Maha Energy AB ("Maha Energy"), whereby Maha Energy informed us that it purchased, through a derivative instrument, 11,999,248 of our common shares, representing 5% of our total capital stock.

On the same date, Maha Energy also sent a letter of intent to 3R's board of directors proposing a business combination (the "Business Combination") involving 3R and PetroRecôncavo S.A. ("PetroRecôncavo"), a corporation incorporated in Brazil and listed on the *Novo Mercado* listing segment of the B3. The letter of intent is publicly available on 3R's investor relations website and is not incorporated by reference in this Offering Memorandum. The proposed business combination would entail two main steps:

(i) a carve-out of 3R's onshore oil concessions, midstream and downstream assets, as well as underlying debt/liabilities, which would be contributed to PetroRecôncavo (the "Carve-Out Transaction"). Upon the conclusion of the Carve-Out Transaction, in addition to continuing to hold capital stock of 3R, 3R's shareholders would also hold capital stock of PetroRecôncavo, and

(ii) after the consummation of the Carve-Out Transaction, 3R's offshore assets (namely Papa-Terra Cluster and Peroá Cluster) would remain with 3R and continue to be managed by 3R's team.

Upon consummation of the Business Combination, PetroRecôncavo would own and operate the onshore assets and related operations, and 3R would continue to own and operate the offshore assets and operations through 3R Offshore. Each of PetroRecôncavo and 3R would continue to be listed on the *Novo Mercado* listing segment of the B3.

Proposed Timeline from Maha Energy letter of intent

According to Maha Energy's letter of intent, the proposed implementation strategy would consist of presenting, together with 3R's board of directors, a proposal on the Business Combination to PetroRecôncavo by no later than February 28, 2024, aiming to finalize and execute definitive agreements during the second quarter of 2024, and close the transaction in the third quarter of 2024.

3R's Analysis and Disclaimers

As of the date of this Offering Memorandum, 3R's board of directors, in accordance with its fiduciary duties, is analyzing the letter of intent sent by Maha Energy, with the assistance of legal advisors. We have not made any decision related to engaging in negotiations with PetroRecôncavo or any other party in respect of the possible Business Combination. While we have begun internal discussions related to the possible Business Combination, we cannot assure you whether definitive documentation leading to the possible Business Combination will be executed.

Even if definitive documentation is executed, we cannot assure you whether the possible Business Combination would be consummated nor its terms and conditions, given the approvals that 3R and PetroRecôncavo would need to obtain from regulatory authorities and creditors, including the holders of the Notes. Further, we cannot anticipate every transaction and corporate step that would be necessary or action that Maha Energy could take as a minority shareholder of 3R to implement the possible Business Combination. Under Brazilian corporate law and CVM regulations, a minority shareholder holding at least 3% of the capital stock of a corporation may request a shareholders' meeting to , including, but not limited to, appoint new members or a slate to the board of directors. Accordingly, Maha Energy will have such right upon settlement of the derivative instrument by means of which it acquired 5% of 3R's capital stock.

We cannot assure you that the transactions, corporate steps and actions to implement the Business Combination would be permitted under the terms and conditions of the Notes under "Description of the Notes" nor can we foresee the effects that such transactions, corporate steps and actions could have on our business, corporate governance and the trading price of the Notes.

Term Loan Facility Waiver and Payoff

The net proceeds from this offering will be used to permanently and entirely repay the Term Loan Facility (as defined herein). In connection therewith, we intend to seek a waiver to prepay the Term Loan Facility prior to the twelve-month non-call period. In addition, we intend to seek waivers for: (1) a breach of financial covenants as a result of the settlement of this offering and repayment of the Term Loan Facility at a later date but before February 15, 2024; and (2) the contingent guarantee of 3R Areia Branca, which will not be provided under the Term Loan Facility as a result of its repayment. See "*Use of Proceeds*" for additional information.

Amendment to the Intercreditor and Collateral Agency Agreement

On or around the Closing Date, the Issuer, the Guarantors, the Intercreditor Agent, the Trustee, and the Collateral Agent anticipate entering into an amendment to the Intercreditor and Collateral Agency Agreement. The purpose of this amendment is: (i) to enable the release of any portion of 3R Bahia's Share Collateral, Concessions Collateral, and Credit Receivables Collateral, provided that such release is related to a transfer or sale to a third party in an arm's length transaction, and as long as the net cash proceeds from the sale are used in accordance with the Indenture; (ii) to enable the release of 5% of the equity interests of 3R Potiguar, such release will occur solely upon the conversion of the outstanding amount of the Fourth 3R Potiguar Debentures (as defined herein) into equity interests of 3R Potiguar. In this event, upon the conversion into equity interests, the Debentures will be terminated, and the Collateral will no longer secure the Fourth 3R Potiguar Debentures; and (iii) to enable the release of certain collateral upon the repayment of the Fourth 3R Potiguar Debentures. For additional information on the Fourth 3R Potiguar Debentures, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Indebtedness—Material Loans and Financings—Fourth 3R Potiguar Debentures*."

Concurrent offering of 3R Debentures

On January 11, 2024, we launched an offering of 3R's fourth issuance of unsecured non-convertible debentures (the "Fourth 3R Debentures"), in a single series, for public distribution under a firm placement guarantee and best placement efforts, only to professional investors, in which (i) R$900.0 million are distributed under a firm placement guarantee and (ii) up to R$400.0 million are distributed with best placement efforts. Such debentures accrue interest at the CDI rate *plus* a rate yet to be defined through a book building process (but, in any case, limited to 3.00% per year), and will mature on February 8, 2029. We expect to use the proceeds from such offering of debentures to fully repay the Second 3R Debentures (as defined below) and any remainder of the proceeds will be used for general corporate purposes. We cannot assure you that the offering of the Fourth 3R Debentures will be consummated.

Issuance of Infrastructure Debentures

On October 10, 2023, our board of directors approved the third issuance of publicly placed debentures of 3R, pursuant to which one million debentures have been issued on October 15, 2023, with a ten-year term and a unit price of R$1,000, totaling R$1.0 billion. Such debentures accrue interest at the IPCA rate *plus* 8.4166% per year and will mature in 2033.

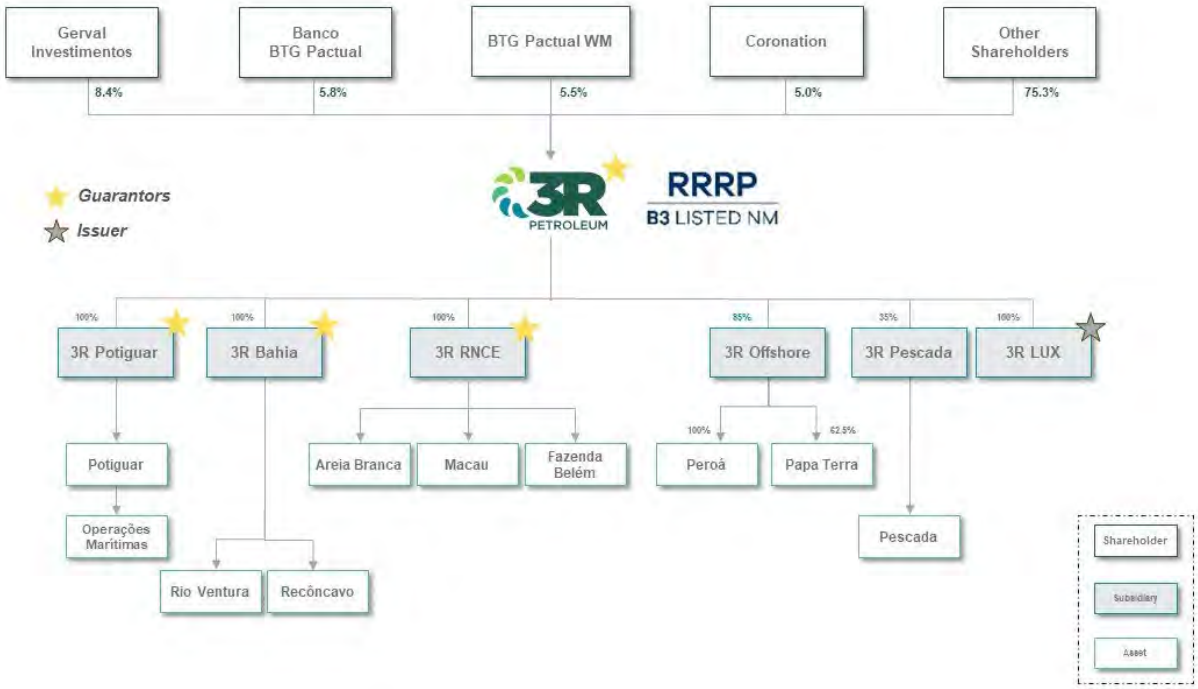
Corporate Reorganization

On January 1, 2024, we partially implemented a corporate reorganization approved by our board of directors on December 21, 2022. This reorganization had the purpose of simplifying our organizational structure by unifying the operations of certain subsidiaries optimizing our operational management and, consequently, generate efficiencies in operational and administrative costs.

Pursuant to the corporate reorganization, our subsidiaries 3R Macau and 3R Fazenda Belém were merged into 3R Areia Branca, which was then renamed "3R RNCE S.A." On the same date, our subsidiary 3R Rio Ventura was merged into 3R Candeias, which was renamed "3R Bahia S.A."

Corporate Structure

The following chart shows our corporate structure as of the date of this Offering Memorandum:



(1) 3R Offshore is 85% held by 3R and 15% held by Maha Energy Offshore (Brasil) Ltda. 3R Offshore holds 100% of Peroá Cluster and a 62.5% working interest in the Papa-Terra Cluster. Accordingly, 3R holds a 53.1% indirect working interest in the Papa-Terra Cluster and related assets.

The Issuer

3R Lux is a private limited liability company *(société à responsabilité limitée)* incorporated and existing under the laws of the Grand Duchy of Luxembourg since June 13, 2022, having its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, Grand Duchy of Luxembourg, and registered with the RCS under number B 268.764. 3R Lux is a wholly owned subsidiary of 3R.

3R Lux's total equity includes (i) a share capital of US$50,000.0, represented by 50,000 ordinary shares (*parts sociales*) in registered form, having a nominal value of US$1.0 each; and (ii) a share premium account in the amount of US$59.1 million.

Additional Information

Our executive offices are located at Praia de Botafogo, No. 186, room 1501, Botafogo, Zip Code 22250-145, in the city of Rio de Janeiro, state of Rio de Janeiro, Brazil. The telephone number of our investor relations' department is +55 (21) 3475-5555. Our investor relations website is http://ri.3rpetroleum.com.br/. The information contained on our website is not part of this Offering Memorandum and is not incorporated herein by reference.

THE OFFERING

The following summary contains basic information about the Notes and is not intended to be complete. For a more complete understanding of the Notes, please refer to the section entitled "Description of Notes" in this Offering Memorandum.

Issuer	3R Lux, a private limited liability company (*société à responsabilité limitée*) incorporated and existing under the laws of the Grand Duchy of Luxembourg, having its registered office at 6, rue Eugène Ruppert, L-2453 Luxembourg, Grand Duchy of Luxembourg, and registered with the RCS under number B 268.764.
Notes Offered	U.S.$500,000,000 aggregate principal amount of 9.750% senior secured notes due 2031 (the "Notes").
Issue Date	February 5, 2024 (the "Issue Date")
Maturity Date	February 5, 2031
Interest Rate	9.750%
Interest Payment Dates	February 5 and August 5 of each year (each an "Interest Payment Date"), commencing August 5, 2024.
Use of Proceeds	The net proceeds from this offering will be used to permanently and entirely repay the Term Loan Facility (as defined herein). For further information, see "*Use of Proceeds*."
Additional Amounts	All payments in respect of the Notes and the Note Guarantees will be made without any withholding or deduction for any taxes, duties, claims, assessments or governmental charges of whatever nature (and any fines, penalties or interest related thereto) imposed or levied by or on behalf of a Relevant Jurisdiction (as defined in "*Description of Notes—Additional Amounts*"), unless such withholding or deduction is required by law or by the interpretation or administration thereof. In such case, the Issuer or the applicable Guarantor, as the case may be, will pay to the holders of the Notes such additional amounts ("Additional Amounts") as will result in receipt by the holders of the Notes of such amounts as would have been received by them had no such withholding or deduction been required, subject to certain exceptions. See "*Description of Notes—Additional Amounts.*"
Optional Redemption	At any time prior to February 5, 2027, the Issuer may

	also redeem some or all of the Notes at a price equal to 100% of the principal amount of the Notes, *plus* accrued and unpaid interest, *plus* the Make-Whole Premium, as defined under "*Description of Notes—Optional Redemption—Optional Redemption with a Make-Whole Premium.*"
	The Notes will be redeemable at the option of the Issuer, in whole or in part, at any time on or after February 5, 2027, at the redemption prices set forth in this Offering Memorandum, together with accrued and unpaid interest, if any, to the date of redemption. See *Description of Notes—Optional Redemption—Optional Redemption without a Make-Whole Premium.*"
	At any time prior to February 5, 2027, the Issuer may redeem up to 35% of the original principal amount of the Notes with the proceeds of certain equity offerings at a redemption price of 109.750% of the principal amount of the Notes, together with accrued and unpaid interest, if any, to the date of redemption. See "*Description of Notes—Optional Redemption—Optional Redemption with Proceeds of Equity Offerings.*"
Optional Redemption upon a Tax Event.....	Upon the occurrence of certain changes in tax laws, the Notes may be redeemed, at the Issuer's election, in whole but not in part, at a price equal to 100% of the outstanding principal amount thereof, together with any Additional Amounts and accrued and unpaid interest, if any, to (but excluding) the redemption date. See "*Description of Notes—Optional Redemption—Optional Redemption upon a Tax Event.*"
Change of Control Offer that results in a Ratings Decline	The occurrence of a Change of Control that results in a Rating Decline (as defined herein) will be a triggering event requiring the Issuer to offer to purchase from you all or a portion of your Notes at a price equal to 101% of their principal amount, together with accrued and unpaid interest, if any, to the date of purchase.
Collateral	The Notes will be secured over time by a first-priority security interest on the Collateral (as defined herein). Once perfected as contemplated herein, the Collateral will consist of a first-priority security interest on:
	(i) shares representing: (a) 100% of the share capital of the Issuer; (b) 100% of the capital stock of 3R RNCE; (c) 100% of the capital stock of 3R Potiguar; (d) 100% of the capital stock of 3R Bahia; (e) 100% of the

capital stock of 3R Operações Marítimas; and (f) 70% of the capital stock of 3R Offshore (collectively, the "Share Collateral");

(ii) 100% of certain subsidiaries' concession rights over the Encumbered Concessions (as defined herein), including any right to receive any amount which is due or which might become due under the relevant Concession Agreements, including, but not limited to, amounts due to the Guarantors upon termination of the relevant Concession Agreements, including indemnity (the "Concessions Collateral"); and

(iii) (x) credit receivables of certain subsidiaries under the Encumbered Off-Take Agreements and Encumbered Oil Hedging Agreements and (y) the credit receivables of the Future Encumbered Off-Take Agreements will comprise the Collateral based on the formulation set forth under "*Description of Notes—Collateral—Credit Receivables Collateral—Future Credit Receivables Collateral*" (the collateral in this item (iii), considering the provisions in items (x) and (y) above, is referred to as the "Credit Receivables Collateral").

For more information, see "*Description of Notes—Collateral*."

The security interests in the Credit Receivables Collateral will be granted pursuant to the Credit Receivables Fiduciary Assignment Agreement. The security interests in the Concessions Collateral will be granted pursuant to Concession Rights Pledge Agreement.

While the security interests will be granted and Security Documents (as defined herein) will be executed at the Issue Date, filing of appropriate notices and public recording of the existence of these liens will only take place following the Issue Date and such security interests will not be fully perfected until such time as the foregoing has been done. In addition, the Security Documents will be subject to a condition for effectiveness, which shall consist of the full repayment of the Term Loan Facility. For a discussion of the relevant actions, time periods and other consequences (including the occurrence of an event of default in the event a lien on the Collateral is not perfected within the time period agreed under the Indenture), see "*Description of Notes—Default and Remedies—Events*

	of Default."
	Under certain limited circumstances, the Collateral may be released without the consent of the holders of Notes. See "*Description of Notes—Collateral—Collateral Release*."
	In the event that the security interest in the Collateral is not perfected within the timeframes described under "*Description of Notes—Default and Remedies—Events of Default,*" 3R Lux will be in default under the Indenture. In the event of a failure to create and perfect liens on the Collateral, the Notes will not be secured by such assets, and the holders of the Notes will not be entitled to the proceeds from the sale of all or any of the proposed Collateral or any other remedies in connection therewith.
Ranking of the Notes	The Notes will have the benefit of a first-priority perfected security interest on the Collateral as described under "*Description of Notes—Collateral*," and as such, will be senior secured obligations of the Issuer to the extent of the value of the Collateral. The Note Guarantees will be senior secured obligations of each of the Guarantors to the extent of the value of such Collateral. After the creation and perfection of the Collateral, the Notes will be secured by the Collateral pursuant to the terms of the Security Documents. Any outstanding amounts due after foreclosure on the Collateral will rank equally in right of payment with all other existing and future senior unsecured and unsubordinated debt of the Issuer and the Guarantors (except for those obligations of the Guarantors preferred by operation of Brazilian law, including without limitation labor and tax claims, as described herein).
	The Notes will be effectively junior to any future secured obligations of the Company, the other Guarantors and any of their subsidiaries with a security interest on assets not constituting Collateral, in each case, to the extent of the value of the collateral securing such obligations. Subject to the limits described under "*Description of Notes—Certain Covenants—Limitation on Liens*," the Company and its Restricted Subsidiaries, including the Issuer, may incur additional secured Debt.
	After the foreclosure of the Collateral, the Notes will be structurally subordinated to any existing or future

Debt or other obligations of any subsidiary of the Company that is not the Issuer or does not guarantee the Notes.

Although the Indenture limits the incurrence of Debt by the Company and Restricted Subsidiaries, the limitation is subject to a number of significant exceptions. Moreover, the indenture does not impose any limitation on the Incurrence by the Company and Restricted Subsidiaries of liabilities that are not considered Debt under the Indenture. See "*Description of Notes—Certain Covenants—Limitation on Debt.*"

Guarantees ..... On the Issue Date, the Issuer's obligations under the Notes and the Indenture will be guaranteed under the Note Guarantees jointly and severally on a senior basis by the following Guarantors:

Guarantor	Jurisdiction
3R Petroleum Óleo e Gás S.A.	Brazil
3R Potiguar S.A.	Brazil
3R RNCE S.A.	Brazil
3R Bahia S.A.	Brazil

Ranking of the Note Guarantees..... The Note Guarantees of each Guarantor will:

- be senior obligations of the relevant Guarantor, secured by a first lien on the Collateral (as defined in "*Description of Notes—Certain Definitions*"), upon completion of customary registration and perfection requirements in accordance with and as required by the Security Documents;
- rank effectively senior to all unsecured indebtedness of such Guarantor to the extent of the value of the above referred Collateral;
- any outstanding amounts due after the foreclosure of the Collateral will rank equally in right of payment with all senior existing and future obligations of that Guarantor (except those obligations of the Guarantors incorporated under the laws of Brazil preferred by operation of Brazilian law, including without limitation labor and tax claims, as described herein);
- rank senior in right of payment to all existing and future subordinated indebtedness of such

	Guarantor; • be guaranteed by the Guarantors as described under "*Description of Notes—Note Guarantees*;" • rank effectively junior to any future secured obligations of such Guarantor with a security interest on assets not constituting Collateral, in each case, to the extent of the value of the collateral securing such obligations; and • be structurally subordinated to any existing or future Debt or other obligations of any subsidiary of 3R that is not the Issuer or does not guarantee the Notes. The Note Guarantees may be subject to certain limitations. See "*Description of Notes—Certain limitations on the Collateral and the Note Guarantees.*" The Note Guarantees may be released in certain limited circumstances. See "*Description of Notes—Additional Matters Relating to Collateral—Release of the Note Guarantees*." The Intercreditor Secured Debt (including the Notes and the Note Guarantees) will be secured by a first-priority security interest (upon completion of customary registration and perfection requirements, as well as fulfillment of the conditions for effectiveness thereof, in accordance with and as required under the Security Agreements) on the Collateral (which shall be shared on a *pari passu* basis among Secured Debt Providers) to the extent the aggregate principal amount of the Notes, together with the Fourth 3R Potiguar Debentures, does not exceed US$1,000,000,000. Accordingly, the rights of the holders of Notes and of the Trustee on behalf of the holders of the Notes, with respect to the Collateral, will be subject to and may be limited by the terms of the Intercreditor Agreement and to the terms of each Security Document (as defined herein).
Intercreditor Agreement	On March 29, 2023, UMB Bank N.A., as administrative agent under the Term Loan Facility and Intercreditor Agent, the Debentures Indenture Trustee, the Collateral Agents, the Issuer and the pledgors named therein entered into an intercreditor agreement to govern, among other things, intercreditor matters related to the Collateral (as amended by the first

	amendment (described below), the "Intercreditor Agreement"). On or about the Issue Date, the Intercreditor Agreement will be amended to: (i) to enable the release of any portion of 3R Bahia's Share Collateral, Concessions Collateral, and Credit Receivables Collateral, *provided* that such release is related to a transfer or sale to a third party in an arm's length transaction, and as long as the net cash proceeds from the sale are used in accordance with the terms of the Description of Notes (as described herein); (ii) to enable the release of 5% of the equity interests of 3R Potiguar, such release will occur solely upon the conversion of the outstanding amount of the Fourth 3R Potiguar Debentures into equity interests of 3R Potiguar. In this event, upon the conversion into equity interests, the Debentures will be terminated, and the Collateral will no longer secure the Fourth 3R Potiguar Debentures; and (iii) to enable the release of certain collateral upon the repayment of the Fourth 3R Potiguar Debentures. On or after the execution of the first amendment to the Intercreditor Agreement, UMB Bank N.A., as Trustee will execute a joinder agreement and become party to the Intercreditor Agreement (as amended) on or about the settlement of this offering.
Substitution of Issuer.....	The Issuer may, without the consent of the holders of the Notes and subject to certain conditions, be replaced and substituted by 3R or any wholly owned subsidiary of 3R, as principal debtor in respect of the Notes. See "*Description of Notes—Substitution of the Issuer*." Such substitution might be treated for U.S. federal income tax purposes as a deemed disposition of Notes by you in exchange for new notes issued by the new obligor. For more information, see "*Taxation—Certain U.S. Federal Income Tax Considerations—Effect of Substitution of the Issuer*."
Certain Covenants.....	The Indenture will contain covenants that will, among other things, limit the ability of 3R, the Issuer and each subsidiary to (subject to certain exceptions): • incur additional indebtedness; • pay dividends or make distributions or repurchase or redeem stock; • prepay, redeem or repurchase certain

	indebtedness; • make loans and investments; • sell assets; • incur liens; • enter into transactions with affiliates; • enter into sale and leaseback transactions; • enter into agreements restricting the ability of 3R's subsidiaries to pay dividends; and • consolidate, merge or sell all or substantially all of our assets. These covenants will be subject to a number of exceptions and qualifications. For more details, see "*Description of Notes—Certain Covenants*."
Events of Default	For a description of certain events of default that may permit acceleration of the principal amount of the Notes *plus* accrued interest, see "*Description of Notes—Default and Remedies—Events of Default*"
Suspension of Certain Covenants on Achievement of Investment Grade Status	If on any date following the Issue Date, the Notes achieve investment grade by at least two of the Rating Agencies (as defined herein) and certain other conditions are satisfied, certain provisions of the Indenture will cease to apply to the Notes. See "*Description of Notes—Suspension of Certain Covenants*."
Additional Notes	The Issuer may issue additional Notes having identical terms and conditions as the Notes other than the issue date, the issue price and the first interest payment; provided that if such additional Notes are not fungible with the Notes for U.S. federal income tax purposes, such Additional Notes will have separate CUSIP numbers, ISINs and Common Codes (as applicable). The Issuer will only be permitted to issue additional Notes if, at the time of such issuance, the Issuer and its Restricted Subsidiaries (as defined herein) are in compliance with the covenants contained in the Indenture. Any Additional Notes will be part of the same issue as the Notes that the Issuer is currently offering and will vote on all matters with the Notes and share collectively the Collateral described herein.
Form and Denomination	The Notes will initially be issued in the form of one or more global notes without interest coupons, registered in the name of The Depository Trust Company

	("DTC"), or its nominee. The Notes will be issued in minimum denominations of U.S.$200,000 and integral multiples of U.S.$1,000 in excess thereof.
Trading and Listing	Application will be made for the listing and quotation of the Notes on the SGX-ST. We cannot assure you, however, that this application will be accepted, or if accepted, that, once listed, the Notes will remain so listed. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this Offering Memorandum. Approval in-principle for the listing and quotation of the Notes on the SGX-ST is not to be taken as an indication of the merits of the Issuer, the Guarantors or any of their affiliates, the Notes or the Guarantee. The Notes will be traded on the SGX-ST in a minimum board lot size of U.S.$200,000 for as long as any of the Notes are listed on the SGX-ST and the rules of the SGX-ST so require.
Absence of Public Market for the Notes.....	The Notes are a new issue of securities and there is currently no established trading market for the Notes. Accordingly, there can be no assurance as to the development or liquidity of any market for the Notes. See "*Risk Factors—Risks Related to this Offering and the Notes and the Collateral—The Notes constitute a new issue of securities for which there is no existing market, and an active trading market for the Notes may not develop.*"
Transfer Restrictions.....	The Notes have not been and will not be registered under the Securities Act or the securities laws of any state in the United States and are subject to certain restrictions on transfer and resale. See "*Transfer Restrictions*."
Governing Law.....	The Indenture, the Notes, and the Note Guarantees will be governed by the laws of the State of New York. The Intercreditor Agreement is governed by the laws of the State of New York. For the avoidance of doubt, (i) the application of articles 470-1 to 470-19 (inclusive) of the Luxembourg law on commercial companies, dated August 10, 1915, as amended, is expressly excluded; and (ii) the Notes shall not be construed or qualify as "*billets à ordre*" or "*lettres de change*" within the meaning of the Luxembourg law of January 8, 1962, relating to the introduction into Luxembourg law of the uniform law on "*lettres de change*" and "*billets à ordre*" (as amended from time to time) and the provisions of this law shall not apply. The Brazilian

	Share Fiduciary Transfer Agreement, the Concession Rights Pledge Agreement and the Credit Receivables Fiduciary Assignment Agreement will be governed by the laws of Brazil. The Luxembourg Share Pledge Agreement is governed by the laws of the Grand Duchy of Luxembourg.
Trustee, Registrar, Paying Agent and Transfer Agent..	UMB Bank N.A.
Collateral Agent.....	TMF Brasil Administração e Gestão de Ativos Ltda.
Intercreditor Agent	UMB Bank N.A.
Risk Factors.....	Investing in the Notes involves substantial risks and uncertainties. See "*Risk Factors*" and other information included in this Offering Memorandum for a discussion of factors you should carefully consider before deciding to purchase any Notes.

SUMMARY FINANCIAL INFORMATION

The following tables present our summary historical financial information, prepared in accordance with IFRS, on a consolidated basis, as of and for the periods indicated below. The tables below set forth a summary of our financial information as of the dates and for each of the periods indicated. You should read the information below together with our unaudited parent company and consolidated condensed interim financial information as of September 30, 2023 and for the nine-month period ended September 30, 2023 and 2022 and our audited parent company and consolidated financial statements as of and for the years ended December 31, 2022 and 2021 and our audited parent company and consolidated financial statements as of and for the years ended December 31, 2021 and 2020, and related notes, included elsewhere in this Offering Memorandum, as well as the information presented in the sections "Presentation of Financial and Other Information," "Selected Financial and Other Information" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." These results are not necessarily indicative of our future results of operations or financial condition.

The financial information in this Offering Memorandum as of September 30, 2023, and for the nine-month period ended September 30, 2023 and 2022 derives from our unaudited interim financial information, included elsewhere in this Offering Memorandum. The financial information as of and for the years ended December 31, 2022 and 2021 and as of and for the years ended December 31, 2021 and 2020, in this Offering Memorandum, derives from our audited financial statements, included elsewhere in this Offering Memorandum.

Statement of Profit or Loss Data

The following table sets forth certain of our statement of profit or loss data for each of the periods presented:

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	**2023**	**2022**	**2022**	**2022**	**2021**	**2020**
	(in millions of US$)[1]	*(in millions of R$)*		*(in millions of US$)*[1]	*(in millions of R$)*		
Net revenue	753.0	3,770.5	1,277.3	344.0	1,722.4	727.8	204.3
Cost of products sold	(517.5)	(2,591.4)	(548.5)	(166.9)	(835.5)	(319.5)	(106.2)
Gross profit	**235.5**	**1,179.1**	**728.8**	**177.1**	**886.9**	**408.3**	**98.0**
General and administrative expenses (G&A)	(70.7)	(353.8)	(252.9)	(67.7)	(339.0)	(159.6)	(59.5)
Other operating (expenses)/revenues	(8.8)	(44.0)	(63.0)	(30.7)	(153.5)	5.9	(44.1)
Impairment (loss)/reversal	(5.3)	(26.5)	–	(24.6)	(123.3)	160.4	(166.8)
	(84.7)	**(424.3)**	**(315.9)**	**(123.0)**	**(615.8)**	**6.8**	**(270.4)**
Income (loss) before financial income (expenses)	**150.7**	**754.8**	**412.9**	**54.1**	**271.1**	**415.0**	**(172.4)**
Financial income	85.9	430.2	253.2	63.9	319.8	197.1	75.1
Financial expenses	(228.1)	(1,142.0)	(632.8)	(160.8)	(805.0)	(656.7)	(204.3)
Financial result	**(142.2)**	**(711.8)**	**(379.6)**	**(96.9)**	**(485.2)**	**(459.6)**	**(129.3)**
Net Income (loss) before income tax and social contribution	**8.6**	**42.9**	**33.3**	**(42.8)**	**(214.1)**	**(44.6)**	**(301.6)**
Current income tax and social contribution	(32.2)	(161.4)	(52.1)	(14.3)	(71.7)	(3.9)	(6.2)
Deferred income tax and social contribution	27.2	136.5	185.5	82.6	413.5	64.4	31.3
Net income (loss) for the year/period	**3.6**	**18.0**	**166.7**	**25.5**	**127.7**	**16.0**	**(276.5)**
Net income (loss) attributable to:							
Shareholders of the parent	1.2	6.2	192.6	29.9	149.6	(0.9)	(259.2)

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	2023	2022	2022	2022	2021	2020
	(in millions of US$)[1]	*(in millions of R$)*		*(in millions of US$)*[1]	*(in millions of R$)*		
company							
Non-controlling interest	2.4	11.8	(25.9)	(4.4)	(21.9)	16.9	(17.3)
Net income (loss) for the year/period	**3.6**	**18.0**	**166.7**	**25.5**	**127.7**	**16.0**	**(276.5)**
Basic earnings (loss) per share – R$	0.01	0.03	0.95	0.15	0.74	(0.01)	(15.96)
Diluted earnings (loss) per share – R$	0.01	0.03	0.94	0.15	0.73	(0.01)	(15.96)

(1) Solely for the convenience of the reader, the Brazilian real amounts for the nine-month period ended September 30, 2023 and year ended December 31, 2022 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

Statement of Financial Position Data

The following table sets forth certain of our statement of financial position data as of each of the dates presented:

	As of September 30,		As of December 31,			
	2023	2023	2022	2022	2021	2020
	(in millions of US$)[1]	*(in millions of R$)*	*(in millions of US$)*[1]	*(in millions of R$)*		
Assets						
Current assets						
Cash and cash equivalents	156.2	782.0	159.8	800.4	118.7	287.9
Securities	2.9	14.5	6.3	31.4	2,389.4	417.5
Restricted cash	44.2	221.5	–	–	–	–
Derivative financial instruments	1.4	7.2	3.2	15.9	–	–
Trade accounts receivables	106.5	533.1	44.6	223.3	114.6	44.7
Advances	11.9	59.8	38.5	193.0	–	–
Inventories	130.7	654.7	37.4	187.5	16.6	4.8
Prepaid expenses	24.9	124.5	15.5	77.4	11.3	2.5
Income tax and social contribution assets	5.1	25.5	6.5	32.5	39.3	-
Other recoverable taxes	24.7	123.8	1.7	8.5	15.5	11.6
Other assets	1.8	9.2	0.2	0.8	8.0	2.9
Total current assets	**510.4**	**2,555.7**	**313.7**	**1,570.7**	**2,713.5**	**771.8**
Noncurrent assets						
Securities	503.3	2,520.5	–	–	–	–
Restricted cash	4.9	24.5	3.0	15.0	8.3	3.7
Income tax and social contribution assets	–	–	0.5	2.4	2.2	4.3
Derivative financial instruments	7.9	39.7	1.5	7.6	–	–
Deferred income tax and social contribution	125.2	627.1	99.9	500.2	96.7	16.5
Other recoverable taxes	0.0	0.1	–	–	–	–
Court deposits	1.6	8.2	0.9	4.6	3.0	2.6
Other assets	1.0	4.8	0.5	2.6	2.3	0.2
	644.0	**3,224.9**	**106.3**	**532.4**	**112.5**	**27.3**
Advances for acquisition of assets	0.3	1.6	118.5	593.5	158.9	121.3
Property, plant and equipment	1,272.6	6,372.7	444.9	2,228.1	948.0	351.8
Intangible assets	1,413.9	7,080.3	598.6	2,997.5	1,495.1	835.7
Right-of-use	8.2	40.9	9.8	48.9	25.5	1.2
Total noncurrent assets	**3,339.0**	**16,720.4**	**1,278.1**	**6,400.4**	**2,740.0**	**1,337.2**

	As of September 30,		As of December 31,			
	2023	2023	2022	2022	2021	2020
	(in millions of US$)[1]	*(in millions of R$)*	*(in millions of US$)*[1]		*(in millions of R$)*	
Total assets	**3,849.4**	**19,276.1**	**1,591.8**	**7,971.1**	**5,453.5**	**2,109.1**
Liabilities and equity						
Current liabilities						
Trade payables	128.7	644.7	49.3	246.7	53.6	22.4
Loans and financing	27.8	139.0	21.6	108.2	–	–
Debentures	91.3	457.4	7.8	39.2	0.7	9.6
Debentures – related parties	3.4	16.9	–	–	–	–
Derivative financial instruments	19.2	96.2	6.5	32.7	116.0	34.3
Labor obligations	21.3	106.5	11.2	55.9	16.4	3.3
Amounts payable to the operator	–	–	–	–	1.4	0.9
Income tax and social contribution payable	13.8	68.9	1.3	6.3	–	–
Other taxes payable	14.6	73.2	10.2	51.0	52.5	25.1
Provision for royalty payments	9.3	46.4	3.0	15.1	9.2	3.1
Leases	3.0	15.0	2.5	12.7	6.7	0.3
Accounts payable for assets acquisitions	161.5	808.9	59.7	299.1	294.4	–
Other liabilities	5.0	25.0	4.9	24.5	16.0	15.5
Total current liabilities	**498.9**	**2,498.1**	**178.0**	**891.5**	**566.9**	**114.5**
Noncurrent liabilities						
Loans and financing	501.2	2,509.8	–	–	–	–
Derivative financial instruments	18.3	91.4	–	–	–	–
Debentures	1,080.7	5,411.9	180.5	904.1	47.5	623.2
Debentures – related parties	4.3	21.4	–	–	–	–
Provision for abandonment (ARO)	446.2	2,234.6	222.3	1,113.0	414.0	282.8
Deferred income tax and social contribution	13.9	69.8	15.9	79.4	89.4	–
Provision for legal and administrative proceedings	0.7	3.7	0.8	4.0	3.5	1.0
Leases	5.9	29.5	7.6	37.8	19.0	1.0
Accounts payable for assets acquisitions	219.3	1,098.2	106.6	533.8	129.3	–
Other liabilities	10.3	51.7	13.2	66.2	8.3	9.4
Total noncurrent liabilities	**2,300.9**	**11,521.9**	**546.8**	**2,738.4**	**711.2**	**917.5**
Equity						
Capital	1,009.6	5,055.8	829.6	4,154.4	4,146.6	1,228.6
Capital reserve	8.9	44.5	7.4	37.1	115.0	–
Accumulated translation adjustment	18.9	94.4	21.2	106.4	115.9	109.0
Accumulated loss	(1.9)	(9.3)	(3.1)	(15.5)	(269.6)	(260.5)
Equity attributable to shareholders of the parent company	**1,035.5**	**5,185.4**	**855.2**	**4,282.4**	**4,107.9**	**1,077.1**
Equity attributable to non-controlling shareholders	14.1	70.7	11.7	58.8	67.6	–
Equity	**1,049.6**	**5,256.1**	**866.9**	**4,341.3**	**4,175.4**	**1,077.1**
Total liabilities and equity	**3,849.4**	**19,276.1**	**1,591.8**	**7,971.1**	**5,453.5**	**2,109.1**

(1) Solely for the convenience of the reader, the Brazilian *real* amounts as of September 30, 2023 and December 31, 2022 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin

The following table sets forth information on our EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin for the periods presented:

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	2023	2022	2022	2022	2021	2020
	(in millions of US$, except percentages) [(1)]	*(in millions of R$, except percentages)*		*(in millions of US$, except percentages)* [(1)]	*(in millions of R$, except percentages)*		
Net income (loss) for the year/period	3.6	18.0	166.7	25.5	127.7	16.0	(276.5)
EBITDA[(2)]	233.2	1,167.9	591.9	109.9	550.4	532.4	(132.7)
EBITDA Margin[(3)]	31.0%	31.0%	46.3%	32.0%	32.0%	73.2%	(65.0)%
Adjusted EBITDA[(4)]	236.4	1,183.7	597.0	141.7	709.6	356.1	52.3
Adjusted EBITDA Margin[(5)]	31.4%	31.4%	46.7%	41.2%	41.2%	48.9%	25.6%

(1) Solely for the convenience of the reader, the Brazilian *real* amounts for the nine-month period ended September 30, 2023 and the year ended December 31, 2022 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

(2) We calculate EBITDA (earnings before interest, tax, depreciation and amortization) in accordance with the guidelines in CVM Resolution No. 156, as net income (loss) for the year/period *plus* financial result (financial expenses net of financial income), current and deferred income tax and social contribution, and depreciation and amortization. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin*" and for a reconciliation of EBITDA to net income (loss) for the applicable year/period, see "*Selected Financial and Other Information—Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin*."

(3) We calculate EBITDA Margin as EBITDA for the year/period *divided by* net revenue for the year/period. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin*".

(4) We calculate Adjusted EBITDA as EBITDA *plus* (i) impairment (loss)/reversal in recoverable value of assets, (ii) expenses related to the return of concessions, (iii) adjustments to the abandonment provisions - Pescada, (iv) exclusion of ICMS from the calculation basis of PIS/COFINS, (v) Macau Cluster additional expense, (vi) expenses earn-out to an old controller; (vii) expenses on operator - *Camarupim* field, (viii) expenses related to labor provisions, (ix) translation adjustments - OPE, (x) expense related to the assignment of the *Fazenda Pinaúna* field, and (xi) bonus linked to the IPO. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—Our EBITDA, EBITDA Margin, Adjusted EBITDA and Adjusted EBITDA Margin*," and for a reconciliation of Adjusted EBITDA see "*Selected Financial and Other Information —Reconciliation of Adjusted EBITDA to Net Income (Loss) and Calculation of Adjusted EBITDA Margin*."

(5) We calculate Adjusted EBITDA Margin as Adjusted EBITDA for the corresponding year/period *divided by* net revenue for the year/period. For more information, see "*Selected Financial and Other Information—Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin*."

RISK FACTORS

An investment in the Notes involves a high degree of risk. You should carefully consider the risks and uncertainties described below and the other information contained in this Offering Memorandum and in our unaudited interim financial information and our audited financial statements, included elsewhere in this Offering Memorandum, before making an investment in the Notes. The risks described in this section are those that we currently believe may materially affect us; however, they are not the only ones we face or to which businesses operating in Brazil are subject. Our business, financial condition or results of operations may be adversely and materially affected by any of these risks and the trading price of the Notes may decline. This Offering Memorandum also contains estimates and projections that involve risks and uncertainties. Our results of operations may differ significantly from those previously estimated or projected as a result of certain factors, including the risks faced by us, as described below and in other sections of this Offering Memorandum.

For purposes of this section, when we state that a risk, uncertainty or problem may, could or will have an "adverse effect" on us or "adversely affect" us, we mean that the risk, uncertainty or problem could have an adverse effect on our business, financial condition, results of operations, cash flow, prospects, reputation and/or the trading price of the Notes, except as otherwise indicated. You should view similar expressions in this section as having similar meanings.

Risks Relating to Brazil

The Brazilian government exercises significant influence over the Brazilian economy. This influence, as well as Brazilian political and economic conditions, may materially and adversely affect us.

The Brazilian government has frequently intervened in the Brazilian economy and has occasionally made significant changes in policy and regulations, influencing the Brazilian economy. The Brazilian government's actions to control inflation and the implementation of policies and regulations have often involved, among other measures, interventions in interest rates and in the foreign exchange market, changes in tax policies, price controls, capital controls and limits on imports. We cannot control or predict which measures or policies will be adopted by the Brazilian government in the future.

We may be materially and adversely affected by changes in policies or regulations involving or affecting factors, including:

- oil and gas prices in Brazil and abroad;
- interest rates;
- foreign exchange controls and restrictions on remittances abroad;
- monetary policy;
- exchange rate fluctuations;
- changes in labor and regulatory rules;
- inflation;
- liquidity in Brazilian financial and capital markets;
- expansion or contraction of the Brazilian economy;
- tax policies and changes in tax laws;
- import and export controls;
- increased unemployment;
- economic, social and political instability;

- expansion or contraction of the Brazilian economy, as measured by gross domestic product, or GDP, growth rates;
- public health, including as a result of epidemics and pandemics; and
- other political, diplomatic, social, environmental, climate and economic developments in or affecting Brazil.

Uncertainty over whether the Brazilian government will implement changes in policy or regulations affecting these or other factors in the future may contribute to economic uncertainty in Brazil and to heightened volatility in the Brazilian securities markets and in the securities of Brazilian companies, including the Notes.

Political instability may adversely affect us.

The Brazilian economy has been and continues to be affected by political events in Brazil, which have also affected the confidence of investors and the public in general, adversely affecting the performance of the Brazilian economy and heightened volatility of securities issued by Brazilian companies.

Brazilian markets experienced heightened volatility in the last decade due to uncertainties deriving from the *Lava Jato* and other investigations and have materially impacted Brazilian economy and political environment. Numerous members of the Brazilian government and of the legislative branch, as well as senior officers of large state-owned and private companies have been convicted of political corruption of officials accepting bribes by means of kickbacks on contracts granted by the government to several infrastructure, oil and gas, and construction companies, among others.

The ultimate outcome of these investigations is uncertain, but they had an adverse impact on the image and reputation of the implicated companies, and on the general market perception of the Brazilian economy. The development of those unethical conduct cases has and may continue to adversely affect us.

Any of the above factors may create additional political uncertainty, which could have a material impact on the Brazilian economy and on our business, financial condition and results of operations.

Inflation and any efforts by the Brazilian government to curb inflation may have an adverse effect on us.

Brazil has experienced high rates of inflation in the past. Inflation and certain governmental actions to curb inflation, together with the speculation about governmental measures to be adopted, have materially and adversely affected the Brazilian economy and contributed to economic uncertainty in Brazil, heightening volatility in the Brazilian capital markets, which could adversely affect us.

Brazil's General Price Index (*Índice Geral de Preços – Mercado*), or IGP-M index, recorded deflation of (4.9)% in the nine-month period ended September 30, 2023, and inflation of 5.5% in 2022, 17.8% in 2021 and 23.1% in 2020. Measures adopted by the Brazilian government to control inflation have historically included the maintenance of a restrictive monetary policy with high interest rates, thereby limiting the availability of credit and reducing economic growth. The Monetary Policy Committee (*Comitê de Política Monetária*), or COPOM, frequently adjusts the official base interest rates in situations of economic uncertainty to meet the economic goals established by the Brazilian government. During recent years there has been significant volatility in the official Brazilian base interest rate (*Sistema Especial de Liquidação e Custódia*, or SELIC rate, set by the COPOM, which ranged from 14.25%, on December 31, 2015, to 2.00% as of December 31, 2020, and 11.75% as of December 31, 2023. As of the date of this Offering Memorandum, the SELIC rate is 11.75%.

Accordingly, fluctuation in Brazilian interest rates and inflation may adversely affect us because we have loans and financing indexed to the variation of the Brazilian interbank deposit certificate (*certificado de depósito interbancário)*, or CDI rate, which is linked to the SELIC rate. Conversely, a significant decrease in the CDI or inflation rates may adversely affect the revenue from our financial investments. For further information, see "*Management's Discussion and Analysis of Financial Condition and Results of Operation—Indebtedness*."

Any future measures taken by the Brazilian government, including changes in interest rates, intervention in the exchange market and the implementation of mechanisms to adjust or defend the value of the *real* may trigger

inflation, adversely affecting the overall performance of the Brazilian economy. If Brazil experiences high inflation in the future, there could be a significant increase in our operating expenses, negatively impacting our financial condition.

Exchange rate instability may adversely affect the Brazilian economy and, as a result, us.

The *real* has suffered significant depreciations and appreciations in relation to the U.S. dollar and other strong foreign currencies in the last four decades. During this period, the Brazilian government implemented a number of economic plans and exchange rate policies, including sudden devaluations, periodic mini-devaluations, exchange controls, dual exchange rate markets and a floating exchange rate system. Since 1999, Brazil has adopted a floating exchange rate system with interventions by the Central Bank in buying or selling foreign currency. We cannot assure you these measures will not be taken by the Brazilian government in the future or that we will not be adversely affected by a depreciation or appreciation of the *real* against the U.S. dollar and other currencies.

In 2020, the *real* depreciated by 28.9% against the U.S. dollar and on December 31, 2020, the *real*/U.S. dollar selling exchange rate was R$5.1967 per US$1.00. In 2021, the Brazilian *real* depreciated by 7.4% against the U.S. dollar and on December 31, 2021, the *real*/U.S. dollar selling exchange rate was R$5.5805 per US$1.00. In 2022, the Brazilian *real* appreciated by 7.0% against the U.S. dollar and on December 31, 2022, the *real*/U.S. dollar selling exchange rate was R$5.2177 per US$1.00. As of December 31, 2023, the *real*/U.S. dollar selling exchange rate was R$4.8413, as reported by the Central Bank, representing a 7.2% appreciation of the *real* in 2023.

We cannot assure you that the *real* will not significantly appreciate or depreciate in relation to the U.S. dollar. Depreciation of the *real* may create additional inflationary pressures in Brazil and cause increases in interest rates, which may negatively affect the overall Brazilian economy and, consequently, us, due to decreased consumption and increased costs. In addition, as prices of oil and gas are calculated based on the U.S. dollar, fluctuations in the *real*/U.S. dollar exchange rate have a direct impact on our principal source of revenue, which is recorded in *reais*. We have no control over and cannot predict the Brazilian foreign exchange policy. We may be adversely affected by changes in foreign exchange policies.

Developments and the perception of risk in other countries, particularly in the United States, European countries and emerging markets, including China, adversely affecting the Brazilian economy and the market price of Brazilian securities, including our Notes.

The market value of securities of Brazilian issuers is affected to varying degrees by economic and market conditions in other countries, including the United States, China, European countries and other Latin American and emerging market countries. Although economic conditions in the United States and European countries may differ significantly from economic conditions in Brazil, investors' reactions to developments in these countries may adversely affect the market value of securities of Brazilian issuers, including the Notes. Moreover, crises or significant developments in other countries and capital markets may diminish investors' interest in securities of issuers with significant operations in Brazil, including the Notes, and their trading price, limiting or preventing our access to capital markets and to funds to finance our future operations at acceptable terms.

Additionally, the financial crisis and political instability in the United States, the trade war between the United States and China, crises in Europe and other countries, as well as the consequences of Brexit affected the global economy, producing a number of effects that directly or indirectly affected the whole of the Brazilian capital markets and economy, including fluctuations in the price of securities of listed companies, reduced availability of credit, deterioration of the global economy, fluctuation in exchange rates and inflation, among others, which may adversely affect us.

We are also subject to impacts arising from the political tension between the United States, Iran and Iraq, the conflict between Russia and Ukraine, as well as other conflicts in the Middle East and East Asia, including the conflict between Israel and Hamas, and Yemeni rebels' hijackings and assaults on ships crossing the Red Sea, where a significant part of the world's seaborne crude oil flows through. The sanctions imposed by various countries against Russia, including regarding the purchase of oil and gas from Russia, has affected the price of oil and gas worldwide, including in Brazil. If these sanctions continue to be imposed or there may be an escalation in tensions and sanctions between the United States, Iran, Iraq, Russia, and possibly other European countries, the price of oil

could fluctuate further, continuing to affect the commodities and energy market in Brazil and in the world, which could affect our operating costs, revenues and consumer expenses and, therefore, adversely affect us.

These tensions can generate political and economic instability around the world, impacting the market and the financial market.

Any further downgrading of Brazil's credit rating may adversely affect us.

Credit ratings affect investors' perceptions of risk and, as a result, the yields required on debt issuances in the financial markets. Rating agencies regularly evaluate Brazil and its sovereign ratings, taking into account a number of factors including macroeconomic trends, fiscal and budgetary conditions, indebtedness and the prospect of change in these factors.

As of the date of this Offering Memorandum, Brazil's sovereign credit ratings were BB with a stable outlook, Ba2 with a stable outlook and BB with a stable outlook as reported by Fitch, Moody's and S&P, respectively, which in all cases is below investment grade.

We cannot assure you that rating agencies will maintain Brazil's sovereign credit ratings. Any downgrading in Brazil's sovereign credit ratings may increase the perception of risk of investors and, as a result, adversely affect the price of securities issued by Brazilian companies, including us, adversely affecting our rating and, consequently, us.

Risks Relating to Us

We are subject to risks relating to the conditions that may be imposed by ANP for the approval of the assignment of the concession agreements.

We are in the process of completing the acquisition of the Pescada Cluster and therefore ANP has not yet approved the assignment of the concession rights of the 65% working interest in such cluster to us. According to law No. 9,478, dated August 6, 1997 (*Lei do Petróleo*), or the Brazilian Oil Law, and Brazilian Law No. 12,351/2010, oil and natural gas exploration and production agreements may be assigned, in full or in part, maintaining the contractual purposes and conditions, as long as the assignee meets the technical, economic and legal requirements set forth in the applicable law and the concession agreement.

The authorization for the assignment of a concession agreement, merger, spin-off, change of operator, and replacement of or exemption from the performance guarantee is preceded by the administrative assignment process. The assignment process is commenced and directed by ANP, pursuant to its internal rules and manuals.

We cannot assure you that ANP will not require specific conditions for its approval of the assignment process relating to the Pescada Cluster or other oil and gas fields that we may acquire in the future, including, but not limited to, conditions related to decommissioning and abandonment guarantees, that we may not be able to fulfill. For more information on our concession agreements, see "*Business—Concession Agreements*."

Additionally, we cannot guarantee that ANP will approve the objective criteria required for the assignment of the assets that we currently own or may acquire in the future, including our technical, economic and legal qualifications required for the conclusion of the assignment processes. If ANP does not approve the assignment of the concession agreements related to those assets or of the concession regarding other oil and gas fields that we may acquire in the future, we would be materially and adversely affected.

We may not be able to comply with the terms of or extend our concession agreements, which could materially and adversely affect us.

Brazilian public authorities grant the authorization to explore, develop and produce oil and natural gas reserves to market players by means of concession agreements entered into with ANP independently or in consortium with other ANP-qualified companies. These concession agreements are primarily governed by the Brazilian Oil Law. Pursuant to the Brazilian Oil Law and the concession agreements, concessions are subject to early termination under certain circumstances, including: (i) non-compliance with the obligations provided for in the concession agreements,

including, without limitation, the failure to comply with the minimum exploratory program under the ANP regulations, the failure to timely submit the development plan to the ANP, and the failure to obtain ANP's approval to the development plan; and (ii) declaration of bankruptcy of the concessionaire or non-approval, by the competent authority, of a judicial recovery (*recuperação judicial*) request by the concessionaire; among others. We cannot assure you that we will be able to meet our obligations or that we will not face bankruptcy, which may subject us to early termination of our concession agreements.

The Brazilian government may also take possession of the oil fields by means of the exercise of eminent domain (*desapropriação*) due to public interest, in which case the concessionaire is entitled to receive a compensation. We cannot predict the amounts and terms regarding these payments and if they will be adequate or sufficient to cover the investments made and related incurred losses.

In the event of early termination of the concession agreements, for any reason, the assets relating to the concession must be returned to the granting authority. Accordingly, the termination of the concession agreements and the consortium agreements to which we are party could have an adverse material effect on us. For additional information on the concession agreements, see "*Business—Concession Agreements*."

If any of the concession agreements are subject to early termination due to one of the events listed above, no compensation will be due from ANP to us and fines or other penalties could be applied to the concessionaire if it is responsible for the termination event. In addition, early termination of the concession agreement, as well as the lack of commercial discoveries during the exploratory period or the failure to extend any of the concession agreements, for any reason, could materially and adversely affect us.

Furthermore, the early termination of the concession agreement does not release us from liability for the damages and losses caused to third parties in connection with the concession granted, subject to the applicable statute of limitations term, or from the rights and obligations agreed with creditors. In the event of termination due to non-compliance with legal, regulatory or contractual provisions that results in termination at will (*caducidade*), the effective compensation amount to be paid by the granting authority could be decreased significantly by the application of fines or other penalties.

ANP is not required to approve our extension requests relating to the concession agreements to which we are a party to (or to which we expect to become a party to). ANP may deny our request in full or require changes to the technical-economic report and investments to be made. Our inability to secure the extension of our concession agreements will materially and adversely affect us.

We are also subject to minimum local content requirements in some of our concession contracts. We may not meet this requirement with appropriate financial conditions and, as a result, we may be impacted by penalties in our contracts.

We have acquired, are in the process of acquiring and may acquire other oil and natural gas production assets and our future performance in the activities related to these assets is uncertain.

We may experience failures in developing business relationships, establishing operating procedures, hiring staff, establishing facilities and obtaining the required licenses and regulatory approvals, as well as in taking any other measures required to perform our businesses relating to our acquired assets, including those which acquisition is pending consummation, and any other assets that we may acquire in the future. We may not be successful in implementing our business strategies or in implementing the necessary infrastructure for the performance of our activities in these assets as planned, which may materially and adversely affect us. For more information on our asset portfolio, see "*Business—Our Asset Portfolio*."

Our business requires significant investments and maintenance expenses which we may be unable to finance.

The oil and gas industry requires significant investments and we expect to make substantial capital expenditures in our business and operations for the production of oil and gas. We may be unable to obtain sufficient funds to carry out revamping projects (interventions, drilling and infrastructure) on our assets. Also, we are in the process of

acquiring the remaining 65% working interest in the Pescada Cluster. We might not have access to the necessary funds required to implement our business plan, which may materially and adversely affect us.

Our future cash flow from operations are subject to several uncertainties, including but not limited to:

- our ability to locate or acquire reserves;
- our ability to extract oil and natural gas from those reserves;
- the terms and timing of any engineering projects for investments in production, revamping and equipment;
- the cost and timing of governmental approvals and/or concessions (including renewals of concessions);
- the performance of the recovery factor of the fields;
- the effects of competition by larger companies operating in the oil and natural gas industry; and
- the prices at which oil and natural gas are sold.

Our ability to obtain funds necessary to run our operations may be adversely affected if our revenue decreases for any reason. If cash from our operations and funds available are insufficient to meet our capital requirements, we may have to enter into inter-company loans, raise funds in the local and international capital market and pursue other sources of financing. This type of financing may not be available or, if available, may not have satisfactory terms and conditions.

In addition, we are subject to delays in the construction and operation of facilities and may incur costs that are above expected, which may materially and adversely affect us.

If we are unable to raise or obtain additional capital in the future, we may also be required to reduce or delay our investments, dispose of our assets, or restructure or refinance our debt, which may materially and adversely affect us.

We are subject to environmental liabilities arising from Petrobras' assets that we have acquired or are in the process of acquiring.

We have acquired several assets and are in the process of acquiring other assets, including assets that belonged to Petrobras. We cannot assure you that during the due diligence process we perform, we had or will have full access to all information regarding validity of environmental licenses issued to the former owners of these assets, including Petrobras, for the operation of the fields located in these assets. We may also not have full information regarding compliance with the applicable environmental laws and regulations by former owners of these assets. As a result, we may not be aware of potential risks relating to the acquisition and operation of these assets. Our failure to comply with the requirements under the licenses or applicable environmental laws and regulations before or after the acquisition of an asset may subject us to environmental administrative and criminal liability, which may materially and adversely affect us.

Additionally, we may be required to repair environmental damages caused in the past, especially in regard to damaged and contaminated areas. As far as civil liabilities are concerned, Brazilian environmental laws adopt a joint and several strict liability regime, which means that the liability to repair the damages applies regardless of fault, and may extend to anyone who, directly or indirectly, contributed to the environmental damage event, which could materially and adversely affect us.

Moreover, with regard to onshore exploration, liabilities in connection with the recovery of contaminated and damaged areas are a *propter rem* liability, meaning that new owners of the properties could be held liable for the recovery of the environmental damage, regardless of who was responsible for the damage by fault or negligence. If we are held liable for any environmental damages caused by the operations of the assets purchased or being purchased by Petrobras or of any other assets we acquire in the future, we may be materially and adversely affected.

The internal projections, studies and evaluations that we rely on involve a significant degree of uncertainty and may be inaccurate.

Under our business model, we rely on internal projections and feasibility studies prepared by independent certification companies, which contain projections based on forecasts and expectations that are based on the current scenario at the time of preparation of these studies to assess future events and financial trends. We cannot assure you that these projections will materialize. Similarly, in view of the uncertainties inherent to projections, including external factors that are extrinsic to us, we cannot assure you that the projections or conclusions from these projections will occur. Accordingly, actual current resources, costs, cash flow, profit margin and exposure to business risks may be less favorable than those projected, which may adversely affect us.

The estimates we have used for our hydrocarbon reserves consider the techniques adopted by the independent certification company *DeGolyer and MacNaughton*, which has prepared the Reserves Report. Such report reflects the professional judgment of *DeGolyer and MacNaughton*, which uses internationally accepted technical criteria for investigating the quality of the reserves we hold. The information about our oil and natural gas reserves and contingent resources included elsewhere in this Offering Memorandum regarding acquisitions of assets that were not and may not necessarily be concluded by us, including (i) production graphs, (ii) estimated, proved, probable, and possible reserves and contingent resources, and (iii) estimates of net revenue arising from our fields and their present value, are derived from the reserves and the Reserves Report.

Studies and evaluations about the volume estimates of oil and natural gas resources consider several estimates and assumptions relating to factors such as geological analyses, behavioral modelling of the reserves, price and cost projections, and comparative analyses with other similar reserves and resources. These studies and evaluations are complex in nature and estimates are particularly difficult to determine due to several uncertainties inherent to the reserves, future production projections, expenses for the development of production wells, operating expenses and cash flow.

We cannot accurately foresee, before drilling wells, if any prospect will actually contain oil or natural gas or if they will be capable of producing oil or natural gas in sufficient amounts or quality to allow us to recover the drilling and completion costs or to make production economically viable. Moreover, the drilling of wells carries a high risk, and some of our drilling activities may not be successful or economically viable.

Therefore, these studies are based on estimates and assumptions that involve a significant degree of uncertainty that may prove incorrect and are beyond our control. Consequently, the reserve estimates stated in our reserves reports, including the Reserves Report, may vary from our actual reserves. The oil and natural gas amounts that will actually be recovered and the timing and cost for these recovered volumes may also be different from our original estimates. Accordingly, the cash flow derived from our assets could significantly vary from the estimates contained in the Reserves Report, which could materially and adversely affect us. For information on our reserves, see "*Reserves Report Summary*."

Oil and natural gas reserves are classified using the level of certainty associated with the estimates and on the basis of the development and production status of a specific project. According to the Petroleum Resources Management System, or PRMS, the classification of oil and natural gas reserves are divided into (i) proved reserves; (ii) probable reserve; and (iii) possible reserves. For additional information on the classification of oil and natural reserves, see "*Business—Classification of Oil and Gas Reserves*."

We rely on third-party suppliers of goods and services for the operation and execution of our projects and, as a result, we may be materially adversely affected by failures or delays, or by the unilateral termination of our supply agreements.

Our operations rely on the availability of drilling equipment, drilling services and access to third-party-owned and operated infrastructure on commercially reasonable terms. These goods and services may be scarce and may not be readily available at the times and places required or at favorable rates. We are also susceptible to the risks of performance and product delivery within our supply chain. If our third-party suppliers and service providers delay, fail to deliver goods or provide services to us, or if they unilaterally terminate our supply agreements with them, we

may not meet our operational goals within the expected timeframe. As a consequence, we may need to postpone one or more of our projects, which may have an adverse effect on us.

Contractors and other third-party service providers may also cause losses or third-party liability or losses to us due to their deficient performance. We may be subject to liability claims as a result of the inherently hazardous nature of the oil and gas business, including for acts and/or omissions of sub-contractors and other service providers. We may also be held liable for the operations of our contractors with respect to governmental authorities, consortium partners or other third parties. Any indemnities we may receive from such parties may be inadequate and/or difficult to enforce.

Adverse events relating to our sales agreements could have a material adverse effect on us.

We enter into sales agreements with our clients pursuant to which our clients commit to purchase all our oil and gas production. We cannot guarantee that these agreements will not be amended, challenged or terminated nor that they will be renewed, or that the revenue obtained thereunder will remain at the same levels or as currently projected. Additionally, the counterparties under any of the sales agreements may not comply with their contractual obligations or may challenge certain provisions of such agreements, which could adversely affect us.

Furthermore, we could also be involved in legal proceedings, arbitration, or other forms of dispute with respect to these agreements, which could delay the compliance of the terms of such agreements, cause their suspension or termination, adversely affecting us.

Our partnerships and joint ventures might not be successful.

We currently invest and may continue to invest in partnerships and joint ventures through special purpose entities or similar entities with third parties, such as the one we have with DBO (now Maha Energy Offshore (Brasil) Ltda.) for the operation of 3R Offshore, in which 3R holds an 85% equity interest. The partnership structure exposes us to additional risks, including the potential bankruptcy of our partners and possible disputes between us and our partners with respect to financial and commercial matters. We cannot assure you that our partnerships, joint ventures and/or similar structures will be successful and obtain the expected results. If our partnerships and joint ventures are not successful, we may be adversely affected.

If a partner fails to meet its obligations or is financially unable to make its capital contributions, we may be required to make additional investments or provide additional services to offset the lack of contributions by the non-performing partner, thereby increasing our exposure to the risks inherent to that partnership, adversely affecting us.

Additional risks related to partnerships include, but are not limited to, (i) inability to maintain a good relationship with business partners; (ii) financial issues of our business partners that may require additional investments by us; (iii) divergent economic and commercial interests between us and our business partners; (iv) liabilities, under specific circumstances and conditions, for the obligations of affiliate companies, particularly in connection with tax, labor, environmental, climate, consumer protection and anti-corruption matters; (v) hidden liabilities of the business partner not previously identified by us; and (vi) potential bankruptcy of our partner. The occurrence of any of these risks may adversely affect us and cause the loss of our investments in such partnerships.

The assets we operate could suffer impairments and write-downs.

Our most significant assets are those related to the exploration and production of oil and gas. Our investments in oil and gas production assets include the rights to the properties used in the production, development and prospecting stages, which are accounted for at their cost value. Most of the assets in our portfolio are mature fields that have been in production for a long time and have depleted fields, therefore, subject to impairment and write-downs.

We review and appraise our assets to conduct impairment tests at least annually or when events or changing circumstances indicate that their respective accounting value may not be recoverable, which could be another risk. Our future cash flows are estimated on the basis of expected future production, oil and gas prices, operating costs and capital costs. There are numerous inherent uncertainties to estimating the oil and gas reserves and contingent

resources, and these differences between our management's assumptions and the actual conditions resulting from the operation of each asset could materially and adversely affect us. For additional information on our recognized impairments, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Factors Impacting the Comparability of our Financial Results—Impairment of Non-Financial Assets*."

Additionally, global macroeconomic conditions may also adversely affect the appraisal of our contingent reserves and resources. The assumptions used in evaluating our contingent reserves and resources include estimates of oil and gas prices that were expected when the assumptions were negotiated. If these estimates or assumptions are inaccurate, we may be required to write-off the value recorded for our contingent reserves and resources, which would materially and adversely affect us.

The loss of members of our senior management, or the inability to attract and retain qualified personnel, may adversely affect us.

Our ability to implement our strategy is dependent, to a large extent, on the services of our senior management team. Our executive officers are responsible for developing our sector expertise, by originating and evaluating business opportunities, as well as directing our investments and acquisitions. If we lose any of the members of our senior management team, we cannot guarantee that we will be able to attract and retain qualified professionals to replace them. The loss of any member of our senior management team or our inability to attract and retain other qualified professionals may materially and adversely affect us. Our long-term success also depends on our capacity to continue to successfully attract and train our employees. Our activities require qualified personnel with knowledge of technical procedures specific to the performance of our activities. We cannot assure you that we will be able to attract, retain and train qualified personnel, at adequate costs, which could have a material adverse effect on us.

Production of oil and natural gas involves inherent risks against which our insurance policies may not provide appropriate coverage.

The occurrence of any event not covered by our insurance policies, or that exceeds the losses provided for under our policies, could have an adverse and material effect on us, and require us to restore and/or revamp the assets affected by any such event, which may compromise the investment made to acquire these assets and would result in increased expenses. We cannot assure you that our insurance policies will be adequate, paid in a timely manner, or sufficient in all circumstances or against all risks to which we are exposed. Additionally, insurance policy coverage is conditional on the payment of the respective premium. If we fail to pay these premiums we could be placed at risk in the event of an accident, since the damages would not be covered by the insurance company, which could adversely affect us.

Moreover, we cannot assure you that we will be able to maintain our insurance policies in the future at reasonable commercial rates or on acceptable terms with the same insurance companies or similar insurance companies, which could increase our costs and, as a result, adversely affect us. We could also be held legally liable to pay damages to third parties as the result of an accident. If any of these factors occur, we could be adversely affected.

Unfavorable decisions or the impossibility to make judicial deposits or provide collateral in judicial, administrative or arbitration proceedings may adversely affect us.

We, our principal shareholders, and the members of our management are and may become defendants in judicial, administrative or arbitration, civil, tax, labor, corporate, land ownership and environmental proceedings, among others. We cannot assure you that the outcome of any of these proceedings will be favorable to us, our principal shareholders or to the members of our management, or that we will fully or partially establish or maintain provisions for these proceedings, in an amount sufficient to cover all liabilities that may result from them.

In addition, we might become defendants and/or receive notifications about legal or administrative proceedings related to the assets we acquired under the Petrobras Divestment Plan, for actions or omissions occurred prior the closing date, in accordance with the terms of the relevant Sale and Purchase Agreement. In case of any unfavorable decision under these judicial, administrative or arbitration proceedings, our liability for damages will follow the

terms and conditions of the relevant Sale and Purchase Agreement, but in case we are liable, it may negatively impact our business, results of operations, financial condition and reputation, consequently affecting the trading price of the Notes. The result of these proceedings may lead to the suspension of our activities until court or administrative rulings are complied with or hinder the continuation of a project. We may not have the funds required to make court deposits, provide or offer collateral in legal proceedings involving substantial amounts, nor to meet the liabilities arising from these proceedings in full or in part, which may adversely affect us.

We are subject to inspection by a number of federal, state and municipal authorities, including fiscal, labor and environmental authorities. These authorities may issue infraction notices against us, which may be converted into administrative proceedings and, subsequently, judicial proceedings. Unfavorable decisions involving significant amounts or that affect our reputation or ability to perform our planned operations may adversely affect us. For more information on our legal proceedings, see "*Business—Legal Proceedings*."

Hedging risks in connection with our exposure to fluctuations in exchange rates and commodity prices may adversely affect us.

The nature of our operations exposes us to fluctuations in exchange rates and commodity (oil) prices. We may use financial instruments and physical delivery contracts to hedge our exposure to these risks. If we decide to enter into hedging arrangements, we will not necessarily be protected from such risks and, (i) we will be exposed to credit-related losses in the event of non-performance by counterparties to the financial instruments; (ii) we may suffer financial loss if we are unable to commence operations on schedule or are unable to produce sufficient quantities of oil and natural gas to meet our obligations; and (iii) our earnings potential could be limited due to the hedge strategy implemented (*e.g.*, minimum and maximum price locks), as we do not necessarily benefit from the full potential of the commodity price increase in a possible sale, all of which could adversely affect us. On the other hand, if we do not engage in hedging agreements, we could be more susceptible to declines in oil and natural gas prices than our competitors who engage in hedging transactions, which could adversely affect us.

Additionally, hedging transactions could expose us to cash margin requirements, which could have a material adverse effect on us, depending on the size of the hedge and the number of sales or purchases of contracts conducted during a period of time.

For additional information on our hedge transactions, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Quantitative and Qualitative Disclosures about Market Risks—Price Risk*."

The distribution and transportation of the hydrocarbons we produce involve risks that could result in accidents and operating costs, which could adversely affect us.

We make arrangements for transportation and distribution of oil and natural gas that we produce in our fields to the market, principally by road and pipelines. Disruptions of these transportation services due to adverse weather conditions, strikes, lockouts, delays or other incidents could temporarily impair our ability to supply the hydrocarbons we produce to our customers, which may materially and adversely affect us.

In addition, some pipelines for transporting production are located in environmentally sensitive areas and if any accident or other problem occurs with our pipelines, such as leaks or ruptures, our operations could be suspended, and we could be materially and adversely affected. In case any of these risks materialize, causing pollution and environmental damage, we could incur in significant civil liability claims, administrative fines or penalties, as well as criminal sanctions against us and our officers, in addition to legal costs, remedial costs and indemnifications. These risks could also result in the loss of lives, significant damage to our property or that of third parties, and interruptions to our operations, which, in turn, could result in significant financial and reputational losses. Moreover, the transportation and distribution activities for waste produced, such as water, triazine, and other toxic materials involve a range of inherent dangers and operational risks, such as leaks, accidents and mechanical problems, which could materially and adversely affect us.

The proximity of pipelines and storage locations to populated areas, including residential and commercial areas, and industrial installations could increase the scale of the damage resulting from these risks. The occurrence of any of these events may adversely affect us.

We may be unable to comply with the covenants under our loan and financing agreements.

We are and may be subject to specific covenants under loan and financing agreements (including under the Debentures and the Indenture), including restrictions relating to financial and non-financial indicators such as (i) restrictions on mergers and sale of assets, (ii) payment of dividends to our shareholders, (iii) acquisitions, and (iv) change of control. For further information, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Indebtedness—Material Loans and Financings*" and "*Description of Notes—Certain Covenants.*"

Accordingly, if we are unable to (i) comply with our financial covenants due to adverse business conditions; (ii) maintain the encumbrances under our loan and financing agreements fully effective; (iii) fulfill the financial model assumptions; (iv) comply with all of our contractual financial obligations, which could lead to cross default of some of our agreements; and (v) comply with our obligations under our agreements with customers, we could experience the cross acceleration of our debt, which could adversely and materially affect us. We are also subject to covenants that could limit, among other things, our ability to incur additional debt, pay dividends, redeem or buy back our shares, sell assets, create certain encumbrances, sign sales and leaseback transactions, enter into transactions with affiliates, establish limitations on dividends and other payment restrictions that affect subsidiaries, and restrict, consolidate, merge, transfer or lease all or nearly all of our assets, which could adversely and materially affect us.

We may face potential conflicts of interest involving related party transactions.

We have expenses resulting from transactions with related parties. Related party transactions may result in potential conflicts of interest among the parties, which may materially and adversely affect us. We cannot assure you that our related party transactions policy will be effective and, in the event of conflicts of interest, we may be adversely affected.

We could be adversely affected by violations of Anticorruption Laws.

We could be materially and adversely affected if members of our management, employees or outsourced service providers, acting on our interest, behalf or to our benefit, violate applicable anticorruption laws and regulations in the countries where we operate or do business, such as Law No. 12,846, dated August 1, 2013, as amended, or the Brazilian Anticorruption Law (*Lei Anticorrupção*), and Law No. 8,429, dated June 2, 1992, as amended, or the Brazilian Administrative Improbity Law (*Lei de Improbidade Administrativa*) (collectively with all such applicable anticorruption laws and regulations, the "Anticorruption Laws"). The Brazilian Anticorruption Law introduced the concept of strict liability for entities involved in harmful conducts against the public administration, and, accordingly, subjecting the wrongdoer to civil and administrative sanctions, including fines, the loss of property, disgorgement, the suspension or partial prohibition of operations, and the prohibition of contracting with the government or receiving tax benefits, incentives or credits, which if applied, could materially and adversely affect our results of operation and reputation. Furthermore, the Brazilian Anticorruption Law states that the controlling, controlled or affiliated companies of the wrongdoer are jointly liable for the illegal acts.

We cannot guarantee that our management, employees and third parties acting on our interest, behalf, or to our benefit, will strictly comply with applicable legislation, our code of ethics and conduct and Anticorruption Laws, which, if violated, could result in fines, loss or early termination of authorizations, permits and/or licenses, in addition to damage to our reputation. Any such violation may materially and adversely affect us.

Non-compliance with Anticorruption Laws by us, companies of our economic group or our representatives may constitute an event of default under the agreements we entered into and, as a result, we may be subject to the acceleration of our debt. Consequently, if the members of our management and employees or the members of the management and employees of the companies of our economic group, or third parties acting on our interest, behalf, or to our benefit, become involved in any investigation or proceedings related to corruption or crimes in connection with our business in Brazil or in any other jurisdiction, we may be materially and adversely affected.

Our business, practices and policies are subject to risks associated with non-compliance with the Brazilian General Data Protection Law and could be adversely affected by the application of penalties, including fines and indemnifications.

Law No. 13,709/18, as amended by Law No. 13,853/2019, or the Brazilian General Data Protection Law, or LGPD governs the processing of personal data in all economic sectors, and prescribes the rights of the data subjects, the legal bases applicable to the processing of personal data, the requirements for obtaining consent, the obligations and requirements relating to security incidents, breaches and data transfers, as well as authorization for the creation of the National Data Protection Authority, or ANPD, the government agency responsible for ensuring compliance with data protection standards and for applying sanctions in case of breach of the LGPD or security incidents.

As the ANPD continues to release guidance on the implementation of LGPD obligations, the legal framework will evolve, and best practice examples will continue to emerge. In the event we are not in compliance with the LGPD, we and our subsidiaries may be subject to certain sanctions and we may be liable for material, moral, individual or collective damages, which could materially and adversely affect us.

For further information, see "*Regulatory Overview—Data Protection and the Brazilian General Data Protection Law*."

We depend on information technology systems to conduct our business and the failure to protect these systems against security incidents could adversely affect us.

We depend on information and communication technology, and hardware and software processing systems for the efficient operation of our business. These systems are necessary for our ability to adequately monitor our operations, generate client invoices, and achieve operational efficiency, indicators and standards of service. The information systems are vulnerable to service interruptions and malfunction, which could interfere unexpectedly in our operations. In addition, our information systems are exposed to viruses, malware, cyberattacks, and other security incidents, which are becoming more sophisticated and pervasive, and could materially and adversely affect us. Failures in our cybersecurity systems or our failure to prevent or identify cyberattacks may materially and adversely affect us.

Cybersecurity incidents could affect the confidentiality, integrity and/or availability of our systems and, therefore, result in misappropriation of our information and/or information of our customer, employees, or third parties, downtime in our servers or interruptions of our operations, or even the disclosure of commercial data and/or other sensitive information, which may materially and adversely affect us.

Any loss of intellectual property, commercial strategies or other sensitive or confidential information or the interruption of our operations may adversely affect us. The monitoring of the unauthorized use of intellectual property is difficult, and we may be unable to adequately protect or prevent third parties from appropriating our intellectual property rights. Additionally, third parties may allege that the products and services we offer infringe their own intellectual property rights. Any dispute related to intellectual property rights may be costly and lengthy due to the uncertainty in these proceedings. In addition, we cannot guarantee that the measures we take in order to protect our intellectual property rights will be sufficient, or that third parties will not violate our intellectual property rights.

We cannot guarantee that our security systems will be effective in protecting us from security incidents or breaches, which could adversely and materially affect us. The unavailability of information systems or the failure of these systems to operate as planned, for any reason, could interrupt our business and result in reduced performance and increased operating costs, which could materially and adversely affect us.

Our inability to identify failures in our internal control systems, policies and procedures could adversely affect us.

Our internal control systems, policies and procedures may not be sufficient or fully effective to detect malpractice, error or fraud. We cannot assure you that our risk management methods may be able to prevent future exposure or be efficient against risks that are unknown and/or unmapped, which could be significantly greater than

those indicated by the historic measures we use. If we are unable to maintain effective internal controls and procedures, we may be unable to accurately report our results or prevent the occurrence of malpractice, error or fraud, which may materially adversely affect us.

We may be adversely affected by illegal practices by our suppliers or outsourced service providers.

We cannot guarantee that our suppliers will not (i) have labor or environmental liabilities, (ii) irregularly process personal data, (iii) outsource the provision of their services, or the production chain, (iv) use improper security conditions, or (v) carry out irregularities to lower the cost of their products or services.

Pursuant to Brazilian law, civil liability for environmental damage is strict and all pollutants may be held jointly and severally liable. Accordingly, strict civil liability applies to all parties involved in the activity that resulted in the environmental damage. Furthermore, indirect pollutants may also be held liable, which is generally understood to include those who benefited from the polluting activity. Contracting third parties to provide any type of services relating to our facilities or activities, such as managing contaminated areas, clearing vegetation, buildings, or the management and final disposal of solid waste, does not exempt us from liability for any environmental damage caused by the contracted party. We may be held liable for any damage caused by our service providers or suppliers, which could adversely and materially affect us. In general, the party holding greater financial resources may be required to repair the environmental damage, with right of recourse against the other parties.

We may be held liable for damage caused by our service providers or suppliers. Under these circumstances, our image and market perception could negatively and materially impact us.

Additionally, under certain circumstances, we may be held jointly and severally liable for practices adopted by our suppliers and service providers that process personal data on our behalf, such as in the event of breach of applicable laws or security breach incidents of our suppliers and service providers affecting the personal data of individuals or entities that are associated with us, which may adversely and materially affect us.

We may be adversely affected by changes in Brazilian tax law, unfavorable outcomes related to tax contingencies or the change, suspension or cancellation of tax benefits and special regimes.

The Brazilian government regularly implements changes in tax laws, including adjustments to tax rates and introductions of temporary taxes, which may increase our total tax obligations and, in turn, adversely affect us.

Additionally, certain tax laws may be subject to restrictive interpretations by tax authorities. If tax authorities have an interpretation of tax laws that differs from ours, we may be adversely affected and be required to pay the full amount of the relevant taxes, *plus* charges and penalties. Besides that, the effects of these changes and any other changes that result from the enactment of additional tax reforms or changes in the way current tax laws are applied cannot be quantified, and there can be no assurance that these changes will not have an adverse effect on our business.

Changes in Brazilian tax legislation are frequent, and increase during periods of economic instability. Currently, the most relevant modification in the Brazilian tax legislation stems from the approval, by the house of representatives and the Federal Senate, of Constitutional Amendment Project ("PEC") No. 45/2019, enacted as the Constitutional Amendment No.132/2023, which modifies the consumption taxation system in its entirety and changes specific points of taxation on assets.

The Constitutional Amendment No.132/2023 provides for the replacement of five taxes: the Social Integration Program (*Programa de Integração Social*, or "PIS"), the Contribution for the Financing of Social Security (*Contribuição para o Financiamento da Seguridade Social*, or "COFINS") and the Tax on Industrialized Products (*Imposto sobre Produtos Industrializados*, or "IPI"); the Tax on Circulation of Goods and Services (*Imposto sobre Circulação de Mercadorias e Serviços*, or "ICMS"), and the Services Tax (*Imposto Sobre Serviços*, or "ISS"). These taxes will be replaced by two value-added taxes (VATs). ICMS and ISS will be incorporated into the Goods and Services Tax (*Imposto sobre Bens e Serviços*, or "IBS"). Managed by states and municipalities. The Federal Government, on the other hand, will be in charge of the Contribution on Goods and Services (*Contribuição sobre Bens e Serviços*, or "CBS"). The CBS will consolidate the PIS, CONFINS and IPI. In addition, the Selective Tax

(*Imposto Seletivo*, or "IS") will be introduced, targeting goods that are harmful to health or the environment. The IS may be applied at varying rates for certain goods and services deemed essential. Constitutional Amendment No.132/2023 also indicates the creation of special tax regimes limited to specific cases will be created. This includes the authorization of specialized CBS and IBS regimes for certain sectors, such as fuels and lubricants, and others explicitly mentioned in Constitutional Amendment No.132/2023.

In addition, on December 15, 2023, the house of representatives also approved the bill to convert Provisional Measure ("MP") No. 1,185/2023 into the Law No. 14,789/2023, which establishes a new system for the tax treatment of revenues arising from governmental subsidies at the federal level.

Moreover, Law No. 14,789/23 changed the tax system for the deduction of expenses with the payment of interest on net equity, by altering certain aspects of the formula for calculating such expenses and making it more restrictive than the previous rules. Law No. 14,789/2023 came into force as of January 1, 2024, bringing a relevant impact to taxpayers who benefit from subsidies for investment and funding.

As of the date of this Offering Memorandum, we benefit from certain tax benefits at Federal and State levels, namely the REPETRO-SPED special regime, an ICMS tax benefit connected with the REPRETRO-SPED, an ICMS tax benefit related to certain fuels that are subject to the ICMS-*monofásico* regime, and a tax incentive from the Superintendency for the Development of the Northeast (*Superintendência de Desenvolvimento do Nordeste*), or SUDENE. For additional information on our tax benefits and special regimes, see "*Business—Tax Incentives*." If these tax incentives are not maintained, for any reason, or if we fail to meet the requirements and conditions to maintain them, the laws providing for these tax incentives are changed, whether due to the tax reform or not, or if these tax incentives are limited, suspended or terminated, we may be adversely affected by the increase in our tax burden.

We are also subject to inspections by federal, state and municipal tax authorities. As a result of these inspections, the tax authorities may question our tax positions. We cannot provide assurances that the provisions for such proceedings, if any, will be appropriate, that there will not be additional tax exposure, and that it will not be necessary to create additional tax reserves for any tax exposure. Any increase in the amount of taxation because of challenges to our tax positions may adversely affect us.

Moreover, Brazilian tax authorities have recently increased the number of inspections. There are several tax issues that are of concern to the Brazilian authorities and in relation to which the Brazilian authorities regularly inspect companies, including inventory control, goodwill amortization expenses, corporate restructuring and tax planning, among others. Any legal and administrative proceedings related to tax matters before the courts, including the Administrative Council for Tax Appeals (*Conselho Administrativo de Recursos Fiscais*), or CARF, and state and municipal administrative courts, may adversely affect us.

We may be held liable for the labor and social security obligations of our outsourced service providers.

Pursuant to Brazilian law, if outsourced service providers fail to meet their obligations pursuant to labor and social security laws, we may be held secondarily liable for the tax, labor and social security debts, regardless of our right of recourse against the outsourced service provider. This liability is inherent to contracting outsourced service providers as it is a result of our position as beneficiary of the services provided to us by their employees. We cannot predict nor quantify the liabilities associated with outsourced service providers. If these liabilities materialize, we could be adversely and materially affected. For additional information, see "*Business—Legal Proceedings—Labor Claims*."

Risks Relating to the Oil and Natural Gas Industry

There are inherent risks to the production of oil and natural gas that could adversely affect us.

Our future performance depends on the success of our exploration and production activities in the oil and gas segment. Additionally, the performance of our activities in the hydrocarbon market and in the redevelopment of mature onshore and offshore fields depends on the evaluation of geological analyses, behavioral modelling of the reserves, price and cost projections, and on increasing the fields' recovery factor. As a result, our oil and gas

production activities are subject to numerous risks beyond our control, including the risk that drilling will not result in a commercially feasible production of oil or natural gas, the assessments of our resources and reserves are based on geological analyses, modeling of deposit behavior, projected prices and costs, and the increase in the recovery factor of fields, *i.e.*, the percentage volume of oil that was extracted from a reservoir in relation to the total existing volume, among others.

Additionally, the marketability of expected oil and natural gas production from our projects will be affected by numerous factors beyond our control, including, but not limited to (i) market fluctuations of prices, (ii) proximity and capacity of pipelines and other means of transportation, (iii) availability of upgrading and processing facilities, (iv) storage, production cuts or interruption in the transportation of the oil and natural gas produced in our fields; (v) equipment availability and government regulations (including, without limitation, regulations relating to prices, taxes, government take, allowable production, importing and exporting of oil and natural gas and environmental protection), among others. Furthermore, adverse market conditions or the absence of satisfactory agreements for the transportation of oil and natural gas may adversely affect our access to the oil and natural gas markets or delay our production. The effect of these factors, individually or in the aggregate, may result in us not receiving an adequate return on our invested capital.

There is no assurance that we will produce oil and natural gas in quantities or at the costs anticipated, or that our projects will not cease production, in part or entirely, in certain circumstances. Drilling and revamping programs may become economically unfeasible as a result of an increase in our operating costs or as a result of a decrease in market prices for oil and natural gas. Our actual operating costs or the actual prices we may receive for our oil and natural gas production may differ materially from current estimates.

We may also be exposed to the adverse effects of delays or interruptions in the wells' production as a result of transportation and storage capacity restrictions, production cuts, or interruptions to the transportation of the oil and natural gas produced in our fields. In addition, adverse market conditions or lack of satisfactory agreements for oil and natural gas transportation could materially and adversely affect our access to oil and natural gas markets or delay production.

Moreover, the raw materials used in our business and the cost of contracted services are subject to volatility depending on market conditions. These prices are affected by various factors over which we have little or no control, including, among others, international and national economic conditions, regulations, government policies, price list adjustments, and global supply and demand. We cannot guarantee that we will be able to reflect and/or compensate for increases in inflation, operating costs and expenses, amortization of investments and taxes. As a result, we may not be able to offset cost increases, which could reduce our profit margin and materially and adversely affect us.

Our business is subject to operational risks that may prevent us from realizing profits and can cause us significant losses.

Our production activities may be unsuccessful or may not be completed in time or within the planned budget for many reasons, including weather, drilling of dry wells, delays by the applicable authorities in providing licenses and/or special regimes, shortage of equipment and qualified personnel, mechanical problems, accidents and costs overruns.

The successful drilling of a gas or oil well will not ensure that we will realize a profit on our investment. A variety of factors, including geological, regulatory and market-related factors can cause a well to become marginally economical or not economically viable.

In addition, activities in the oil and gas sector can be dangerous and may be subject to interruption in the event of certain casualties. Our business is subject to a range of operating risks inherent in the oil and gas sector, including (i) fires; (ii) explosions; (iii) blow-outs and surface cratering; (iv) uncontrollable flows of gas, oil, fluids or formation water; (v) natural disasters, such as storms and other adverse weather conditions; (vi) gas pipelines, cement, or oil pipelines failures; (vii) casing collapses; (viii) mechanical and electrical problems, such as the loss or failure of equipment and tools; (ix) abnormally pressured formations; (x) environmental hazards, such as gas leaks, oil spills, oil pipeline ruptures and discharges of harmful gases, or underground water and soil contamination from site operations and storage; (xi) unsatisfactory performance by subcontracted suppliers in drilling wells and in

performing other services; (xii) pandemics; (xiii) other hazards relating to our operations; (xiv) business interruption and delivery delays; (xv) labor disputes or strikes by our employees or third-parties' employees; (xvi) delays or additional requirements in obtaining, maintaining or renewing permits and regulatory or other governmental licenses, including approvals from regulatory and environmental agencies; and (xvii) demonstrations by environmental and/or social groups or associations.

If any of these events were to occur, they could result in environmental damage, injury to persons, loss of life or a failure to produce oil or gas in commercial quantities. The said events could also result in significant delays to our drilling programs, a partial or total shutdown of operations, significant damage to our equipment and equipment owned by third parties and personal injury or wrongful death claims being brought against us. In addition, some of our main activities may cause accidents, such as oil spills, product leaks, fires and explosions. In particular, deep-water and ultra-deep-water activities present various risks, such as oil spills and explosions in our exploration and production units, including platforms, ships, pipelines, and terminals, among other assets owned or operated by us. These events may occur due to technical failures, human errors or natural events, among other factors.

Experiencing any of these operating risks or other events not predicted could lead to problems in any wells, platforms, gathering systems and other facilities, which could have an adverse and material effect on our in-progress operations, image and cause significant losses from (i) death or bodily injury; (ii) serious damage and destruction of property, (iii) damage to natural resources and equipment; (iv) pollution and environmental damage, which could lead to criminal and liabilities and administrative fines; (v) cleaning and repairs to resume our operations or other remedial liabilities; (vi) regulatory requirements; (vii) administrative, civil and criminal investigations and penalties; and (viii) suspension of our operations.

If any of these risks materialize, we may have to limit or suspend any production operations, and we could have our sales of oil or natural gas interrupted or suspended. Furthermore, we may face substantial costs associated with any clean-up, remediation or indemnification obligations.

Moreover, any of these events, or similar unpredicted events, could have administrative consequences and impact our ability to comply with the industry requirements and specific regulations for the oil and gas industry, including the obligations to present documentary evidence of oil and natural gas production, meet the safety standards according to the applicable law, operate installations and equipment in disagreement with applicable regulations, and sale of hydrocarbons outside the technical specification defined by the ANP.

Strikes, stoppages or other disputes with our employees or those of our principal suppliers and contractors, or in sectors of society that affect our business, could have adverse and material effect on the completion of projects, on achieving our objectives and on our operational continuity. Also, popular and trade union movements are active in the sector and regions where we operate and might oppose the expansion of existing and future processing plants, drilling schedules, distribution of oil by truck or other means, and the normal operations in the course of our business, which could adversely affect us. In general, members of these movements are used to invading and occupying facilities, which could adversely and materially affect us.

In addition, if these events result in the breach of the obligations assumed under the concession agreements we entered into with ANP and we do not cure such breach within the term established by ANP, ANP may terminate the respective agreements.

Any of these occurrences and the resulting consequences could materially and adversely affect us, including administrative penalties, such as fines, seizure of goods and products, full or partial temporary suspension of the operation of our establishments or facilities, and cancellation of our authorization to perform regulated activities.

Offshore oil operations involve a higher level of operational risk, which may adversely and materially affect us.

Our portfolio includes offshore fields, including ultra-deep-water offshore fields. Activities in offshore fields involve greater risks related to mechanical problems, especially when compared to onshore activities, as they require more time and employ more advanced technologies, which results in a higher risk of technological failure and higher costs, increasing the risk of occurrence of accidents involving oil spills, which require the suspension of drilling and production activities.

Offshore operations require intensive capital expenditures, which may increase the financial and operating risks of our standard procedures. These operations are also subject to risks inherent to maritime operations, including maritime disasters and pollution, total loss of vessels, government requirements, inactivity of vessels, defects in equipment, fire, explosions, ship turning, shipwreck, stranding, collision, damage due to adverse weather, risks associated with transshipment and infestations. Due to the limitation and high cost of infrastructure, certain discoveries of offshore reserves may not be economically viable and, if developed, they involve a greater risk of not providing the expected results. All of such risks and conditions may materially and adversely affect us.

We are also required to obtain environmental licenses for our activities, transportations means and river and maritime support with the competent environmental agencies. More restrictive environmental laws may delay the development of our activities and increase operating costs, which may result in delays in the schedule of activities or prevent us from conducting our activities, materially and adversely affecting us.

Decommissioning and abandonment costs are unknown and may cause substantial and unplanned costs, which may materially and adversely affect us.

Pursuant to the concession agreements we have entered into with the ANP, we are contractually responsible for the costs associated with abandoning and reclaiming wells and facilities we use for production of our oil and natural gas reserves, particularly because our strategy is focused on the acquisition and development of mature hydrocarbon fields. The abandonment of these installations and the costs associated therewith is often referred to as decommissioning. The use of financial resources to meet these decommissioning costs could impair our ability to deploy capital in other areas of our business. In addition, we may remain liable for historic deactivation and abandonment, even after the sale or transfer of the assets before the end of production, which could adversely affect us.

The costs related to decommissioning and abandonment are difficult to estimate, since (i) they are often in accordance with estimates included in documents approved by ANP, such as the development plan (*plano de desenvolvimento*), annual work program (*programa anual de trabalho*), annual reserve bulletin (*boletim anual de reserva*) or annual installation program (*programa anual de instalação*), and (ii) the regulation that sets forth the decommissioning standards could undergo changes over time. The estimated period for implementing decommissioning depends on several factors and before this period there could be a significant reduction in production levels and in the commodities' prices, and/or an increase in operating expenses.

Additionally, under certain circumstances (such as when an asset is assigned or production begins), ANP may require us to make a deposit or a pledge serving as a financial guarantee for the decommissioning and abandonment costs. ANP Resolution No. 854/21 regulates the procedures for the presentation of financial guarantees and terms to secure the financial resources for the decommissioning of production facilities in oil and natural gas fields, based on the adoption of progressive contributions, in addition to establishing the guarantees accepted by ANP, including letters of credit, corporate collaterals, provisioning funds, oil and natural gas pledge, performance bonds or the execution of extrajudicially enforceable instruments. The acceptance of each financial guarantee or term is subject to the discretion of ANP, which may order the replacement of the adopted guarantee at any time, whenever a technical study shows that the presented guarantee is insufficient or inadequate.

If we fail to provide the guarantee for the decommissioning in assignment processes pending with the ANP, the assignment will not be completed, as the guarantee is a requirement set forth in ANP Resolution No. 854/21. If we fail to renew the presented decommissioning guarantees, they may be foreclosed by ANP, pursuant to ANP Resolution No. 854/21, and we may be subject to the termination of the concession agreements due to the non-compliance with contract essential obligations and the penalties set forth in Law No. 9,847/1999 for non-compliance with requirements set forth in applicable law and in ANP Resolutions.

Additionally, there are just a few banks that are able and willing to issue such letters of credit, which could require us to provide collateral cash or other more expensive forms of pledges accepted by the ANP, as indicated above.

We remain liable before ANP for demobilizing equipment in our capacity as concessionaire, regardless of the assumption of part of certain decommissioning costs by a counterparty to our agreements or partner. We cannot

guarantee that any decommissioning costs for our assets (or assets in the process of acquisition) will not initially projected amounts, which may materially and adversely affect us.

The international reference prices for crude oil and natural gas and the demand for these products may fluctuate due to factors beyond our control.

In 2020, as a result of the effects arising from the COVID-19 pandemic and the price war between the principal oil producers in the world, primarily Russia, Saudi Arabia and the United States, there was a significant reduction in the global demand for oil, leading to an unprecedented fluctuation in oil prices. Since then, the global price of oil and natural gas has fluctuated significantly and is subject to international supply and demand factors beyond our control. Factors such as (i) political events around the world, especially in the Middle East, Venezuela and the United States and the ongoing conflicts between Russia and Ukraine, and Israel and Hamas; (ii) the evolution of inventory of oil products and natural gas; (iii) the circumstantial effects of climate change and meteorological phenomena, such as storms and hurricanes, which especially affect the Gulf of Mexico; (iv) the increase or the reduction in demand in countries with strong economic growth, such as China and India; (v) pandemics in general, such as the COVID-19 pandemic; (vi) the political instability and threats of terrorism that some producing regions suffer periodically, including Yemeni rebels' hijackings and assaults on ships crossing the Red Sea, where a significant part of the world's seaborne crude oil flows through; (vii) actions of Organization of Petroleum Exporting Countries ("OPEC"), its members and other state-controlled oil companies relating to oil price and production controls; (viii) the risks that crude oil and natural gas could be used as a political weapon; and (ix) the development of new sources of energy with disruptive potential, which could replace fossil fuels more quickly than specialists currently indicate, could affect the market and the international prices of oil and natural gas, therefore adversely and materially affecting us.

In addition, trade wars, such as the one in early 2020 involving Russia and Saudi Arabia, which led prices of crude oil to turn negative for the first time, may impact the prices of crude oil and consequently, the demand for our products. Since then, crude oil prices gradually recovered, reaching a high point of approximately US$128 per barrel in March 2022. We cannot assure you that similar fluctuations will not happen again. Accordingly, we cannot predict the behavior of future prices and any weakening of global demand and other factors could significantly decrease the prices of commodities, which could adversely affect us.

Lower oil and natural gas prices would have an adverse and material effect on our profitability, the pricing of our assets and capital expenditure plans, including the capital expenditure planned for our oil and gas production activities. In addition, a substantial decline in our capital expenditures could have an adverse effect on our ability to replace our oil reserves, which could materially and adversely affect us.

In Brazil, Petrobras is the main supplier of base oils, the principal distributor of fuel, and the market leader in the natural gas sector. If its activities are significantly interrupted, we could be materially and adversely affected.

Petrobras is the main supplier of fuel in Brazil and the distribution policies that it establishes directly affect the Brazilian energy matrix. Petrobras is also subject to investigations in the *Lava Jato*, which was conducted by the Brazilian Federal Police, the Brazilian Federal Prosecutor's Office, CVM, and the SEC, in connection with allegations of corruption, which could cause interruptions to and additional investigations of Petrobras' activities. Any interruption in our supply to Petrobras could interrupt our oil and natural gas sales if we are unable to find another purchaser. Consequently, any interruption in Petrobras' operations could affect our ability to sell oil and natural gas, materially and adversely affecting us.

The development schedule of oil and natural gas projects is subject to cost overruns and delays.

Oil and natural gas projects may experience significant capital cost variations and overruns due to factors, such as the unavailability or high cost of equipment, materials, and qualified oil field workforce. The cost to execute projects may not be properly established and remains dependent upon a number of factors, which may affect the completion of detailed estimates and final engineering, contracting and procurement costs. Development of our projects may be adversely affected by one or more factors associated with large industrial projects such as: (i) shortages of equipment, materials and labor; (ii) fluctuations in the prices of construction materials; (iii) delays in delivery of equipment and materials; (iv) labor disputes; (v) political events; (vi) blockades or embargoes; (vii)

litigation; (viii) adverse weather conditions; (ix) unanticipated increases in costs; (x) natural disasters; (xi) accidents; (xii) unforeseen engineering complications; (xiii) environmental or geological uncertainties; and (xiv) other unforeseen circumstances.

Any of these events or other unanticipated events could give rise to delays in the development and completion of our projects and cost overruns, which could have a material adverse effect on us.

Delays in the projects could delay the revenue coming from these operations, which could materially and adversely affect us. Additionally, cost overruns could make the project not economically viable. Development plans may also need to be amended, which could have a material effect on future investments and on the schedules associated with the development of our assets.

Delays in the construction and commissioning of projects or other technical difficulties could result in production delays, and, accordingly, additional unexpected investments. These projects may require the use of new, advanced technologies to prevent them from becoming obsolete or ineffective, which could be costly to us. These operational uncertainties and risks associated with the development of the projects could have an adverse material effect on us.

Furthermore, the contracts we signed with suppliers may not be renewed or may contain clauses related to price increases, and if we are unable to replace the supplier on acceptable terms or at all, we may not be able to maintain the development deadline for the project or the cost previously expected.

Development and production activities are generally described in detailed development plans, work plans and programs prepared by the concessionaire in accordance with the specifications and regulations from the ANP. These plans and programs are subject to their approval by the ANP. In any of the cases described above or if the schedule is delayed, the concessionaire will be required to update the scope of the plans and/or programs already approved by the ANP and present a revised plan or program, describing the changes, to be submitted to the ANP for new approval. Discussions with the ANP related to the work plans or programs may take time and impact operations. Furthermore, the failure of the concessionaire to present work plans or programs to the ANP in a timely manner, and any failures in fulfilling the work plans or programs, will lead to the ANP imposing fines and, in the final instance, terminating the concession contract (subject to an administrative process), which may materially and adversely affect us.

Drilling in our fields may not take place and areas that we decide to drill may not yield oil or natural gas in commercial quantities and quality.

We have concession rights over various oil and gas producing assets, through which we perform our oil and natural gas production activities. For additional information on the concessions we currently hold, see "*Business—Concession Agreements*."

Regarding the assets object of the above-mentioned concession agreements, we cannot assure you that before drilling and conducting certain specific tests, whether a specific exploratory prospect will contain oil or natural gas or, even if it does contain it, whether it will produce oil or natural gas in sufficient quantities and/or quality to recover the drilling and completion costs, or whether it will become an economically viable field. Other elements that may cause technical challenges must be taken into account relating to mature oil fields, including the amount invested in revamping projects for a well, shortage of or difficulty in allocating rigs, costs for re-equipping wells, and costs of the pipes and rods structures.

We could be materially and adversely affected if the potential areas do not yield oil or natural gas in commercial quantities and quality.

We are not the owners of any oil and natural gas reserves in Brazil.

According to Brazilian law, the Brazilian government is the owner of all oil and natural gas reserves in Brazil, and the concessionaire is the owner of the oil and natural gas it produces according to the concession agreements with the ANP. Oil and natural gas companies in Brazil acquire the exclusive right to explore, develop and produce

oil and natural gas from the reserves in specific areas pursuant to the concession agreements entered into with the Brazilian government. If regulators and authorities impose restrictions on us or prevent us from exploring future oil and natural gas reserves, which would require the amendment of the applicable laws, our capacity to generate revenues may be adversely affected, which will have a material adverse effect on us.

Participants in the oil and natural gas industry are subject to extensive regulation.

The oil and natural gas industry is subject to extensive regulation and intervention by the Brazilian government on specific issues, including (i) the interest in the production concession; (ii) the imposition of specific drilling and exploration requirements; (iii) restrictions on production; (iv) price controls; (v) taxation; (vi) required disposal of assets; and (vii) control of foreign currency throughout the development, nationalization and expropriation or cancellation of contractual rights. Compliance with government regulations may result in significant expenditures, especially in events including, but not limited to (a) obtaining drilling licenses for conducting operations (if there are assets in our portfolio that require this type of licensing); (b) following processes for separating production (if production extends into neighboring reserves); (c) complying with local policies; and (d) taxation, in particular due to the fact that the competent tax authorities continue to approve new rules subject to interpretation and possible litigation.

Under these laws and regulations, we could be liable for personal injury, property damage and other types of damage. Failure to comply with these laws and regulations could also result in the suspension or termination of our operations and subject us to administrative, civil and criminal penalties. Moreover, these laws and regulations may be amended or re-interpreted by the tax authority in ways that could substantially increase (or possibly decrease) our costs.

Additionally, our operations are also subject to federal, state and municipal environmental laws and regulations. The public authorities may publish new, stricter environmental and climate standards or impose more restrictive interpretations of existing laws and regulations, which could cause delays in our projects, meaning we may incur significant costs to comply with such laws and regulations and other costs, as well as prohibit or severely restrict our activities in environmentally protected or sensitive areas.

Any such liabilities, penalties, suspensions, terminations or regulatory changes could have a material adverse effect on us.

Our activities are subject to environmental, health and safety regulations, which may become stricter in the future and result in an increase in liabilities and capital expenditures, including compensation and fines for environmental damage.

Our activities are subject to federal, state and municipal environmental, health and safety legislation, which could become stricter in the coming years. The obligation to repair damage caused to the environment is addressed, particularly, by the National Environmental Policy (Law No. 6,938/81). Any non-compliance with such laws and regulations could subject the wrongdoer to administrative, civil and criminal sanctions, including the obligation to repair or compensate for environmental damages and pay damages to our own employees, third parties, land surfaces and communities located around the areas directly or indirectly affected, which could adversely affect us. The absence of liability in one of these areas of law would not necessarily exempt us from liability in other areas. Non-compliance with environmental regulations could have an adverse effect on us.

Civil liability requires the wrongdoer to repair the environment or, if this is not possible, to reimburse the losses caused, including negligence. Environmental civil liability is strict and joint, which means that the obligation to repair the damage applies regardless of evidence of fault or intent and is dependent only on the relationship between the activity performed and the damage (*causality nexus*), and could affect all those who, directly or indirectly, contributed to the occurrence of the environmental damage, including our suppliers and partners, materially and adversely affecting us. We may also be considered responsible, including criminally, for environmental damages that occurred in areas that have been affected by our activities.

As we are subject to environmental liabilities, the payment of sanctions or expenses that we might incur to repair environmental damage could, consequently, decrease our disposable income and could materially and

adversely affect us. The use of financial resources to meet these environmental costs could impair our ability to deploy capital in other areas of our business. We might also be required to suspend our operations in order to avoid or repair the environmental damage.

According to Brazilian environmental law and regulation, we might be subject to the piercing of our corporate veil to ensure that sufficient financial resources are available to the parties that seek reparations for environmental damage. Accordingly, our directors, shareholders and/or partners could, together with the wrongdoer, be held liable for damages to the environment.

Furthermore, delays or refusals by the environmental bodies in issuing or renewing licenses and authorizations could have an adverse effect on us. Non-compliance with conditions imposed in connection with the environmental licenses, regardless of whether the activity is causing environmental damages, may subject us to civil, criminal and administrative liability, including fines, the cancellation and/or suspension of the environmental license, and the obligation to repair the environmental damage, which could materially and adversely affect us, including with the suspension of our operations.

Moreover, governmental agencies or other authorities may also issue new, stricter rules or seek more restrictive interpretations of existing environmental, health and safety laws and regulations. Thus, investments and expenses required to comply with those laws may significantly increase and we may be required to use additional funds to adjust to any new requirements by the relevant agencies and authorities and we could be materially adversely affected.

We may be affected by new demarcations of indigenous lands by Brazilian authorities, settlements and occupations by social movements and traditional communities.

Traditional communities, including indigenous people and *quilombolas*, and social movements, including the Landless Rural Workers Movement (*Movimento dos Trabalhadores Rurais Sem Terra*), are important stakeholders for the development of projects in Brazil and usually request from federal and state governments the demarcation of land, land reform and the compulsory redistribution of land, which may encompass areas currently occupied by us. As a result, we may be required to renegotiate our existing occupation agreements, which may result in additional costs and may adversely affect us.

International governmental agreements related to environmental protection, new energy market trends and climate changes could adversely affect us.

Our activities are subject to the evolution of industry standards, international conventions and requirements related to environmental protection. Any new international conventions could introduce restrictions on oil and gas activities, which could adversely and materially affect us. Growing global action to tackle climate change and new regulatory approaches to reduce emissions of gases associated with the activities of producing oil and gas could be developed, and we could incur significant costs, which could have a material and adverse effect on the profitability of our projects and generate uncertainty and exposure to financial, operational and reputational risks, adversely affecting us.

The 2015 United Nations Climate Change Conference adopted by consensus the 2015 Paris Climate Agreement. The agreement deals with greenhouse gas (the "GHG") emission reduction measures, targets to limit global temperature increases and requires countries to review and represent a progression in their intended nationally determined contributions, which set emissions reduction goals every five years, beginning in 2020. The 2021 United Nations Climate Change Conference adopted the Glasgow Climate Pact, which includes strengthened efforts to build resilience to climate change and to curb GHG emissions. Compliance with legal and regulatory changes relating to climate change, including those resulting from the implementation of international treaties, may in the future increase our costs to (i) operate and maintain our facilities, (ii) install new emission controls on our facilities and (iii) administer and manage any GHG emissions program. Revenue generation and strategic growth opportunities may also be adversely affected.

In addition, future international agreements may introduce restrictions on oil activities in environmentally sensitive areas, and severe climatic change may generate long periods of rain, storms and other events that may

affect our operational activities and results, especially in maritime areas. Should one or more of these changes occur, our exploration, development and production goals may be affected, directly impacting our results of operations.

There are also increasing risks of litigation related to climate change effects. Governments and third parties have brought suit against some fossil fuel companies in the Netherlands alleging, among other things, that such companies created public and private nuisances by producing fuels that contributed to climate change. For example, in the Netherlands, the Hague District Court has ordered Royal Dutch Shell to reduce the carbon dioxide emissions of the Royal Dutch Shell group by net 45% by 2030, compared to 2019 levels, through the Royal Dutch Shell group's corporate policy. Although this judgment is still subject to appeal, other environmental organizations may bring similar cases against other parties, including in Brazil. While we are not party to such suits at this time, we may become subject to such litigation in the future. Such cases could also adversely impact public perception and the demand for fossil fuels and petroleum products, which could subsequently result in decreased demand for our services and products and adversely affect our results of operations.

Likewise, trends in the production business, such as the decrease in the number of wells in producing fields, may reduce the volume of oil and gas produced from the discoveries and future international agreements may introduce restrictions on oil activities in environmentally sensitive areas. Should one or more of these changes occur, our exploration, development and production goals may be affected, directly impacting our results of operations.

The oil and natural gas industry, including the acquisition of assets, is highly competitive, which could materially and adversely affect us.

The international oil and natural gas industries are highly competitive in all aspects, including the acquisition of concession rights for exploration blocks and producing fields, development of new supply sources, the distribution and commercialization of products made from oil and the contracting and retaining of qualified personnel. Many of our competitors possess and employ financial, technical and personnel resources substantially greater than ours. Those companies may be able to pay higher acquisition prices for oil and natural gas properties and prospects and to evaluate, bid for and purchase a greater number of properties than our financial or personnel resources permit.

Our ability to acquire additional assets and to find and develop reserves in the future will depend on our ability to evaluate and select suitable properties and to consummate transactions in a highly competitive environment. Also, there is substantial competition for available capital for investment in the oil and natural gas industry. As a result of these and other factors, we may not be able to compete successfully in an intensively competitive industry, which could have a material adverse effect on us.

We could be adversely affected if the natural gas market does not continue to develop or suffer a material change in its regulation.

In 2019, the Brazilian Committee for the Promotion of Competition in the Natural Gas Market (*Comitê de Promoção da Concorrência do Mercado de Gás Natural*) was established pursuant to a resolution of the National Energy Policy Council (*Conselho Nacional de Política Energética*), or CNPE. The committee's responsibility includes proposing measures for stimulating competition in the natural gas market, sending recommendations to the CNPE for directive and development in energy policies aimed at promoting free competition in the natural gas market, and proposing actions to federal bodies to encourage best regulatory practices.

As a result of a proposal presented by the committee, the CNPE approved Resolution No. 16/2019, which establishes the directive and energy policy developments aimed at (i) promoting free competition in the natural gas market, (ii) defining how the transition to a competitive market should occur and (iii) establishing structural and behavioral measures in the interest of the national energy policy to be complied with by the player with market power in the natural gas market.

In addition to the New Gas Market (*Novo Mercado de Gás*) program, launched by the Brazilian government in July 2019, and the establishment of the Monitoring Committee for the Opening of the Natural Gas Market (*Comitê de Monitoramento da Abertura do Mercado de Gás Natural*), the opening of the gas market advanced upon the enactment of the New Gas Law, which amends the federal legal framework for the sector in Brazil. The purpose of this law is to establish an open, dynamic and competitive natural gas market, promoting competition among

suppliers and reduced gas prices to final consumers. However, we cannot guarantee that such legislation will achieve its goals. Additionally, ANP and state regulatory agencies still need to regulate the legislation. If this regulation is not implemented or takes too long to be implemented, our gas production and monetization strategy may be adversely affected. For more information, see "*Industry—Mature Onshore, Offshore and Shallow-water Fields*."

We may be materially and adversely affected if the natural gas market fails to open for new players, particularly, we may face challenges (i) in accessing the infrastructure necessary for piping the gas we produce, considering the potential shortage of available capacity; and (ii) in accessing end consumers because of the barriers imposed by state level legislation and local distributors of piped gas.

The effective opening of the natural gas market in Brazil for new players depends particularly on the compliance with the terms of the TCC entered into between CADE and Petrobras.

Currently, Petrobras has a monopoly through its dominant stake in the Brazilian natural gas market. In July 2019, the Brazilian Administrative Council for Economic Defense (*Conselho Administrativo de Defesa Econômica*, or "CADE") and Petrobras entered into an Cessation Commitment Agreement (*Termo de Compromisso de Cessação*, or "TCC") in order to lower Petrobras' stake in the natural gas market in subsequent years, and promote competition through the creation of new roles for companies from the private sector to develop the natural gas sector. That included, among others, measures related to: (i) the release of the contracted and unused capacity in gas pipelines; (ii) enabling access to all the essential infrastructure of the sector; (iii) divestment of Petrobras' equity participation in transportation and distribution companies; and (iv) leasing the liquefied natural gas regasification terminal located in the Guanabara Bay (*Baía de Guanabara*). The implementation of the measures established by the TCC have been promoting competition by enabling other players to enter the Brazilian natural gas market. These measures have also been promoting new investments and making more gas supply and distribution options available to market players.

Any possible reassessment or failure to implement the terms established in the TCC may adversely and materially affect, or even prevent, the development of the natural gas market in Brazil and, consequently, adversely and materially affect us.

We may be unable to timely obtain, maintain or renew the licenses, grants, registrations, permits and authorizations necessary to conduct our business.

We are subject to a great variety of laws, regulations and federal, state and municipal licensing requirements, and depend on obtaining and/or renewing the necessary licenses, permits and authorizations to perform our activities. For the development and operation of our projects, we must obtain environmental licenses.

Non-compliance with the legislation could undermine our licensing process, causing delays in obtaining the licenses, permits and authorizations, which could result in losses due to changes in our cash flow and the possible suspension of our activities, therefore adversely affecting us. Moreover, additional requirements may be imposed at any time in the process to obtain the licenses, permits and authorizations, which could render the project economically unfeasible. Accordingly, we cannot guarantee that we will be able to maintain, renew or obtain the required licenses, permits or authorizations in a timely manner or that no additional requirements or unexpected costs will be imposed in relation to such renewal request, which may adversely affect us.

Non-compliance with environmental license conditions, regardless of whether the activity is causing environmental damages, may subject us to civil, criminal and administrative liability, including warnings, fines, suspension of activities, the cancellation and/or suspension of the environmental license, and the obligation to repair the environmental damage, which could directly affect or totally suspend our operations, thereby affecting our reputation and materially and adversely affecting us.

In addition, the establishment, development and operation of our businesses and projects are subject to monitoring by governmental entities such as environmental bodies and/or the Public Prosecutor's Office. The failure to obtain or delay in obtaining the required licenses, permits and/or authorizations or their embargo or cancellation, for any reason, including action by the Public Prosecutor's Office, could lead to the interruption or cancellation of the establishment and/or operation of our business and/or projects, which could have a material adverse effect on us.

Under these licenses, grants and authorizations, we are required to periodically inform compliance with the regulations and any conditions set forth by the competent agencies. Any failure to obtain, maintain or timely renew our licenses, grants, registrations, records and authorizations, as well as delays by regulatory and administrative agencies in analyzing our requests, may prevent us from implementing and/or developing our activities, adversely affecting us.

Moreover, we are subject to periodic inspections conducted by the competent agencies to verify whether we are in compliance with the obligations set forth in the applicable regulations. We may be unable to meet the conditions required for the maintenance or granting of these approvals, licenses, grants, registrations, records and authorizations. If any non-compliance by us with the applicable regulations is found in these inspections, the licenses and authorizations required for our activities may be cancelled or suspended and we will be subject to the application of fines and other administrative penalties, which may adversely affect us.

Failure or delay in obtaining, maintaining or renewing the licenses, permits and authorizations required for our operations, could result in fines, losses or early termination of those licenses, permits and authorizations, as well as the closure of our facilities, which could lead to breaches of our financing and commercial contracts, adversely and materially affecting us.

An increase in the use of alternative sources of energy could substantially affect the demand for fossil fuels.

The world is experiencing a transformation in the manner in which energy is being produced and consumed. This energy transition involves reducing CO_2 emissions, applying new technologies to increase productivity, and increasing the use of alternative sources of energy, such as natural gas, and wind and solar power.

Changes to the composition of the Brazilian energy matrix and the costs of alternative sources of energy could affect the demand for hydrocarbons and fossil fuels and could adversely and materially affect us.

We may be adversely and materially affected in the event of a decrease in the demand for oil and natural gas. Additionally, a significant increase in the supply of electricity generated by using alternative fuels could result in a reduction of the price of electricity to end users and adversely affect the demand for oil and natural gas.

We cannot guarantee that future increases in oil and natural gas prices, reductions in the prices of alternative fuels, incentives for the use of alternative energy sources or the generation of electricity from such sources will not have a significant adverse effect on us.

Additionally, the development and implementation of new technologies could result in a significant acceleration in the migration of the composition of the Brazilian energy matrix. We cannot predict if and when new technologies will become available, the migration flow to these new technologies, as well as their acceptance, and associated costs. The advances in the development of alternative sources for the so-called “energy transition” could significantly reduce the demand for fossil fuels, which means reduced demand for oil and natural gas, which could have a material adverse effect on us.

Risks Related to this Offering and the Notes and the Collateral

There can be no assurance that the Guarantors and the Issuer will have sufficient cash flow to repay their obligations under the Notes and the Note Guarantees.

The Issuer is a wholly owned financing subsidiary of 3R, incorporated and existing in the Grand Duchy of Luxembourg with no operations other than issuing and making payments on the Notes and on the Term Loan Facility and using the proceeds therefrom as permitted by their respective governing documents. The Indenture will include covenants and other provisions that, among other things, restrict the Issuer’s ability to engage in any other operations.

Accordingly, the Issuer’s ability to pay principal, interest and other amounts due on the Notes and other debt will depend on the financial condition and cash flow generation of the Subsidiary Guarantors, as 3R is a holding company, and its only material assets are cash on hand, the equity interests in its subsidiaries and other investments.

The holders of the Notes must therefore rely either on the Guarantors directly or indirectly providing funds to the Issuer in order for the Issuer to make payments on the Notes or on the Guarantors making payments on the Notes pursuant to the Note Guarantees.

No assurance can be given that the Guarantors' cash flow from operations will be sufficient to fund the Issuer's repayment of the Notes. The financial condition and results of operations of the Guarantors will be affected by, among other factors, its financial performance, including cash flow needs, requirements of the Brazilian Corporation Law and other applicable law, and restrictions contained in agreements, which therefore would affect the ability to make payments on the Notes and the Note Guarantees. In the event of an adverse change in the financial condition or cash flow generation of the Guarantors, the Issuer may not have sufficient funds to repay all amounts due on or with respect to the Notes.

Subject to satisfaction of the conditions set forth in the Indenture, the Issuer and the Guarantors will be permitted to incur additional secured debt, which could adversely affect the value of the Collateral and the credit support package securing the Issuer's obligations under the Notes.

In addition to the debt incurred under the Term Loan Facility, the Indenture allows the Issuer and the Guarantors to incur additional secured debt (under Oil Hedge Agreements, as defined herein), subject to certain conditions, which secured debt may share in the Collateral that will secure the Issuer's obligations under the Notes. As a result, any such additional debt will be secured by assets that secure the Notes, which could dilute the value of the Collateral securing the Issuer's obligations under the Notes. In addition, the holders of such debt will be entitled to share equally with the holders of the Notes in any proceeds distributed in connection with the Issuer's winding up, insolvency, liquidation, reorganization or dissolution.

The rights of the holders of Notes with respect to the Collateral will be subject to the terms of the Intercreditor Agreement, which may materially limit the rights of the holders of the Notes to take enforcement actions, including with respect to the Collateral securing the Notes.

The Intercreditor Secured Debt (including the Notes, the Note Guarantees and the Fourth 3R Potiguar Debentures) will be subject to the Intercreditor Agreement pursuant to which proceeds from enforcement of the Collateral will be shared on a *pari passu* basis among the Secured Debt Providers to the extent the aggregate principal amount of the Notes, together with the Fourth 3R Potiguar Debentures, does not exceed US$1,000,000,000. Accordingly, the rights of the holders of Notes and of the Trustee on behalf of the holders of the Notes, with respect to the Collateral, will be subject to and may be limited by the terms of the Intercreditor Agreement and to the terms of each Security Document (as defined herein).

Additionally, the Trustee, acting on behalf of the holders of the Notes, will become a party to the Intercreditor Agreement (as defined herein) by entering into a joinder agreement on or about the issue date upon repayment of the Term Loan Facility. The Notes will be subject to the terms of the Intercreditor Agreement, which will govern, among other things, the rights and obligations of the holders of the Notes, the lenders under the Term Loan Facility, holders of the Fourth 3R Potiguar Debentures, the Oil Hedge Agreements, in each case in respect of enforcement of the Collateral, and when enforcement actions can be taken in respect of the Collateral. The Collateral Agents (acting as directed pursuant to the Intercreditor Agreement), the Intercreditor Agent and/or the Trustee (as applicable) will agree to release any of the Collateral created by the Security Documents if permitted by the Fourth 3R Potiguar Debentures Indenture, the Term Loan Facility and the Intercreditor Agreement without requiring any consent from the holders of the Notes.

Under the Intercreditor Agreement, the rights of the holders of the Notes to take any enforcement actions, including commencing legal proceedings against us in respect of the Notes, enforcing the Collateral securing the Notes and petitioning for the bankruptcy of the Issuer, will be limited. No holder of the Notes will be entitled to take such enforcement actions following an event of default under the Indenture unless the required percentage of secured creditors has elected to exercise such remedies and instructed the Intercreditor Agent to take such actions in accordance with the procedures set forth in the Intercreditor Agreement. Furthermore, the other secured creditors may have the ability to control the outcome of certain intercreditor votes under the Intercreditor Agreement without the approval of the holders of the Notes, including with respect to (i) the approval of certain amendments to, and waivers of, the provisions of the other Security Documents, (ii) the exercise of remedies against us, including

enforcement of the Collateral, and (iii) other instructions that may be provided to the Intercreditor Agent in accordance with the terms of the Intercreditor Agreement. Each decision made in accordance with the terms of the Intercreditor Agreement will be binding upon the Trustee and the holders of the Notes and each other secured creditor. If the holders of the Notes obtain any amount from us, including as payment of any amounts due on following the acceleration thereof or from any realization on any Collateral, other than amounts obtained from or through the Intercreditor Agent pursuant to the Intercreditor Agreement and the other Security Documents, the holders of the Notes must promptly pay such amount to the Intercreditor Agent for the account of our secured creditors to be shared among such creditors in accordance with the Intercreditor Agreement. See "*Description of Notes—Collateral—Intercreditor Agreement*."

Issues related to the creation or perfection of a security in the Collateral may make it difficult to enforce your security interest on the Collateral securing the Notes.

The security interest held by the Collateral Agents, as applicable, for the benefit of the holders of the Notes, in respect of the Notes may be subject to practical problems generally associated with the realization of security interests in Collateral. For example, problems related to the creation or perfection of the security interest on the Collateral may arise, and we cannot assure that all parties will have taken all actions necessary to create properly perfected security interests, which may result in the loss of priority of the security interest in favor of holders of the Notes to which they would otherwise have been entitled or otherwise limit or restrict the holders of the Notes ability to foreclose the Collateral.

If the Collateral Agents, for the benefit of the holders of the Notes, do not, for any reason, have a perfected first priority security interest in the Collateral pursuant to the timeframes set forth under the Indenture and each Security Document, it will result in an event of default under the Indenture. See "*Description of Notes—Default and Remedies—Events of Default*." In the event of a failure to create and perfect liens on the Collateral, the Notes will not be secured by such Collateral, and the holders of the Notes will not be entitled to the proceeds from the sale of all or any of the proposed Collateral or any other remedies in connection therewith.

There may be limitations on foreclosure or enforcement of rights in the Collateral.

The creation and perfection of the security interest by the Collateral Agents in respect of certain Collateral are governed by Brazilian law or Luxembourg law, as the case may be. The laws relating to the creation and perfection of security interests in such jurisdictions differ from those in the United States and may be subject to restrictions and limitations, the effect of fraudulent conveyance and similar laws. These restrictions and limitations may have the effect of preventing, limiting and/or delaying the foreclosure and subsequent disposition of such Collateral, and may materially impair the claims of noteholders. Any such delay in having an enforceable claim could also diminish the value of the interest of the noteholders in the Collateral due, among other things, to the existence of other potential creditors and claimants.

The right and ability of the Collateral Agents, for the benefit of the holders of the Notes, if and as instructed by the Trustee, to realize or foreclose upon the equity subject to the Collateral upon the occurrence of an event of default is likely to be significantly impaired by applicable bankruptcy law if a bankruptcy proceeding were to be commenced by or against us or a subsidiary of ours prior or during the foreclosure of the Collateral by the Collateral Agents. Under applicable bankruptcy law, a secured creditor such as the Collateral Agents may be prohibited from foreclosing its security from a debtor in an insolvency case or from disposing of security repossessed from such debtor either because the credit is subject to the relevant insolvency proceeding as a consequence of the type of collateral or because the enforcement cannot take place during the period in which the debtor is under bankruptcy (such as fiduciary lien granted under the laws of Brazil over assets that are deemed essential to the company's restructuring).

In addition, none of our subsidiaries is publicly traded. There can be no assurance of the Collateral Agents' ability to liquidate in an orderly manner our equity interests in our directly held subsidiaries following its exercise of remedies with respect to the equity.

The ability of the Collateral Agents, for the benefit of the holders of the Notes, if and as instructed by the Intercreditor Agent, to enforce the Concessions Collateral and the Brazilian Share Collateral may be impaired by

ANP regulatory qualification requirements for potential buyers. Any assignment of ownership of the emerging concession rights under the Concession Agreements, including if such assignment occurs as a consequence of the enforcement of the Concessions Collateral, will be subject to the prior authorization from ANP (or the Federal Government), following the procedures set forth in ANP Resolution No. 785/2019. For the authorization process, ANP will assess the technical, economic and legal qualifications of the proposed assignee. Also, if the enforcement of the Brazilian Share Collateral results in a change of control of the relevant company(ies) that requires the replacement of the performance guarantee delivered to ANP by the relevant company(ies) with respect to their concessions, such transfer of shares will be considered to have caused an assignment of the concession rights, which will then be subject to the provisions of the concession assignment procedure established under ANP Resolution 785, described above. The ANP authorization procedure may take months to be concluded, which may cause the Collateral foreclosure process in connection with the Concessions Collateral (and the Brazilian Share Collateral, if applicable) to be lengthy and delay the recovery of funds by the holders of the Notes.

We have no obligation under the Notes, the Indenture or the Security Documents to maintain the value of the Collateral at a minimum level.

The value of the Collateral may not be sufficient to satisfy all the obligations secured by the Collateral. As a result, holders may not receive full payment of the obligations owed under their Notes following an event of default.

We cannot provide any assurance as to the market value of the Collateral at the time of any foreclosure or as of the date of this Offering Memorandum. The fair market value of the Collateral will fluctuate from time to time and such fluctuations may be based on factors that include, among others, general economic conditions, the availability of qualified potential buyers and similar factors. The amount to be received upon a sale of the Collateral would also be dependent on numerous factors, including, but not limited to, the actual fair market value of the Collateral at such time and the timing and the manner of the sale. Also, in such case, any claim for the difference between the amount realized by noteholders from the foreclosure of the Collateral and the Issuer's remaining obligations under the Notes (or the Guarantors' obligations under the Note Guarantees) would rank equally in right of payment with all of the Issuer's or the Guarantors' unsecured indebtedness.

The amount of proceeds that ultimately would be distributed in respect of the Notes upon any enforcement action or otherwise may not be sufficient to satisfy the Issuer's obligations under the Notes. If the proceeds of any sale of the Collateral are insufficient to repay all amounts due on the Notes and any other outstanding secured debt, the holders would have only an unsecured claim against the remaining assets.

Under the Indenture, we may transfer, sell, dispose, spin-off or otherwise distribute the capital stock of a Restricted Subsidiary that holds substantially only our offshore assets.

Our portfolio includes offshore fields, including ultra-deep-water offshore fields. Under the Indenture and subject to the conditions set forth therein, we may sell, convey, transfer, distribute or otherwise dispose of the capital stock (and the proceeds thereof) of a Restricted Subsidiary (as defined under the Indenture) that holds substantially only our offshore assets. Accordingly, such actions could reduce the value of the Collateral securing the Issuer's obligations under the Notes in the future.

We may make investments in permitted project finance subsidiaries, which will not be subject to the covenants under the Indenture.

Under the Indenture, we are permitted, subject to satisfaction of certain conditions, to create and make certain investments in Project Finance Companies, as defined under "*Description of Notes—Certain Covenants—Limitation on Debt*." Any Project Finance Company may incur an unlimited amount of non-recourse debt and may repay such debt or otherwise make distributions outside the requirements of the Indenture.

In addition, no asset of any Project Finance Company nor the Guarantors' equity interest in any Project Finance Company would constitute Collateral securing the Notes. Further, no Project Finance Company will guarantee the Notes. Accordingly, the creditors of any Project Finance Company and its subsidiaries will have a structurally senior claim on the assets of such unrestricted subsidiary and its subsidiaries. Finally, the initiation of bankruptcy or

insolvency proceedings or the entering of a judgment against these entities, or their default under their other credit arrangements will not result in an event of default under the Indenture.

The Notes constitute a new issue of securities for which there is no existing market, and an active trading market for the Notes may not develop.

The Notes constitute a new issue of securities, for which there is no existing market, and we cannot assure you that in the future a market for the Notes will develop or that you will be able to sell the Notes you have purchased. Although application will be made for the listing and quotation of the Notes on the SGX-ST, we cannot assure investors that this application will be accepted. None of the Initial Purchasers is under any obligation to make a market with respect to the Notes, and we cannot assure you that trading markets will develop or be maintained, that holders of the Notes will be able to sell their Notes, or the price at which such holders may be able to sell their Notes. If an active trading market were to develop, the Notes could trade at prices that may be higher or lower than the initial offering price depending on many factors, including prevailing interest rates, our results of operations and financial condition, prospects for other companies in our industry, political and economic developments in and affecting Brazil, the risk associated with Brazilian and other issuers of similar securities, the ability (including as a result of regulatory requirements or developments such as the SEC's interpretation of Rule 15c2-11 and its application to debt securities) and interest of securities dealers in making a market for the Notes and the market for similar securities. If an active trading market for the Notes does not develop or is interrupted, the market price and liquidity of the Notes may be materially adversely affected. As a result, we cannot assure you as to the liquidity of any trading market for the Notes and you may be required to bear the financial risk of your investment in the Notes until maturity.

The Issuer may be unable to make a change of control offer required by the Indenture, which would cause a default under the Indenture.

The terms of the Notes may require the Issuer to make an offer to repurchase the Notes at a price equal to 101% of the principal amount of the Notes, together with any accrued and unpaid interest to the date of purchase, upon the occurrence of certain events constituting a Change of Control that Results in a Ratings Decline (as defined under "*Description of Notes—Repurchase of Notes upon a Change of Control that results in a Rating Decline*") under the Indenture. The Issuer may be unable to pay the holders of the Notes the Change of Control Offer (as defined under "*Description of Notes—Repurchase of Notes upon a Change of Control that results in a Rating Decline*") purchase price for their Notes. Its failure to pay the Change of Control Offer purchase price when due will constitute a default under the Indenture, which will materially and adversely affect us.

Brazilian insolvency laws may be less favorable to investors than insolvency laws in other jurisdictions.

If the Guarantors are unable to pay when due their respective obligations under the Notes and the Note Guarantees, the relevant obligor may become subject to voluntary or involuntary insolvency proceedings in Brazil. The Notes may be subject to such insolvency proceedings. The corporate insolvency laws of Brazil currently in effect contemplate two types of voluntary reorganization proceedings (*recuperação judicial*, which has similarities with the corporate reorganization proceedings provided under the U.S. Bankruptcy Code's Chapter 11, and *recuperação extrajudicial*, which is a form of "pre-pack" arrangement that is submitted to court confirmation to bind a dissenting or absenting minority) and one-liquidation proceeding (*falência*, which may be either voluntary or involuntary). However, these proceedings may be less favorable to creditors than those of certain other jurisdictions, such as the United States. Technicalities may undermine the ability of the holders of the Notes to directly participate or otherwise receive distributions in such insolvency proceedings. The holder of a claim in *recuperação judicial* proceedings is likely to be the Trustee (acting pursuant to the Indenture) or the Collateral Agent (acting pursuant to and as directed by the Intercreditor Agreement) on behalf of and for the benefit of the holders of the Notes. The holders of the Notes willing to directly participate in insolvency proceedings may need to hire local counsel in order to separate their individual claim from the claim held by the Trustee or the Collateral Agent. Also, courts may reject the vote of the Trustee or of the Collateral Agent in *recuperação judicial* proceedings if the Trustee or the Collateral Agent do not present written evidence that voting powers were received from the holders of the Notes according with the terms of the Indenture. In case of bankruptcy, a court may order each holder of the Notes to file an individual claim (as opposed to a single claim filed by the Trustee for the benefit of the holders of the Notes), for

which holders of the Notes may need to engage local counsel. In the latter scenario, the Trustee may be unable to remit distributions to the holders of the Notes.

The Brazilian bankruptcy law also provides the possibility of the debtor to file an injunction to obtain a stay period of 60 days, during negotiations with creditors, through mediation or conciliation proceedings before a competent chamber. In this case, the holders of the Notes can be represented by an *Ad Hoc* group committee in the mediation or conciliation hearings and the Trustee and the Collateral Agents may participate on behalf of and for the benefit of the holders of the Notes, in accordance with the terms of the Indenture and the Intercreditor Agreement.

The credit ratings on the Notes may be lowered, suspended or withdrawn for any reason.

Credit rating agencies continually review their ratings for the companies that they follow, including us, and the credit ratings of the Notes may change after issuance. The credit rating agencies also evaluate the industries in which we operate as a whole and may change their rating for us based on their overall view of such industries. The credit ratings of the Notes may be lowered, suspended or withdrawn by the rating agencies. We cannot assure you that such credit ratings will remain in effect for any given period of time or that such ratings will not be lowered, suspended or withdrawn entirely by the rating agencies, if, in the judgment of such rating agencies, circumstances so warrant. Any lowering, suspension or withdrawal of the ratings of the Notes may have an adverse effect on the market price and marketability of the Note or make it more difficult or more expensive for us to obtain additional debt financing. In addition, actual or anticipated changes in our credit ratings, the sovereign credit rating of Brazil or the credit ratings of the Notes will generally affect the market value of the Notes. Thus, even though the Issuer is making interest payments when due, the price of the Notes in the secondary market that may develop may be considerably less than the price you paid for your Notes.

The ratings on the Notes are limited in scope and may not address all material risks related to an investment in the Notes, including the likelihood of payment of principal on any scheduled principal payment date. A rating is not a recommendation to purchase, hold or sell the Notes, and a rating does not comment as to the marketability of the Notes, any market price or suitability for a particular investor.

The ability of the Guarantors to guarantee the Notes may be restricted by local law, which may limit your potential recovery.

It is possible that creditors or liquidators of the Guarantors may challenge, in an insolvency proceeding, the Guarantees as a fraudulent transfer or conveyance. If such a challenge were to be successful, a court could avoid or invalidate a portion or all of the obligations of any future guarantors, direct that holders of the Notes return any amounts paid under the future guarantee and take other action that may be detrimental to you. The measures of insolvency for purposes of this fraudulent transfer in the relevant jurisdictions of any future guarantors may differ in a less favorable manner from those measures applicable under U.S. law, and there can be no assurance as to how the insolvency laws of the various jurisdictions in which we operate will be applied in relation to one another. If we cannot satisfy our obligations under the Notes and any future guarantee is found to be a fraudulent transfer or conveyance, we cannot assure you that you will ever be paid in full any amounts outstanding under the Notes. In addition, the liability of any future guarantors will be limited to the amount that will result in its guarantee not constituting a fraudulent conveyance or improper corporate distribution, and there can be no assurance as to what standard a court would apply in making a determination of the maximum liability of the Guarantors. Should any of the foregoing events occur, we cannot assure you that any future guarantors would have sufficient assets to pay amounts due under a Guarantee.

Holders of our Notes may face difficulties in serving process on or enforcing judgments against us and other persons.

We are a corporation (*sociedade por ações*) incorporated under the laws of Brazil. Most of our directors and officers are Brazilian residents and most of our assets are located outside the United States. As a result, it may be difficult for you to effect service of process upon us or these other persons within the United States or to enforce judgments obtained in U.S. courts against us, our directors and officers, including those claims and judgments predicated upon the civil liability provisions of the U.S. federal securities laws.

Our obligations with respect to the Notes will be structurally subordinated to all liabilities of our subsidiaries that do not guarantee the Notes, and junior to any of our future secured obligations with a security interest on assets not constituting the Collateral, in each case, to the extent of the value of the collateral securing such obligations.

Our non-guarantor Subsidiaries (i.e., 3R Operações Marítimas S.A. and 3R Petroleum Offshore S.A.) are separate and distinct legal entities and have no obligation, contingent or otherwise, to pay any amounts due pursuant to the Notes, or to make any funds available therefore, whether by dividends, loans, distributions or other payments. Any right that we have to receive any assets of any of such Subsidiaries upon the liquidation or reorganization of such Subsidiaries, and the consequent rights of holders of Notes to realize proceeds from the same of any of those Subsidiaries' assets, will be effectively subordinated to the claims of that Subsidiary's creditors, including trade creditors and holders of debt of that Subsidiary.

Our obligations with respect to the Notes will be junior to any of our future secured obligations with a security interest on assets not constituting Collateral, in each case, to the extent of the value of the collateral securing such obligations. Accordingly, holders of the Notes may not be able to realize proceeds from assets not constituting the Collateral.

Risks Related to the Issuer

It may be difficult for you to enforce judgments against the Issuer or its managers in Luxembourg.

The Issuer is incorporated as a private limited liability company (*société à responsabilité limitée*) under the laws of the Grand Duchy of Luxembourg, substantially all of its assets are located in Luxembourg, and substantially all of 3R Group's assets are located in Brazil. In addition, most of our directors and executive officers reside outside the United States and all or a substantial portion of the assets of such persons are located outside the United States. As a result, it may be difficult or impossible to effect service of process within the United States upon the Issuer, or to recover against us on judgments of U.S. courts, including judgments predicated upon the civil liability provisions of the U.S. federal securities laws. Further, no claim may be brought in Luxembourg against the Issuer or its managers and officers in the first instance for violation of U.S. federal securities laws because these laws do not have force of law in the Grand Duchy of Luxembourg. However, a Luxembourg court may impose civil liability, including the possibility of monetary damages, on the Issuer or its managers if the facts alleged in a complaint constitute or give rise to a cause of action under Luxembourg law.

There is no treaty in force between the United States and the Grand Duchy of Luxembourg providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters. As a result, whether a United States judgment would be enforceable in Luxembourg against the Issuer or its managers depends on whether the U.S. court that entered the judgment is recognized by the court in Luxembourg as having jurisdiction over the Issuer or its managers, as determined by reference to Luxembourg conflict of law rules. A judgment debt from a U.S. court that is final and for a sum certain based on U.S. federal securities laws will not be enforceable in Luxembourg unless the judgment debtor had submitted to the jurisdiction of the U.S. court, and the issue of submission and jurisdiction is a matter of Luxembourg (not U.S.) law.

In addition, and irrespective of jurisdictional issues, the Luxembourg courts will not enforce a U.S. federal securities law that is either penal or contrary to Luxembourg public policy. An action brought pursuant to a public or penal law, the purpose of which is the enforcement of a sanction, power or right at the instance of the state in its sovereign capacity, will not be entertained by a Luxembourg court. Certain remedies available under the laws of U.S. jurisdictions, including certain remedies under U.S. federal securities laws, would not be available under Luxembourg law or enforceable in a Luxembourg court, as they would be contrary to Luxembourg public policy.

Changes in tax laws in Luxembourg may impact tax treatment of the Issuer.

The Issuer has been advised by its Luxembourg counsel that payments under the Notes will not be subject to Luxembourg withholding tax. The Luxembourg tax treatment of the Issuer is based on Luxembourg law in effect as of the date of this Offering Memorandum. No assurance can, however, be given as to the impact of any possible judicial decision or change to Luxembourg law or administrative practice after the date of this Offering Memorandum.

Luxembourg has entered into a number of double taxation treaties. It may be necessary or desirable for the Issuer to seek to rely on such treaties, particularly in respect of income and gains of the Issuer. While each double taxation treaty needs to be considered individually taking into account fiscal practices, primarily of the country from which relief is sought, a number of requirements need to be met. These requirements may include ensuring that an entity that is resident in Luxembourg is subject to taxation on income and gains in Luxembourg and is also a beneficial owner of such income and gains.

Fiscal policy and practice are constantly evolving and at present the pace of evolution has quickened due to a number of developments which include, but are not limited to, the Organization for Economic Co-operation and Development, or OECD, base erosion and profit shifting project. Any fiscal policy change may or may not be accompanied by a formal announcement by any fiscal authority or the OECD. As a result, there can be no certainty that the Issuer will be able to rely on double taxation treaties because fiscal practice in relation to the construction of double taxation treaties and the operation of the administrative processes surrounding those treaties may be subject to change.

Transposition of the Anti-Tax Avoidance Directives in Luxembourg law may adversely affect us.

As part of its anti-tax avoidance package, the EU Council adopted, on July 12, 2016, the Council Directive (EU) 2016/1164 (the "ATAD I"). The Council Directive (EU) 2017/952 of May 29, 2017 then extended the scope of ATAD I to hybrid mismatches with third countries (the "ATAD II"). In this respect, the Luxembourg law dated December 21, 2018 (the "ATAD I Law") transposed the ATAD I into Luxembourg legislation. The ATAD I Law may have an impact on the tax position of the Issuer (including on its performance). Amongst the measures contained in the ATAD I Law is an interest deductibility limitation rule similar to the recommendation contained in the BEPS Action 4 proposals. The ATAD I Law provides that "exceeding borrowing costs" in excess of the higher of (a) EUR 3,000,000, or (b) 30% of an entity's adjusted EBITDA (for purposes of the interest deductibility limitation rule, "adjusted EBITDA" means the taxpayer's net income increased by the "exceeding borrowing costs," depreciation and amortization and tax exempt income and expenses that are economically linked to such exempt income are excluded from the adjusted EBITDA) will not be deductible in the year in which they are incurred but would remain available for carry forward. "Exceeding borrowing costs" is a defined term which relates to the amount by which the tax-deductible borrowing costs exceed "interest revenues and other economically equivalent taxable revenues realized by the taxpayer." Thus, interest (and equivalent) income is netted against interest (and equivalent) expenses and the interest deduction limitation rules apply solely if and to the extent there are interest (and equivalent) expenses after such netting. To the extent that the exceeding borrowing costs do not exceed an amount of EUR 3,000,000 per annum or 30% of the Issuer's adjusted EBITDA as defined by the ATAD I Law, the interest deduction limitation rules should not have an adverse tax impact at the level of the Issuer. Furthermore, the Luxembourg law dated December 20, 2019 (the "ATAD II Law") transposed the ATAD II into Luxembourg legislation. The ATAD II Law extends the scope of the ATAD I Law which applied to situations of double deduction or deduction without inclusion resulting from the use of hybrid financial instruments or hybrid entities. The ATAD II requires EU Member States to either deny deduction of payments, expenses or losses or include payments as taxable income, in case of hybrid mismatches. It includes situations involving permanent establishments, reverse hybrids, imported mismatches, hybrid transfers and dual residence.

The ATAD II Law applies as of January 1, 2020, except for the provision on reverse hybrid mismatches which applies as of January 1, 2022. The potential impact of the ATAD II Law at the level of the Issuer will mainly depend (i) on whether the Issuer will be considered tax transparent from the perspective of the Issuer's associated enterprises (as defined by the ATAD II Law) and (ii) on the qualification of the Notes (as equity or debt) from the perspective of the Issuer's associated enterprises (as defined by the ATAD II Law) having subscribed to the Notes (if any). The application of the ATAD II Law may result, under certain circumstances, in a denial of deduction of interest expenses at the level of the Issuer.

Transposition of the Pillar 2 Directive in Luxembourg law may adversely affect us.

On December 22, 2022, the EU Council adopted the Council Directive (EU) 2022/2523 on ensuring a global minimum level of taxation for multinational enterprise ("MNE") groups and large-scale domestic groups in the Union (the "Pillar 2 Directive"). The Pillar 2 Directive sets out among the EU members the Global Anti-Base Erosion Model Rules released on December 20, 2021 by the OECD ("Pillar 2"). On December 20, 2023, the

Luxembourg Parliament adopted the bill of law No. 8292 implementing the Pillar 2 Directive into Luxembourg law (the "Pillar 2 Law"). Coming into force as from fiscal years starting on or after December 31, 2023 (the undertaxed profit rule "UTPR" will become effective for fiscal years starting on or after December 31, 2024), the Pillar 2 Law targets constituent Entities (i.e., entities in scope) that are part of an MNE group with an annual consolidated revenue of EUR 750 million or more in any two of the four years preceding the relevant financial year and aims to implement a jurisdictional minimum taxation of at least 15%. The Pillar 2 Law foresees *inter alia* the implementation of: (i) an Income Inclusion Rule (the "IIR"), (ii) a UTPR and (iii) a qualified domestic minimum top-up tax (the "QDMTT"). Very broadly, the IIR would impose a top-up tax to bring the effective tax rate of the MNE group to 15% whereas the UTPR would operate as a safeguard in cases where top-up taxes are not collected in full through the IIR. The QDMTT would allow Luxembourg to collect any top-up tax for low-taxed Luxembourg entities in priority to any other jurisdiction applying an IIR or a UTPR. Pillar 2, the Pillar 2 Directive and the Pillar 2 Law implement a very complex set of rules, the interpretation of which is currently highly uncertain under EU and Luxembourg law. The potential impact of the Pillar 2 Directive and the Pillar 2 Law at the level of the Issuer remains to be determined.

USE OF PROCEEDS

We estimate that the net proceeds from this offering, after deducting the Initial Purchasers' discount and other estimated expenses payable in connection with this offering, will be approximately US$486.7 million. The Issuer intends to use the net proceeds from this offering to permanently and entirely repay the Term Loan Facility (as defined herein). Affiliates of certain of the Initial Purchasers are lenders under the Term Loan Facility and will receive a portion of the proceeds of this offering if consummated.

CAPITALIZATION

The information below under the column "actual" is derived from our unaudited interim financial information included elsewhere in this Offering Memorandum. You should read the table below together with the sections entitled "Presentation of Financial and Other Information," "Summary Financial Information," "Selected Financial and Other Information" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," as well as our unaudited interim financial information and related notes included elsewhere in this Offering Memorandum.

The following table sets forth our total capitalization, which represents the sum of our consolidated current and noncurrent loans and financing (less current and noncurrent amounts relating to the Term Loan Facility), our consolidated current and noncurrent debentures with related parties and our consolidated total equity, (i) on an actual basis as of September 30, 2023 and (ii) as adjusted for the receipt of the estimated net proceeds from this offering of US$486.7 million (R$2,437.2 million), after deducting estimated fees and other offering expenses payable by us of US$13.3 million (R$66.6 million), and the pre-payment of debentures in the amount of US$505.1 million (R$2,529.2 million).

After giving effect to the use of proceeds, actual amounts may vary from the estimated amounts as adjusted depending on several factors, including exchange rate fluctuations.

	As of September 30, 2023			
	Actual		As adjusted[2]	
	(in millions of US$)[1]	*(in millions of R$)*	*(in millions of US$)*[1]	*(in millions of R$)*
Current Loans and Financing *less* current Term Loan Facility (UMB Loan[3] acquired by 3R Lux)[4]	11.1	55.3	11.1	55.3
Noncurrent Loans and Financing *less* noncurrent Term Loan Facility (UMB Loan[3] acquired by 3R Lux)[5]	18.6	93.2	18.6	93.2
Total Loans and Financing *less* Term Loan Facility (UMB Loan acquired by 3R Lux)	**29.7**	**148.5**	**29.7**	**148.5**
Current debentures	91.4	457.4	86.3	432.0
Noncurrent debentures	1,080.7	5,411.9	1,067.4	5,345.3
Total Debentures	**1,172.1**	**5,869.3**	**1,153.7**	**5,777.3**
Current Debentures- related parties	3.4	16.9	3.4	16.9
Noncurrent Debentures- related parties	4.2	21.4	4.2	21.4
Total Debentures – related parties	**7.6**	**38.3**	**7.6**	**38.3**
Total equity	**1,049.6**	**5,256.1**	**1,049.6**	**5,256.1**
Total capitalization[6][7]	**2,259.0**	**11,312.2**	**2,240.6**	**11,220.2**

(1) Solely for the convenience of the reader, the Brazilian real amounts as of September 30, 2023 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

(2) As adjusted for the receipt of the estimated net proceeds from this offering of US$486.7 million (R$2,437.2 million), after deducting estimated fees and other offering expenses payable by us of US$13.3 million (R$66.6 million), and the pre-payment of debentures in the amount of US$500.0 million in non-current and US$5.1 million in current (R$2,503.8 million in non-current and R$25.4 million in current).

(3) The "UMB Loan" is the Term Loan Facility (as defined herein).

(4) Total current loans and financing in the amount of R$139.0 million *less* current Term Loan Facility (UMB Loan acquired by 3R Lux) in the amount of R$83.7 million.

(5) Total noncurrent loans and financing in the amount of R$2,509.8 million *less* noncurrent Term Loan Facility (UMB Loan acquired by 3R Lux) in the amount of R$2,416.7 million.

(6) Total capitalization represents the sum of our consolidated current and noncurrent loans and financing (*less* current and noncurrent Term Loan Facility amounts), our consolidated current and noncurrent debentures, our consolidated current and noncurrent debentures with related parties, and our consolidated total equity. The definition of capitalization may not be comparable with the definition of capitalization adopted by other companies.

(7) Total capitalization does not take into account the proceeds from the issuance of the Fourth 3R Debentures.

Except as disclosed elsewhere in this Offering Memorandum, there has not been any material change in our capitalization since September 30, 2023.

SELECTED FINANCIAL AND OTHER INFORMATION

The tables below set forth certain selected financial information as of the dates and for each of the periods indicated. You should read the information below together with our unaudited interim financial information and our audited financial statements, included elsewhere in this Offering Memorandum, as well as the information presented in the sections "Presentation of Financial and Other Information," "Summary Financial Information" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." These results are not necessarily indicative of our future results of operations or financial condition.

The financial information in this Offering Memorandum as of September 30, 2023, and for the nine-month period ended September 30, 2023 and 2022 derives from our unaudited interim financial information, included elsewhere in this Offering Memorandum. The financial information as of and for the years ended December 31, 2022 and 2021 and as of and for the years ended December 31, 2021 and 2020, in this Offering Memorandum, derives from our audited financial statements, included elsewhere in this Offering Memorandum.

Statement of Profit or Loss Data

The following table sets forth certain of our statement of profit or loss data for each of the periods presented:

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	**2023**	**2022**	**2022**	**2022**	**2021**	**2020**
	(in millions of US$)[1]	*(in millions of R$)*		*(in millions of US$)*[1]	*(in millions of R$)*		
Net revenue	753.0	3,770.5	1,277.3	344.0	1,722.4	727.8	204.3
Cost of products sold	(517.5)	(2,591.4)	(548.5)	(166.9)	(835.5)	(319.5)	(106.2)
Gross profit	**235.5**	**1,179.1**	**728.8**	**177.1**	**886.9**	**408.3**	**98.0**
General and administrative expenses (G&A)	(70.7)	(353.8)	(252.9)	(67.7)	(339.0)	(159.6)	(59.5)
Other operating (expenses)/revenues	(8.8)	(44.0)	(63.0)	(30.7)	(153.5)	5.9	(44.1)
Impairment (loss)/reversal	(5.3)	(26.5)	–	(24.6)	(123.3)	160.4	(166.8)
	(84.7)	**(424.3)**	**(315.9)**	**(123.0)**	**(615.8)**	**6.8**	**(270.4)**
Income (loss) before financial income (expenses)	**150.7**	**754.8**	**412.9**	**54.1**	**271.1**	**415.0**	**(172.4)**
Financial income	85.9	430.2	253.2	63.9	319.8	197.1	75.1
Financial expenses	(228.1)	(1,142.0)	(632.8)	(160.8)	(805.0)	(656.7)	(204.3)
Financial result	**(142.2)**	**(711.8)**	**(379.6)**	**(96.9)**	**(485.2)**	**(459.6)**	**(129.3)**
Net Income (loss) before income tax and social contribution	**8.6**	**42.9**	**33.3**	**(42.8)**	**(214.1)**	**(44.6)**	**(301.6)**
Current income tax and social contribution	(32.2)	(161.4)	(52.1)	(14.3)	(71.7)	(3.9)	(6.2)
Deferred income tax and social contribution	27.2	136.5	185.5	82.6	413.5	64.4	31.3
Net income (loss) for the year/period	**3.6**	**18.0**	**166.7**	**25.5**	**127.7**	**16.0**	**(276.5)**
Net income (loss) attributable to:							
Shareholders of the parent company	1.2	6.2	192.6	29.9	149.6	(0.9)	(259.2)
Non-controlling interest	2.4	11.8	(25.9)	(4.4)	(21.9)	16.9	(17.3)
Net income (loss) for the year/period	**3.6**	**18.0**	**166.7**	**25.5**	**127.7**	**16.0**	**(276.5)**
Basic earnings (loss) per share – R$	0.01	0.03	0.95	0.15	0.74	(0.01)	(15.96)
Diluted earnings (loss) per share – R$	0.01	0.03	0.94	0.15	0.73	(0.01)	(15.96)

(1) Solely for the convenience of the reader, the Brazilian real amounts for the nine-month period ended September 30, 2023 and year ended December 31, 2022 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

Statement of Financial Position Data

The following table sets forth certain of our statement of financial position data as of each of the dates presented:

	As of September 30,		As of December 31,			
	2023	2023	2022	2022	2021	2020
	(in millions of US$)[1]	*(in millions of R$)*	*(in millions of US$)*[1]	*(in millions of R$)*		
Assets						
Current assets						
Cash and cash equivalents	156.2	782.0	159.8	800.4	118.7	287.9
Securities	2.9	14.5	6.3	31.4	2,389.4	417.5
Restricted cash	44.2	221.5	–	–	–	–
Derivative financial instruments	1.4	7.2	3.2	15.9	–	–
Trade accounts receivables	106.5	533.1	44.6	223.3	114.6	44.7
Advances	11.9	59.8	38.5	193.0	–	–
Inventories	130.7	654.7	37.4	187.5	16.6	4.8
Prepaid expenses	24.9	124.5	15.5	77.4	11.3	2.5
Income tax and social contribution assets	5.1	25.5	6.5	32.5	39.3	-
Other recoverable taxes	24.7	123.8	1.7	8.5	15.5	11.6
Other assets	1.8	9.2	0.2	0.8	8.0	2.9
Total current assets	**510.4**	**2,555.7**	**313.7**	**1,570.7**	**2,713.5**	**771.8**
Noncurrent assets						
Securities	503.3	2,520.5	–	–	–	–
Restricted cash	4.9	24.5	3.0	15.0	8.3	3.7
Income tax and social contribution assets	–	–	0.5	2.4	2.2	4.3
Derivative financial instruments	7.9	39.7	1.5	7.6	–	–
Deferred income tax and social contribution	125.2	627.1	99.9	500.2	96.7	16.5
Other recoverable taxes	0.0	0.1	–	–	–	–
Court deposits	1.6	8.2	0.9	4.6	3.0	2.6
Other assets	1.0	4.8	0.5	2.6	2.3	0.2
	644.0	**3,224.9**	**106.3**	**532.4**	**112.5**	**27.3**
Advances for acquisition of assets	0.3	1.6	118.5	593.5	158.9	121.3
Property, plant and equipment	1,272.6	6,372.7	444.9	2,228.1	948.0	351.8
Intangible assets	1,413.9	7,080.3	598.6	2,997.5	1,495.1	835.7
Right-of-use	8.2	40.9	9.8	48.9	25.5	1.2
Total noncurrent assets	**3,339.0**	**16,720.4**	**1,278.1**	**6,400.4**	**2,740.0**	**1,337.2**
Total assets	**3,849.4**	**19,276.1**	**1,591.8**	**7,971.1**	**5,453.5**	**2,109.1**
Liabilities and equity						
Current liabilities						
Trade payables	128.7	644.7	49.3	246.7	53.6	22.4
Loans and financing	27.8	139.0	21.6	108.2	–	–
Debentures	91.3	457.4	7.8	39.2	0.7	9.6
Debentures – related parties	3.4	16.9	–	–	–	–
Derivative financial instruments	19.2	96.2	6.5	32.7	116.0	34.3
Labor obligations	21.3	106.5	11.2	55.9	16.4	3.3
Amounts payable to the operator	–	–	–	–	1.4	0.9
Income tax and social contribution payable	13.8	68.9	1.3	6.3	–	–
Other taxes payable	14.6	73.2	10.2	51.0	52.5	25.1
Provision for royalty payments	9.3	46.4	3.0	15.1	9.2	3.1
Leases	3.0	15.0	2.5	12.7	6.7	0.3
Accounts payable for assets acquisitions	161.5	808.9	59.7	299.1	294.4	–
Other liabilities	5.0	25.0	4.9	24.5	16.0	15.5
Total current liabilities	**498.9**	**2,498.1**	**178.0**	**891.5**	**566.9**	**114.5**
Noncurrent liabilities						
Loans and financing	501.2	2,509.8	–	–	–	–
Derivative financial instruments	18.3	91.4	–	–	–	–
Debentures	1,080.7	5,411.9	180.5	904.1	47.5	623.2

	As of September 30,		As of December 31,			
	2023	2023	2022	2022	2021	2020
	(in millions of US$)[1]	*(in millions of R$)*	*(in millions of US$)*[1]	*(in millions of R$)*		
Debentures – related parties	4.3	21.4	–	–	–	–
Provision for abandonment (ARO)	446.2	2,234.6	222.3	1,113.0	414.0	282.8
Deferred income tax and social contribution	13.9	69.8	15.9	79.4	89.4	–
Provision for legal and administrative proceedings	0.7	3.7	0.8	4.0	3.5	1.0
Leases	5.9	29.5	7.6	37.8	19.0	1.0
Accounts payable for assets acquisitions	219.3	1,098.2	106.6	533.8	129.3	–
Other liabilities	10.3	51.7	13.2	66.2	8.3	9.4
Total noncurrent liabilities	**2,300.9**	**11,521.9**	**546.8**	**2,738.4**	**711.2**	**917.5**
Equity						
Capital	1,009.6	5,055.8	829.6	4,154.4	4,146.6	1,228.6
Capital reserve	8.9	44.5	7.4	37.1	115.0	–
Accumulated translation adjustment	18.9	94.4	21.2	106.4	115.9	109.0
Accumulated loss	(1.9)	(9.3)	(3.1)	(15.5)	(269.6)	(260.5)
Equity attributable to shareholders of the parent company	**1,035.5**	**5,185.4**	**855.2**	**4,282.4**	**4,107.9**	**1,077.1**
Equity attributable to non-controlling shareholders	14.1	70.7	11.7	58.8	67.6	–
Equity	**1,049.6**	**5,256.1**	**866.9**	**4,341.3**	**4,175.4**	**1,077.1**
Total liabilities and equity	**3,849.4**	**19,276.1**	**1,591.8**	**7,971.1**	**5,453.5**	**2,109.1**

(1) Solely for the convenience of the reader, the Brazilian *real* amounts as of September 30, 2023 and December 31, 2022 have been translated into U.S. dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin

The following table sets forth a reconciliation of our EBITDA to net income (loss) for the year/period and calculation of our EBITDA Margin for the periods presented:

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	2023	2022	2022	2022	2021	2020
	(in millions of US$, except percentages) [1]	*(in millions of R$, except percentages)*	*(in millions of R$, except percentages)*	*(in millions of US$, except percentages)* [1]	*(in millions of R$, except percentages)*		
Net income (loss) for the year/period	3.6	18.0	166.7	25.5	127.7	16.0	(276.5)
(+) Current and deferred income tax and social contribution	5.0	24.9	(133.4)	(68.3)	(341.8)	(60.6)	(25.1)
(+) Financial result (financial expenses net of financial revenues)	142.2	711.8	379.6	96.9	485.2	459.6	129.3
(+) Depreciation and amortization	82.5	413.1	179.0	55.8	279.3	117.4	39.6
EBITDA[2]	**233.2**	**1,167.9**	**591.9**	**109.9**	**550.4**	**532.4**	**(132.7)**
Net revenue	753.0	3,770.5	1,277.3	344.0	1,722.4	727.8	204.3
EBITDA Margin[3]	**31.0%**	**31.0%**	**46.3%**	**32.0%**	**32.0%**	**73.2%**	**(65.0)%**

(1) Solely for the convenience of the reader, the Brazilian *real* amounts for the nine-month period ended September 30, 2023 and for the year ended December 31, 2022 have been translated into dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

(2) We calculate EBITDA (earnings before interest, tax, depreciation and amortization) in accordance with the guidelines in CVM Resolution No. 156, as net income (loss) for the year/period *plus* financial result (financial expenses net of financial income), current and deferred income tax and social contribution, and depreciation and amortization. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin.*" and for a reconciliation of EBITDA to net income (loss) for the applicable period/year, see "*Selected Financial and Other Information—Reconciliation of EBITDA to Net Income (Loss) and Calculation of EBITDA Margin.*"

(3) We calculate EBITDA Margin as EBITDA for the year/period *divided by* net revenue for the year/period. For more information, see "*Presentation of Financial and Other Information—Special Note Regarding Non-GAAP Financial Measures—EBITDA, Adjusted EBITDA, EBITDA Margin, and Adjusted EBITDA Margin*."

Reconciliation of Adjusted EBITDA to Net Income (Loss) and Calculation of Adjusted EBITDA Margin

	For the nine-month period ended September 30,			For the year ended December 31,			
	2023	**2023**	**2022**	**2022**	**2022**	**2021**	**2020**
	(in millions of US$, except percentages) [(1)]	*(in millions of R$, except percentages)*	*(in millions of R$, except percentages)*	*(in millions of US$, except percentages)*[(1)]	*(in millions of R$, except percentages)*		
EBITDA	**233.2**	**1,167.9**	**591.9**	**109.9**	**550.4**	**532.4**	**(132.7)**
(+)Impairment (Loss)/reversal in recoverable value of assets[(2)]	5.3	26.5	-	24.6	123.3	(160.4)	166.8
(+)Expenses related to the return of concessions[(3)]	-	-	-	-	-	(0.4)	-
(+)Adjustments to the abandonment provisions - Pescada[(4)]	(2.1)	(10.7)	-	(5.5)	(27.9)	(5.3)	(21.5)
(+)Exclusion of ICMS from the calculation base of PIS/COFINS[(5)]	-	-	-	-	-	(10.2)	-
(+)Macau Cluster additional expense[(6)]	-	-	5.1	1.0	5.1	-	-
(+)Expenses earn-out to an old controller[(7)]	-	-	-	11.7	58.7	-	-
(+)Expenses on operator - *Camarupim* field[(8)]	-	-	-	-	-	-	7.3
(+)Expenses related to labor provisions[(9)]	-	-	-	-	-	-	1.2
(+)Translation adjustments - OPE[(10)]	-	-	-	-	-	-	6.2
(+)Expense related to the assignment of the *Fazenda Pinaúna* field[(11)]	-	-	-	-	-	-	15.0
(+)Bonus linked to the IPO[(12)]	-	-	-	-	-	-	10.0
Adjusted EBITDA[(13)]	**236.4**	**1,183.7**	**597.0**	**141.7**	**709.6**	**356.1**	**52.3**
Net revenue	753.0	3,770.5	1,277.3	344.0	1,722.4	727.8	204.3
Adjusted EBITDA Margin[(14)]	**31.4%**	**31.4%**	**46.7%**	**41.2%**	**41.2%**	**48.9%**	**25.6%**

(1) Solely for the convenience of the reader, the Brazilian *real* amounts for the nine-month period ended September 30, 2023 and for the year ended December 31, 2022 have been translated into dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

(2) Impairment (loss)/reversal in recoverable value of assets. Impairment and reversal of impairment, which is the assessment that compares the recoverable value of the asset, determined by discounted cash flow assessment, in relation to the asset's book value. These expenses and expense reversals do not influence our cash generation, so we excluded them from our Adjusted EBITDA calculation.

(3) Expenses related to the return of concessions. As part of our change in strategy to focus on increasing production and reserves in mature oil and gas fields, in 2019 and 2020, we (through 3R Candeias – now 3R Bahia) returned the exploratory blocks PNT-65, PNT-137, PNT-145, PNT-151, PNT-162 and PNT-165 to ANP. We incurred legal and regulatory expenses which were necessary to be able to return these concessions. These expenses are not part of the normal course of our business, following this strategic change and, therefore, we excluded them from our Adjusted EBITDA calculation.

(4) Adjustments to the abandonment provisions - Pescada. Estimated costs for future environmental dismantling and restorations are calculated according to the updated information relating to costs and expected recovery plans available at the time of such calculation. These expenses are recognized at present value, using a discount risk-free rate adjusted by the "country-risk" premium rate. As a result of the long period of time until the abandonment, even slight variations in the discount rate may result in significant differences in the recognized amount. Since this item does not have a cash effect, we excluded it from our Adjusted EBITDA calculation.

(5) Exclusion of ICMS from the calculation basis of PIS/COFINS. Recoverable amounts of PIS/COFINS of 3R Macau (now 3R RNCE) and 3R Pescada, of R$8.8 million and R$1.6 million, respectively, totaling R$10.4 million (of which R$10.2 million corresponds to

principal and R$0.25 million corresponds to adjustment for inflation at the SELIC rate). These amounts relate to a tax credit resulting from a decision rendered by the Brazilian Federal Supreme Court (Supremo Tribunal Federal), or STF, in May 2021, excluding ICMS from the calculation basis of PIS/COFINS. As this item is nonrecurring and is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation.

(6) Macau Cluster additional expense. Additional expenses related to specific items identified following the closing of the acquisition of the Macau Cluster. We excluded these nonrecurring expenses from our Adjusted EBITDA calculation;

(7) Expenses earn-out to an old controller. Expense related to the recognition of a liability for an additional payment to FIP Angel, the former controller of the concessions operated by 3R Offshore, 3R Candeias (now 3R Bahia) and 3R, in connection with the calculation of taxable profit for income tax and social contribution purposes. Under the terms of the purchase and sale agreement, if 3R and/or the abovementioned subsidiaries were to realize carry-forward tax losses, the former controller would be entitled to the equivalent value of up to one third of the benefit obtained as a result of their use. As this expense has no impact on the period's cash flow and is related to an income tax benefit, we excluded it from our Adjusted EBITDA calculation.

(8) Expenses on operator - *Camarupim* field. As part of our change in strategy to focus on increasing production and reserves in mature oil and gas fields, we entered into an agreement for the sale of the *Camarupim* field, which was consummated in 2020. Prior to the closing of the sale, we continued to honor cash calls for the exploratory activities in this field, which were recognized as an expense. These expenses are not part of the normal course of our business following this strategic change and, therefore, we excluded it from our Adjusted EBITDA calculation.

(9) Expenses related to labor provisions. This refers to expenses related to legacy labor proceedings from Ouro Preto, which we identified as being probable losses subsequent to their acquisition. As this effect is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation.

(10) Translation adjustments - OPE. Due to the acquisition of 3R (then Ouro Preto) by Ônix on 18 February 2020, we changed the functional currency of 3R Offshore, from dollar to real, in accordance with technical pronouncement CPC 02(R2) and in order to align it with the 3R Group's functional currency. As this item in nonrecurring and is not part of the normal course of our business, so we excluded it from our Adjusted EBITDA calculation.

(11) Expense related to the assignment of the *Fazenda Pinaúna* field. 3R Offshore entered into a settlement of legal action No. 0179509-24.2016.8.19.0001, on August 25, 2020, pursuant to which it irrevocably assigned 100% of the working rights of the *Fazenda Pinaúna* field (a legacy field which did not fit with our change in strategy to focus on increasing production and reserves in mature oil and gas fields) to the authors of such action. As this is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation.

(12) Bonus linked to the IPO. We granted bonuses to the members of our management and our employees as a result of our financial performance in connection with 3R's initial public offering of shares (IPO), in 2020. As this item is not part of the normal course of our business, we excluded it from our Adjusted EBITDA calculation.

(13) Adjusted EBITDA corresponds to EBITDA *plus* adjustments mentioned in previous items.

(14) Adjusted EBITDA Margin consists of Adjusted EBITDA *divided by* net revenue.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion concerning our financial condition and results of operations is based on, and should be read in conjunction with, our unaudited parent company and consolidated condensed interim financial information as of September 30, 2023 and for the nine-month period ended September 30, 2023 and 2022 and our audited parent company and consolidated financial statements as of and for the years ended December 31, 2022 and 2021 and our audited parent company and consolidated financial statements as of and for the years ended December 31, 2021 and 2020, and related notes, included elsewhere in this Offering Memorandum, as well as information presented under the sections "Presentation of Financial and Other Information," "Summary Financial Information" and "Selected Financial and Other Information."

This section contains certain forward-looking statements that involve risks and uncertainties. Our actual results may differ substantially from those discussed in these forward-looking statements as a result of various factors, including, without limitation, those set forth in the sections entitled "Forward-Looking Statements" and "Risk Factors."

Overview

We are one of the largest publicly listed independent oil and gas producers in Latin America in terms of production volume and our main strategy is focused on the redevelopment of mature oil and gas fields.

We are ranked by the ANP as a class "A" operator, which enables us to operate in all types of oil and gas fields in Brazil, from onshore to ultra-deep-water offshore fields. We have a qualified technical team that has a successful track record in (i) revamping mature oil fields, and (ii) structuring complex mergers and acquisitions and funding transactions. As certified by *Degolyer and McNaughton*, our assets had proved and probable (2P) oil and gas reserves of 516.0 Mmboe as of December 31, 2022.

In accordance with our business plan, our strategy is to build our portfolio through opportunistic acquisitions of assets that (i) have been operational for many years; (ii) have proved oil reserves certifiable by independent experts; (iii) we are able to increase production based on investments with accelerated returns (we use return on investment as a decision-making tool and, accordingly, we consider the time to achieve the expected returns and the amount to be disbursed); (iv) have optimized infrastructure that can be operated with a lean structure; and (v) potentially have (a) synergy with our other assets and (b) can be operated at competitive lifting costs.

Throughout our history, we have acquired a comprehensive portfolio of oil and gas production assets in Brazil following a divestment plan of onshore, shallow-water and offshore oil fields executed by Petrobras, (the "Petrobras Divestment Plan"). In summary, we have positioned ourselves as a strategic company in the oil and gas sector, with a portfolio and an investment thesis anchored in oil and gas production. Our current focus is to integrate and optimize the operations of the assets in our portfolio.

Principal Factors Affecting our Results of Operations

Our revenues derive from the sale of oil and gas we produce at the clusters we own, from the oil derivatives that produce in the refinery and from oil and gas services that we provide to third parties. All our operations are made in Brazil, we are affected by the general macroeconomic conditions in Brazil.

Accordingly, the main factors that affect our results of operations and revenues are:

- the Brazilian macroeconomic scenario, including inflation and fluctuations in exchange rates and in interest rates;
- production at our oil and gas fields;
- fluctuations in the Brent Oil Price; and
- fluctuations in the crack spread of oil derivatives.

Brazilian Macroeconomic Scenario

We operate in Brazil and, accordingly, all of our revenues, expenses and assets are denominated in Brazilian *reais*. Consequently, Brazil's macroeconomic conditions, especially with respect to interest rates, inflation and exchange rates affect our results of operations. In addition, as the prices for sale of oil and gas are calculated in U.S. dollars and converted into *reais*, fluctuations in exchange rates directly affect our revenues.

The growth rate of the Brazilian GDP and the unemployment rate have a direct impact on the purchasing power of the Brazilian population. In the nine-month period ended September 30, 2023 and in 2022, the Brazilian GDP increased by 3.2% and 2.9%, respectively, while in 2021 it increased by 4.6%, after having decreased in 2020 by 4.1%. As of December 31, 2022, 2021 and 2020, the unemployment rate in Brazil was 9.3%, 13.2% and 13.8%, respectively.

Inflation rates in Brazil, as measured by the Broad Consumer Price Index (*Índice de Preços ao Consumidor – Amplo*), or IPCA index, were 5.2%, 5.8%, 10.1% and 4.5% for the nine-month period ended September 30, 2023 and the years ended December 31, 2022, 2021 and 2020, respectively. As of the same periods, inflation rates in Brazil, as measured by the General Market Price Index (*Índice Geral de Preços – Mercado*), or IGP-M index, were -3.5%, 5.5%, 17.8% and 23.1%, respectively.

The accumulated rate of interbank deposits in Brazil, or CDI, was 13.4%, 12.4%, 4.4% and 2.7% as of September 30, 2023 and December 31, 2022, 2021 and 2020, respectively. As of the same dates, the official long-term interest rate (*taxa de juros de longo prazo*), or TJLP, was 7.0%, 7.2%, 5.3% and 4.6%, respectively.

During recent years there has been significant volatility in the official Brazilian base interest rate, the SELIC rate, set by the COPOM, which ranged from 14.25%, on December 31, 2015, to 2.00% as of December 31, 2020, and 13.75% as of August 31, 2022. As of the date of this Offering Memorandum, the SELIC rate is 11.75%. Interest rates have been historically used by the Brazilian government as a tool to curb inflationary pressures.

The *real* has historically suffered significant depreciations and appreciations in relation to the U.S. dollar. In 2020, the *real* depreciated by 28.9% against the U.S. dollar and on December 31, 2020, the *real*/U.S. dollar selling exchange rate was R$5.1967 per US$1.00. In 2021, the Brazilian *real* depreciated by 7.4% against the U.S. dollar and on December 31, 2021, the *real*/U.S. dollar selling exchange rate was R$5.5805 per US$1.00. In 2022, the Brazilian *real* appreciated by 7.0% against the U.S. dollar and on December 31, 2022, the *real*/U.S. dollar selling exchange rate was R$5.2177 per US$1.00. As of September 30, 2023, the *real*/U.S. dollar selling exchange rate was R$5.0076, as reported by the Central Bank, representing a 4.0% appreciation of the *real* in 2023 to date. As prices of oil and gas are calculated based on the U.S. dollar, a currency devaluation of the *real* in relation to the U.S. dollar may adversely affect our results of operations.

The following table sets forth the Brazilian GDP, inflation rates, interest rates and exchange rates as of the dates and for the periods presented:

	As of and for the nine-month period ended September 30,	As of and for the year ended December 31,		
	2023	2022	2021	2020
GDP growth	3.2%	2.9%	4.6%	(4.1)%
Inflation (IGP-M)[1]	(4.9)%	5.5%	17.8%	23.1%
Inflation (IPCA)[2]	5.2%	5.8%	10.1%	4.5%
CDI rate[3]	13.4%	12.4%	4.4%	2.7%
TJLP[4]	7.0%	7.2%	5.3%	4.6%
SELIC[5]	12.7%	13.8%	9.2%	2.0%
Real appreciation/(depreciation) in relation to the U.S. dollar	(4.0)%	7.0%	(7.4)%	(28.9)%
Period-end exchange rate (in R$ per US$1.00)[6]	5.0076	5.2177	5.5805	5.1967
Average exchange rate (R$ per US$1.00)[7]	5.0083	5.1655	5.3956	5.1578

Sources: BNDES, Central Bank, FGV, IBGE and Economática.

(1) The General Market Price Index (Índice Geral de Preços-Mercado), or IGP-M, is measured by FGV.

(2) The IPCA index is measured by IBGE.
(3) The CDI is the accumulated rate of the interbank deposits in Brazil during each period.
(4) The TJLP is required by the BNDES for long-term financing (period-end data).
(5) Annual average interest rate.
(6) Exchange rate (for sale) of the last day of the period, as reported by the Central Bank.
(7) Average of exchange rates (for sale) during the period, as reported by the Central Bank.

Exchange Rates

As oil and gas prices are calculated based on U.S. dollars, fluctuations in the *real* /U.S. dollar exchange rate have a direct impact on our principal source of revenue, which is recorded in *reais*. Accordingly, in the nine-month period ended September 30, 2023 and in the year ended December 31, 2022, the appreciation of the *real* negatively affected our net revenue and in the years ended December 31, 2021 and 2020, the depreciation of the *real* positively affected our net revenue and increased our financial income from financial investments indexed to the U.S. dollar. Conversely, in the periods of depreciation of the *real* the cost of certain products and services we use in our production chain was negatively affected.

Inflation and Interest Rates

Variations in interest rates may directly impact our financial income and financial expenses, which are linked to the CDI. The increase in the CDI rate in the years ended December 31, 2021, and December 31, 2022, resulted in an increase in our financial income and financial expenses for those years and the reduction in the CDI rate in the year ended December 31, 2023 resulted in a decrease in our financial income and financial expenses for that period. Variations in the CDI rate affect the cost of local credit and may impact our business in the event we incur new financing and similar loans.

In addition, variations in inflation rates may directly affect our costs and expenses, as most of the agreements we enter into with suppliers and service providers are indexed to the IPCA and IGP-M. Increased IPCA rates in the years ended December 31, 2022, 2021 and 2020, and increased IGP-M rates in the years ended December 31, 2022, 2021 and 2020, negatively affected our costs and expenses for those periods. The decrease in the IPCA and in the IGP-M in the year ended December 31, 2023 resulted in a decrease in our costs and expenses.

Production at our Oil and Gas Fields

Our net revenue is directly related to the production at our oil and gas fields, in our upstream (E&P) segment installations, which may be affected by factors such as (i) the natural decline in production due to the consumption of reserves; (ii) variations in market demand for oil and gas; and (iii) decreases in production due to operational challenges. Any of these factors impact our operational results.

We also process, refine and market oil derivatives though our midstream and downstream segment installations. The performance of this segment may be affected by factors such as (i) variations in market demand for oil derivatives; (ii) the presence of operational challenges, such as restrictions on the storage and treatment capacity of our industrial complex, and (iii) governmental policies that may impose control or restrictions on prices of oil derivatives.

Fluctuations in the Brent Oil Price

In the nine-month period ended September 30, 2023, 42.1%, 10.6%, and 46.0% of our net revenue derived from the sales of oil, gas, and oil derivatives, respectively. The remaining 1.4% derived from services rendered. Part of our gas production is sold at a fixed price, and regardless of any variations in oil price, we do not expect any price variations in this commodity until expiration of our sales contracts. Oil, however, is sold at a pre-determined discount under the Brent Oil Price curve. As a result, any variation of the Brent Oil Price directly affects our revenue from sales of oil, even though it does not affect our revenue from the sale of gas at a fixed price. Brent Oil Price may also affect the assessment of non-financial assets, and also contingent payments due under the Sales and Purchase Agreements of the assets that constitute our portfolio.

In 2023, the decrease in the Brent Oil Price, reaching US$77.6 on December 31, 2023, negatively affected our revenue derived from the sale of oil, gas and oil derivatives, due to the direct connection between the sales price and the Brent Oil Price.

In 2022 and 2021, the increase in the Brent Oil Price, reaching US$82.8 and US$77.2 per barrel on December 31, 2022, and 2021, respectively, positively affected our revenue derived from the sale of oil in view of the direct relationship between the sales price and the reference price. Conversely, in 2020, the reduction in the Brent Oil Price to less than US$30 per barrel in April and May of 2020, affected our revenue derived from the sale of oil in view of the direct relationship between the sales price and the reference price.

Notwithstanding the impact on revenue derived from oil in 2020, our net revenue increased in 2020 compared to 2019, due to higher production levels and the depreciation of the *real* against the U.S. dollar.

The following table sets forth historical information on the average Brent Oil Price (US$/bbl) for the periods indicated:

	2023			2022				2021				2020			
	3Q	2Q	1Q	4Q	3Q	2Q	1Q	4Q	3Q	2Q	1Q	4Q	3Q	2Q	1Q
Brent Oil Price (in US$ per bbl) [1]	86,65	77,99	81,07	88,72	100,71	113.84	100.87	79.61	73.51	68.98	61.04	44.32	42.91	29.70	50.27

(1) Average Brent Oil Price, as published by the U.S. Energy Information Administration.

For additional information on the fluctuations in the Brent Oil Price, see "*Industry—The Global Oil and Natural Gas Industry*."

Tax Incentives

As of the date of this Offering Memorandum, we benefit from the following tax incentives or special regimes:

- REPETRO-SPED special regime granted to 3R Areia Branca (which has been renamed 3R RNCE), which (i) exempts its headquarter and one of its branches from the payment of import tax, IPI (as defined herein), PIS (as defined herein) on imports and COFINS (as defined herein) on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts another branch from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time, and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Areia Branca's corporate name, to 3R RNCE;

- REPETRO-SPED special regime granted to 3R Candeias (which has been renamed 3R Bahia) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Candeias' corporate name, to 3R Bahia;

- REPETRO-SPED special regime granted to 3R Fazenda Belém (which has been merged into 3R RNCE) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will

permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Fazenda Belém's corporate name, to 3R RNCE;

- REPETRO-SPED special regime granted to 3R Macau (which has been merged into 3R RNCE) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts two of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Macau's corporate name, to 3R RNCE;

- REPETRO-SPED special regime granted to 3R and to six of its branches that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country;

- REPETRO-SPED special regime granted to 3R Potiguar that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts four of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country;

- REPETRO-SPED special regime granted to 3R Rio Ventura (which has been merged into 3R Bahia) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Rio Ventura's corporate name, to 3R Bahia;

- SUDENE special regime granted to 3R Rio Ventura (which has been merged into 3R Bahia), 3R Macau (which has been merged into 3R RNCE), 3R Potiguar, 3R Offshore, 3R Candeias (which has been renamed 3R Bahia), 3R Fazenda Belém (which has been merged into 3R RNCE) and 3R Areia Branca (which has been renamed 3R RNCE): 75% income tax reduction related to the profits arising from the exploitation of the project enrolled in the relevant special regime. We are taking all necessary measures to update the incentive which are currently under 3R Rio Ventura's and 3R Candeias' corporate name to 3R Bahia, and the incentives which are currently under 3R Macau's, 3R Fazenda Belém's and 3R Areia Branca's corporate name to 3R RNCE.

- COTEPE Act No. 05/2020 which grants to 3R Areia Branca (which has been renamed 3R RNCE), 3R Candeias (which has been renamed 3R Bahia), 3R Macau (which has been merged into 3R RNCE), 3R Offshore and 3R Rio Ventura (which has been merged into 3R Bahia) a reduced calculation basis, resulting in an ICMS import tax rate of 3%. This tax benefit is connected with the REPETRO-SPED special regime. We are taking all necessary measures to update the incentive which are currently under 3R Rio Ventura's and 3R Candeias' corporate name to 3R Bahia, and the incentives which are currently under 3R Macau's and 3R Areia Branca's corporate name to 3R RNCE.

- COTEPE Act No. 43/2023 which grants 3R Potiguar the deferral of the ICMS-*monofásico* for diesel, GLP and gas *(gasolina)* on import transactions and on remittances between its own establishments.

These tax incentives are subject to certain conditions. Any non-compliance with the requirements related to these tax benefits or special tax regimes or the amendments to applicable laws may affect our enjoyment of these tax

benefits or special regimes and, as a result, we may be adversely affected. For more information, see "*Business—Tax Incentives*."

Acquisitions of Oil and Gas Fields

Consummated Acquisitions and Related Deferred and Contingent Amounts Payable

Our growth strategy has been based on expansion through organic and inorganic growth via acquisitions, which generate more revenue and therefore impact our results of operations. The consummation of acquisitions and the payment of the purchase prices for the assets we acquire also impact our results of operations.

As of September 30, 2023, we have disbursed (i) US$191.0 million to acquire the Macau Cluster; (ii) US$49.0 million to acquire the Areia Branca Cluster, (iii) US$35.0 million to acquire the Fazenda Belém Cluster; (iv) US$78.0 million to acquire the Rio Ventura Cluster; (v) US$250.0 million to acquire the Recôncavo Cluster, (vi) US$13.0 million to acquire the Peroá Cluster; (vii) US$16.0 million to acquire the Papa-Terra Cluster, and (viii) US$1,210 million to acquire the Potiguar Cluster.

Notwithstanding the consummation of these acquisitions, we are required to make certain deferred payments or contingent payments (*i.e.*, a payment conditioned on the achievement of a certain metric), as the case may be, under the Sale and Purchase Agreements of the assets we acquired. As of September 30, 2023, the following amounts remain due, without taking into consideration the adjustments and deductions to be applied under each Sale and Purchase Agreement:

(i) Deferred payment of US$16.0 million relating to the acquisition of the Rio Ventura Cluster, payable within thirty months after the consummation of such acquisition, occurred on July 15, 2021;

(ii) Contingent payment of up to US$42.5 million relating to the acquisition of the Peroá Cluster, subject to the recovery of the Brent Oil Price and the commercial viability of the Malombe Exploratory Block and/or extension of the concession;

(iii) Deferred payment of US$235.0 million relating to the acquisition of the Potiguar Cluster payable in four annual installments from March 2024 to March 2027;

(iv) Contingent payment of US$90.0 million relating to the operational performance of the Papa-Terra Cluster, divided in several installments aligned with performance targets established by the relevant Sale and Purchase Agreement; and

(v) Contingent payment of up to US$23.0 million relating to the acquisition of the Areia Branca Cluster, contingent upon the Brent Oil Price and/or volume of new certified reserves.

While the acquisition processes of the remaining 65% of the Pescada Cluster is still pending consummation, we are entitled to its cash generation since January 1, 2020. The amounts measured in this asset from such date until the actual closing of the transaction will be deducted from the installments to be paid at the closing of the transactions.

We agreed on a cost-sharing mechanism related to the abandonment of specific wells and the decommissioning of platforms and pipelines that are no longer commercially viable to operate. According to such mechanism, Petrobras committed to a fixed amount for decommissioning purposes, with details on the amounts per asset and presenting a timetable for events of abandonment, which will be paid by Petrobras to us as the assets are decommissioned. For more information, see note 21 to our unaudited interim financial information. For information on our portfolio of oil and gas fields, see "*Business—Our Asset Portfolio*."

Pending Acquisition

On July 9, 2020, we entered into a Sale and Purchase Agreement with Petrobras for the acquisition of the remaining 65% working interest in the concession rights related to the Pescada Cluster. We currently own a 35%

working interest in the concession rights relating to this cluster. Upon the closing of the transaction with Petrobras, 3R Pescada will become the sole operator of the Pescada Cluster, which is expected to occur in 2024.

The total purchase price for the Pescada Cluster acquisition was US$1.5 million, of which (i) US$0.3 million, was paid on July 9, 2020; and (ii) US$1.2 million, will be paid on the closing date, excluding the effects from cash generated at the Pescada Cluster since January 1, 2020, to be discounted from the remaining payment due at closing).

Since January 1, 2020, although Petrobras is still the operator of the Pescada Cluster, we are entitled to receive the revenue relating to the 65% working interest we hold in the concession agreements relating to the Pescada Cluster. Such amounts will be deducted from the payment due on the closing of such transaction.

Other Assets

On April 13, 2022, we participated in the third cycle of the permanent offer of ANP and acquired the concession rights of six onshore exploratory blocks in the Potiguar Sedimentary Basin (POT-T326, POT-T353, POT-T437, POT-T524, POT-T525, and POT-T568), in regions very close to the Macau, Areia Branca and Potiguar Clusters (operated by us). The offers for the onshore exploratory blocks comprised a total signing bonus of R$1.0 million. The acquisitions are in line with our strategy of evaluating opportunities to replace reserves in oil and gas assets, which present possible synergies with our portfolio. The evaluation of the onshore exploratory blocks was carried out based on geological and geophysical correlations with the fields in production held by us in the Potiguar Sedimentary Basin.

On December 13, 2023, we participated in the fourth cycle of the permanent offer of ANP, acquiring concession rights for three onshore exploratory blocks located in the Potiguar Sedimentary Basin (POT-T-403, POT-T-488, and POT-T-531). These exploratory blocks are located in regions in close proximity to other assets that we operate in the Potiguar Sedimentary Basin. The signing bonus for these blocks totaled R$0.3 million. These acquisitions are aligned with our strategy to constantly evaluate opportunities that can offer potential synergies with our existing portfolio and provide oil and gas reserve replacement. Our assessment of these exploratory blocks was based on geological and geophysical data, correlated with the production fields that we already operate in the Potiguar Sedimentary Basin.

Factors Impacting the Comparability of our Financial Results

Activities related to certain Clusters

Our results of operations for the nine-month period ended September 30, 2023, and for the years ended December 31, 2022, 2021 and 2020, are not fully comparable, primarily due to: (i) the initiation of the operations of the Macau Cluster, in 2020, (ii) the merger of 3R Petroleum e Participações S.A. into 3R, completed in November 2020 (the "Merger"), (iii) the initiation of the operations of the Rio Ventura Cluster, in July 2021, (iv) the initiation of the operations of the Areia Branca Cluster, in November 2021, (v) the consummation of the acquisition of a 100% working interest in the Recôncavo Cluster (except for the *Guanambi* and the *Cambacica* fields), in May 2022, (vi) the consummation of the acquisition of 100% working interests in the Peroá Cluster and in the Fazenda Belém Cluster, in August 2022, (vii) the consummation of the acquisition of a 62.5% working interest in the Papa-Terra Cluster, in December 2022, and (viii) the beginning of the operations of the Potiguar Cluster in June 2023.

Impairment of Non-Financial Assets

In the nine-month period ended September 30, 2023, we identified evidence that led to an impairment test for the *Camarão* field, owned by 3R Offshore. This resulted in the recognition of an impairment loss of R$26.5 million at the end of the referred period, applying a discount rate of 11.36% per annum. The premise is that the project of flow of gas product occur by the platform of Manati and, therefore, depends on the commercial and/or corporate agreement with the current holder of the economic rights of the platform, about the duct of the flow until the cost. Additionally, the deadline of the gas sales was revised (with point of delivery in the arrival of the pipeline at the platform of *Manati*) and the investment necessary for the project of the tie-back (connection by the production area of the *Camarão* field until the platform of *Manati*). In this moment, this investment isn't contemplated in our short-term budget.

On December 31, 2022, we identified evidence in the *Camarão* field that led to an impairment test that resulted in a provision in the amount of R$123.3 million, considering a discount rate of 10.97% per annum.

Compared to the test carried out on December 31, 2021, we identified that reservoir analysis carried out for the *Camarão* field estimated that the volume of oil and gas is smaller than the volume that had been considered so far. We assume that the consortium that owns Manati (which is 45% owned by Enauta, 35% by Petrobras, 10% by Geopark and 10% by Petrorio) is interested in the gas from the *Camarão* field to provide flexibility to the system and additional gains in the sale of gas to the final consumer. Thus, we adopted the premise of selling gas to the consortium, with a delivery point at the arrival of the gas pipeline at the Manati platform. The analysis carried out considered the average Brent Oil Price of US$76.1 per barrel in the period from 2023 to 2027, with a positive variation of US$/5.6 per barrel in relation to the test carried out on December 31, 2021.

We estimated the gas price at 10% of the Brent Oil Price (in US$/mmbtu), using as reference the proposal received for the sale of gas in the *Peroá* field at a discount, as well as market analysis conducted by our commercial team. Therefore, in 2026 (the year the *Peroá* field entered into operation), we estimated the price of gas at US$7.3/mmbtu (assuming a Brent Oil Price of US$72.3 per barrel).

On December 2021, in the *Pescada* field, we identified evidence that led to an impairment test that resulted in a reversal of R$47.2 million. This was due to a rise in the average Brent Oil Price of US$14.3 per barrel (or 28.2%) for the entire evaluated period (up to the year 2046) and a rise of US$17.0 per barrel (or 32.6%) for the period up to 2026.

On December 31, 2021, in the *Camarão* field, we identified evidence that led to an impairment test that resulted in the reversal of the impairment value recorded in the amount of R$113.3 million, applying a discount rate of 8.56% per annum. Compared to the test carried out on June 30, 2021, where the estimated average Brent Oil Price was US$70.5 per barrel, there was a rise of US$7.8 per barrel (or 13.7%) in the average Brent Oil Price for the entire evaluated period (up to the year 2046) and an increase of US$8.8 per barrel (or 14.6%) for the following five-year period (up to 2026), in an upward trend. The price of gas was conservatively estimated at 8.2% of the Brent Oil Price (in US$/mmbtu), using the current contract between the *Peroá* field and Petrobras as a reference. Therefore, in 2025, the year the *Peroá* field is expected to enter into operation, the price of gas was estimated at US$5.4/mmbtu (assuming the Brent Oil Price at US$65.8/bbl).

In 2020, we conducted an impairment test at the *Pescada* and *Arabaiana* fields' cash-generating units, factoring in a reduction in the discount rate to 7.59% per annum. This test included updates to oil and gas prices according to the projection published by Platts and an adjustment in OPEX, following the reserve certification concluded on June 30, 2020. The outcome was an impairment of R$46.1 million, determined by using a discounted cash flow technique to assess the value in use.

In 2020, we conducted an impairment test at the *Camarão* field cash-generating unit, considering a reduction in the discount rate to 7.59% per annum, factored in 12 years of production starting 2023, and development costs through a tie-back with an existing producing field near the Camarão field. This resulted in an impairment of R$113.5 million, determined using the discounted cash flow technique to assess value in use.

In 2020, we conducted an impairment test at the *Fazenda Pinaúna* field, relating to an out-of-court settlement to conclude lawsuit 0179509-24.2016.8.19.0001, whereby Fazenda Pinaúna was valued at R$15.0 million, resulting in an impairment of R$7.1 million.

For additional information on our operational results for the year ending December 31, 2021 compared to the year ending December 31, 2020, see "*—Results of Operations—Year Ended December 31, 2021 compared to Year Ended December 31, 2020*."

For additional information on our operational results for the year ending December 31, 2022 compared to the year ending December 31, 2021, see "*—Results of Operations—Year Ended December 31, 2022 compared to Year Ended December 31, 2021*."

Significant Changes in Accounting Pronouncements

In the nine-month period ended September 30, 2023, and in the years ended December 31, 2022 and 2021, there were no significant changes in accounting pronouncements.

Critical Accounting Policies

We prepare our financial statements based on estimates and assumptions derived from our experience and a number of other factors which we believe are reasonable. Accordingly, we adopt certain critical accounting practices that we deem important in the preparation of our financial statements. The determination of our critical accounting practices is subjective and complex, frequently requiring us to make inherently uncertain estimates or estimates on future issues. However, although we review these estimates and assumptions in the ordinary course of our business, the preparation of our financial statements often requires us to make difficult, subjective and complex judgments. Accordingly, actual results may differ from our estimates due to a number of variables, assumptions or conditions. For further information on our critical accounting policies, see notes 5 and 7 to our 2022 audited financial statements, included elsewhere in this Offering Memorandum.

Principal Components of our Statement of Profit or Loss

Net Revenue

Our net revenue derives from (i) sales of oil and gas that we produce at the clusters we own and operate, (ii) sales of oil derivatives originated from refining processing carried out at the *Clara Camarão* refinery belonging to 3R Potiguar (since the consummation of the Potiguar Acquisition on June 8, 2023), and (iii) to a lesser extent, gas compression services and the usage of our infrastructure at the Potiguar Cluster.

After the consummation of the acquisition of the Potiguar Cluster, on June 8, 2023, we began to operate in the midstream and downstream segment (processing, refining and marketing of oil and gas derivatives) and record net oil derivatives revenues and net services revenues.

In the nine-month period ended September 30, 2023, 42.1% of our net revenue derived from sales of oil, while 10.6% derived from the sale of gas, 46% derived from the sales of oil derivatives and 1.4% derived from services. In the year ended December 31, 2022, 81.6% of our net revenue derived from sales of oil, 18.3% of our net revenue derived from the sale of gas, and the remaining 0.1% derived from services. In the year ended December 31, 2021, 95.5% of our net revenue derived from sales of oil, while 4.5% derived from the sale of gas. In the year ended December 31, 2020, 84.2% of our net revenue derived from sales of oil, while 15.8% derived from the sale of gas.

Cost of Products Sold

Our cost of products sold mainly relates to operating costs, area occupation and retention, depreciation and amortization, oil and gas royalties due to ANP, oil transport through trucks, water treatment and electric power, personnel costs, gas processing and transport, and among others. For more information, see note 32 to our 2022 audited financial statements and note 27 to our unaudited interim financial information included elsewhere in this Offering Memorandum.

Operating Revenues (Expenses)

Operating income (expenses) are comprised of (i) general and administrative expenses and (ii) other operating revenues (expenses). General and administrative expenses derive from management and support of our operational activities. These expenses are predominantly related to the activities that are held at our head office. Some of the main expenses include salaries and payroll charges, share-based payment transactions, outsourced services, depreciation and amortization, employee benefits, software and hardware maintenance and support, among others. For more information, see note 33 to our 2022 audited financial statements and note 28 to our unaudited interim financial information included elsewhere in this Offering Memorandum.

Other operating revenues (expenses) derive from petroleum risk insurance and other related insurances premiums, ANP database access (which is a geological and geophysical information), and asset transition expenses, among others. For more information, see note 34 to our 2022 audited financial statements and note 29 to our unaudited interim financial information included elsewhere in this Offering Memorandum.

Our main operational expenses are adjusted according to Brazilian inflation indices. As such, an increase in inflation rates in Brazil will cause an increase in our operational expenses.

Impairment and Reversal of Impairment

Refers to impairments and reversal of impairments. The carrying values of our non-financial assets are reviewed as of each reporting date to calculate whether there is any indication of impairment. If there is such indication, then the recoverable amount of the asset is estimated. We calculate the recoverable value of an asset for impairment based on the discounted cash flow method, in relation to the asset's book value. These income and expenses only have an accounting impact and do not affect our cash.

Financial Income and Financial Expenses

Financial income comprises primarily income generated as a result of the investment in marketable securities and gains on hedge transactions. Financial expenses comprise losses on hedge transactions, interest on debentures and losses on securities. Exchange variation is also recognized within financial result. For more information, see note 35 to our 2022 audited financial statements and note 30 to our unaudited interim financial information included elsewhere in this Offering Memorandum.

Income Tax and Social Contribution

The provision for current and deferred income tax and social contribution is related to the taxable profit in fiscal years, with the rates for our activities being 25% for income tax and 9% for social contribution. Fluctuations in the exchange rate may significantly affect the amount of deferred income tax and social contribution recognized in each period, mainly due to the impact on non-monetary assets. For more information, see note 14 to our 2022 audited financial statements and note 9 to our unaudited interim financial information included elsewhere in this Offering Memorandum.

Results of Operations

Nine-month Period Ended September 30, 2023 Compared to the nine-month Period Ended September 30, 2022

The following table sets forth the components of our consolidated statement of profit or loss for the nine-month period ended September 30, 2023 and 2022:

	For the nine-month period ended September 30,		
	2023	**2022**	**Variation**
	(in millions of R$)		*(%)*
Net revenue	3,770.5	1,277.3	195.2%
Cost of products sold	(2,591.4)	(548.5)	372.5%
Gross profit	**1,179.1**	**728.8**	61.8%
General and administrative expenses (G&A)	(353.8)	(252.9)	39.9%
Other operating (expenses) revenues	(44.0)	(63.0)	(30.2)%
Impairment loss	(26.5)	–	n.m.
Income before financial income (expenses)	**754.8**	**412.9**	82.8%
Financial income	430.2	253.2	69.9%
Financial expenses	(1,142.0)	(632.8)	80.5%
Financial result	**(711.8)**	**(379.6)**	87.5%
Net income before income tax and social contribution	**42.9**	**33.3**	28.8%
Current income tax and social contribution	(161.4)	(52.1)	209.8%
Deferred income tax and social contribution	136.5	185.5	(26.4)%
Total income tax and social contribution	(24.9)	133.4	(118.7)%
Net income for the period	**18.0**	**166.7**	(89.2)%

*n.m. = not meaningful.

Net Revenue

The table below sets forth our net revenue by product for the periods indicated:

	For the nine-month period ended September 30,		
	2023	**2022**	**Variation**
	(in millions of R$)		*(%)*
Net oil revenues	1,585.5	1,099.3	44.2%
Net oil derivatives revenues	1,734.8	-	100.0%
Net gas revenues	398.6	177.9	124.1%
Net services revenues	51.6	-	100.0%
Total net revenue	**3,770.5**	**1,277.3**	195.2%

Net revenue increased by R$2,493.2 million, or 195.2%, from R$1,277.3 million in the nine-month period ended September 30, 2022 to R$3,770.5 million in the nine-month period ended September 30, 2023, mainly due to the factors below.

Net oil revenue increased by R$486.2 million, or 44.2%, from R$1,099.3 million in the nine-month period ended September 30, 2022 to R$1,585.5 million in the nine-month period ended September 30, 2023, mainly due to by the greater operational efficiency recorded in portfolio management, in addition to the acquisition and initiation of operation of two new assets (the Papa-Terra Cluster and the Potiguar Cluster).

After the consummation of the acquisition of the Potiguar Cluster, on June 8, 2023, we began to operate in the midstream and downstream segment and present net oil derivatives revenues.

Net gas revenue increased by R$220.7 million, or 124.1%, from R$177.9 million in the nine-month period ended September 30, 2022 to R$398.6 million in the nine-month period ended September 30, 2023, mainly due to by the greater operational efficiency recorded in portfolio management.

Cost of Products Sold

Cost of products sold increased by R$2,042.9 million, or 372.5%, from R$548.5 million in the nine-month period ended September 30, 2022 to R$2,591.4 million in the nine-month period ended September 30, 2023, mainly to the greater number of assets operated in the period 2023 (the Papa-Terra Cluster and the Potiguar Cluster), as well as the acceleration of recovery activities and maintenance of operational facilities and infrastructure that support the production process.

Gross Profit

Gross profit increased by R$450.3 million, or 61.8%, from R$728.8 million in the nine-month period ended September 30, 2022 to R$1,179.1 million in the nine-month period ended September 30, 2023, mainly due to the factors described above.

General and Administrative Expenses (G&A)

General and administrative expenses increased by R$100.9 million, or 39.9%, from R$252.9 million in the nine-month period ended September 30, 2022 to R$353.8 million in the nine-month period ended September 30, 2023, mainly due to the expansion of our corporate structure to manage our asset portfolio, especially with the takeover of the Potiguar Cluster in June 2023.

Other Operating (Expenses) Revenue

Other operating expenses decreased by R$19.0 million, or 30.2%, from R$63.0 million in the nine-month period ended September 30, 2022 to R$44.0 million in the nine-month period ended September 30, 2023, mainly due to the transition expenses in the nine-month period ended September 30, 2022 incurred with mobilization of teams, systems and infrastructure to carry out the transition process before the takeover of assets, directly related to the acquisition of the Papa-Terra Cluster, completed in December 2022.

Impairment Loss

Impairment loss varied by R$26.5 million mainly due to the provisions for impairment losses recorded in 2023 related to the *Camarão* field.

Income before Financial Income (Expenses)

Income before financial income (expenses) increased by R$341.9 million, or 82.8%, from R$412.9 million in the nine-month period ended September 30, 2022 to R$754.8 million in the nine-month period ended September 30, 2023, mainly due to the factors described above.

Financial Income

Financial income increased by R$177.0 million, or 69.9%, from R$253.2 million in the nine-month period ended September 30, 2022 to R$430.2 million in the nine-month period ended September 30, 2023, mainly due to the increase in income from securities and the effects of net exchange variation on financial instruments contracted to finance the acquisition of the Potiguar Cluster.

Financial Expenses

Financial expenses increased by R$509.2 million, or 80.5%, from R$632.8 million in the nine-month period ended September 30, 2022 to R$1,142.0 million in the nine-month period ended September 30, 2023, mainly due to higher interest expenses on debt service (related to loans, financings and debentures) and effects of exchange rate variation on accounts payable for assets acquisition indexed to the US dollar.

Financial Result

Financial result increased by R$332.2 million, or 87.5%, from an expense of R$379.6 million in the nine-month period ended September 30, 2022 to an expense of R$711.8 million in the nine-month period ended September 30, 2023, mainly due to the factors mentioned above.

Income Before Income Tax and Social Contribution

Income before income tax and social contribution increased by R$9.6 million, or 28.8%, from R$33.3 million in the nine-month period ended September 30, 2022 to R$42.9 million in the nine-month period ended September 30, 2023, mainly due to the factors described above.

Total Income Tax and Social Contribution

Total income tax and social contribution varied by R$158.3 million, or 118.7%, from a revenue of R$133.4 million in the nine-month period ended September 30, 2022 to an expense of R$24.9 million in the same period of 2023. This variation was primarily due to the offsetting of tax loss in 3R Offshore, which turned profitable in 2023 and had a compensatory balance from previous years, contrasting with the situation in 2022.

Net Income for the Period

As a result of the foregoing, net income decreased by R$148.7 million, or 89.2%, from R$166.7 million in the nine-month period ended September 30, 2022 to R$18.0 million in the nine-month period ended September 30, 2023.

Year Ended December 31, 2022 compared to Year Ended December 31, 2021

The following table sets forth the components of our consolidated statement of profit or loss for the years ended December 31, 2022 and 2021:

	For the year ended December 31,		
	2022	**2021**	**Variation**
	(in millions of R$)		*(%)*
Net revenue	1,722.4	727.8	136.7%
Cost of products sold	(835.5)	(319.5)	161.5%
Gross profit	**886.9**	**408.3**	117.2%
General and administrative expense (G&A)	(339.0)	(159.6)	112.4%
Other operating (expenses) revenue	(153.5)	5.9	(2,701.7)%
Impairment (loss)/reversal	(123.3)	160.4	(176.9)%
	(615.8)	**6.8**	(9,155.9)%
Income (loss) before financial income (expenses)	**271.1**	**415.0**	(34.7)%
Financial income	319.8	197.1	62.3%
Financial expenses	(805.0)	(656.7)	22.6%
Financial result	**(485.2)**	**(459.6)**	5.6%
Loss before income tax and social contribution	**(214.1)**	**(44.6)**	380.0%
Current income tax and social contribution	(71.7)	(3.9)	1,738.5%
Deferred income tax and social contribution	413.5	64.4	542.1%
Total income tax and social contribution	341.8	60.5	465.0%
Net income for the year	**127.7**	**16.0**	698.1%

Net Revenue

The table below sets forth our net revenue by product for the years indicated:

	For the year ended December 31,		
	2022	**2021**	**Variation**
	(in millions of R$)		*(%)*
Net oil revenues	1,405.2	695.2	102.1%
Net gas revenues	315.2	32.6	866.9%
Net services revenues	2.0	-	100.0%
Total net revenue	**1,722.4**	**727.8**	136.7%

Net revenue increased by R$994.6 million, or 136.7%, from R$727.8 million in 2021 to R$1,722.4 million in 2022, partially due to: (i) new assets acquired that began operations in 2022; (ii) increased production, as a result of our greater operating efficiency; and (iii) the effect of the appreciation of the average Brent Oil Price in 2022, partially offset by a depreciation in the average U.S. dollar exchange rate in 2022.

Cost of Products Sold

Cost of products sold increased by R$516.0 million, or 161.5%, from R$319.5 million in 2021 to R$835.5 million in 2022, mainly due to: (i) the acquisition of new assets that began operations and, consequently, an increase in (a) the overall volume of products sold, and (b) the cost of royalties, depreciation and amortization, personnel, and gas processing and transportation; and (ii) implementation of maintenance inherited from the former operator on newly incorporated assets, thus generating higher operating costs.

Gross Profit

Gross profit increased by R$478.6 million, or 117.2%, from R$408.3 million in 2021 to R$886.9 million in 2022, mainly due to the factors described above.

General and Administrative Expenses (G&A)

General and administrative expenses increased by R$179.4 million, or 112.4%, from R$159.6 million in 2021 to R$339.0 million in 2022, mainly due to: (i) a more robust operating structure, adequate for the management of our newly acquired portfolio, including the assets whose operation are still under operating transition; (ii) higher expenses related to outsourced services; and (iii) higher expenses related to software and hardware maintenance and support.

Other Operating (Expenses) Revenue

Other operating (expenses) revenue varied by R$159.4 million, from a revenue of R$5.9 million in 2021 to an expense of R$153.5 million in 2022, mainly due to: (i) R$98.2 million in mobilization expenses to carry out the transition of the Peroá, Papa-Terra, Recôncavo, Fazenda Belém and Potiguar Clusters, acquired from Petrobras (ii) R$58.7 million in earn-out expenses foreseen in the acquisition of Ouro Preto Energia Group, related to the appropriation of the accumulated tax loss of this group's companies; and (iii) R$18.4 million in expenses with acquisitions, data and partnerships; partially offset by the reversal of the provision for abandonment of the Pescada Cluster, in R$27.9 million.

Impairment (Loss)/Reversal

Impairment *(loss)/*reversal varied by R$283.7 million, from an income of R$160.4 million in 2021 to loss of R$123.3 million in 2022, mainly due to the provisions for impairment losses recorded in 2022 related to the *Camarão* field and the reversal of the provisions for impairment losses recorded in 2021 for the Pescada Cluster and the *Camarão* field.

Income (Loss) before Financial Income (Expenses)

Income before financial income (expenses) decreased by R$143.9 million, or 34.7%, from R$415.0 million in 2021 to R$271.1 million in 2022, mainly due to the factors described above.

Financial Income

Financial income increased by R$122.7 million, or 62.3%, from R$197.1 million in 2021 to R$319.8 million in 2022. This increase mainly reflects the gains with hedging transactions in 2022, of R$106.8 million, and the net exchange variation of investments in an exchange investment fund, of R$87.8 million, partially offset by a lower income from securities, compared to 2021, of R$77.0 million.

Financial Expenses

Financial expenses increased by R$148.3 million, or 22.6%, from R$656.7 million in 2021 to R$805.0 million in 2022. This increase was primarily due to impact of hedge transactions, in the amount of R$135.4 million, and losses in investments in securities, which amounted to R$98 million. Additionally, the exchange rate variation between U.S. dollars and *reais* amounted to a loss of R$61.0 million, partially offset by the reduction in interest on debentures, also caused by such exchange variation, in the amount of R$154.7 million.

Financial Result

Financial result increased by R$25.6 million, or 5.6%, from an expense of R$459.6 million in 2021 to an expense of R$485.2 million in 2022, mainly due to the factors described above.

Loss Before Income Tax and Social Contribution

Loss before income tax and social contribution increased by R$169.5 million, or 380.0%, from R$44.6 million in 2021 to R$214.1 million in 2022, mainly due to the factors described above.

Income Tax and Social Contribution

Income tax and social contribution increased by R$281.3 million, or 465.0%, from R$60.5 million in 2021 to R$341.8 million in 2022. This variation was mainly due to the establishment of deferred income tax and social contribution deriving from the expected use of tax losses and social contribution basis of our subsidiaries 3R Candeias (now 3R Bahia) and 3R Offshore, as we believe that the offsetting of these tax credits has a probable chance to occur.

Net Income for the Year

As a result of the foregoing, net income increased by R$111.7 million, or 698.1%, from R$16.0 million in 2021 to R$127.7 million in 2022. Net income for the year accounted for 7.4% and 2.2% of our net revenue in 2022 and 2021, respectively, due to the factors described above.

Year Ended December 31, 2021 compared to Year Ended December 31, 2020

The following table sets forth the components of our consolidated statement of profit or loss for the years ended December 31, 2021 and 2020:

	For the year ended December 31,		
	2021	**2020**	**Variation**
	(in millions of R$)		*(%)*
Net revenue	727.8	204.3	256.3%
Cost of products sold	(319.5)	(106.2)	200.8%
Gross profit	**408.3**	**98.0**	**316.5%**
General and administrative expense (G&A)	(159.6)	(59.5)	168.2%
Other operating (expenses) revenue	5.9	(44.1)	(113.4)%
Impairment (loss)/reversal	160.4	(166.8)	(196.2)%
	6.8	**(270.4)**	**(102.5)%**
Income (loss) before financial income (expenses)	**415.0**	**(172.4)**	**(340.7)%**
Financial income	197.1	75.1	162.5%
Financial expenses	(656.7)	(204.3)	221.4%
Financial result	**(459.6)**	**(129.3)**	**255.5%**
Loss before income tax and social contribution	**(44.6)**	**(301.6)**	**(85.2)%**
Current income tax and social contribution	(3.9)	(6.2)	(37.1)%
Deferred income tax and social contribution	64.4	31.3	105.8%
Total income tax and social contribution	60.5	25.1	141.0%
Net income (loss) for the year	**16.0**	**(276.5)**	**(105.8%)**

*n.m. = not meaningful.

Net Revenue

The table below sets forth our net revenue by product for the years indicated:

	For the year ended December 31,		
	2021	**2020**	**Variation**
	(in millions of R$)		*(%)*
Net oil revenues	695.2	171.9	304.4%
Net gas revenues	32.6	32.4	0.6%
Total net revenue	**727.8**	**204.3**	**256.2%**

Net revenue increased by R$523.5 million, or 256.2%, from R$204.3 million in 2020 to R$727.8 million in 2021, partially due to the increase in revenue from the sale of oil and gas from the Macau Cluster and the commencement of operations at the Rio Ventura Cluster, on July 15, 2021, and of the Areia Branca Cluster, on November 1, 2021.

Cost of Products Sold

Cost of products sold increased by R$213.3 million, or 200.8%, from R$106.2 million in 2020 to R$319.5 million in 2021, mainly due to (i) the beginning of our operations at the Rio Ventura and Areia Branca Clusters during 2021, (ii) larger payments of royalties and surface rights referring to improvements made at the wells, which provide an increase in production and their respective costs, (iii) the implementation of preliminary activities in connection with our mature fields, incurred to revitalize the wells according to the progress of their exploration and production phases, and (iv) the significant increase in production at the Macau Cluster in 2021.

Gross Profit

Gross profit increased by R$310.3 million, or 316.6%, from R$98.0 million in 2020 to R$408.3 million in 2021, mainly due to the factors described above.

General and Administrative Expenses (G&A)

General and administrative expenses increased by R$100.1 million, or 168.2%, from R$59.5 million in 2020 to R$159.6 million in 2021, mainly due to the expansion of our operating structure, sized to manage and operate the acquired assets, including those that are being acquired from Petrobras and under the transition period. General and administrative expenses accounted for 21.9% and 29.1% of our net revenue in 2021 and 2020, respectively.

Other Operating (Expenses) Revenue

Other operating (expenses) revenue varied by R$50.0 million, or 113.4%, from expenses of R$44.1 million in 2020 to revenue of R$5.9 million in 2021, mainly due to expenses incurred with the sale of the *Camarupium* field to Petrobras, and expenses related to payments to our former controlling shareholder FIP Angel, related to the sale of shares of Ouro Preto, and adjustments resulting from the exclusion of ICMS from the PIS/COFINS taxable base. Additionally, there was a R$15.0 million impact related to an extrajudicial settlement entered into by 3R Offshore on August 25, 2020, referring to judicial holds carried out in civil proceedings in which 3R Offshore was a party. The positive variations between the periods were partially offset by the negative variation of R$16.2 million in the adjustment in the provisions for abandonment of 3R Pescada.

Impairment (Loss)/Reversal

Impairment *(loss)/*reversal varied by R$327.2 million, or 196.2%, from a loss of R$166.8 million in 2020 to income of R$160.4 million in 2021, mainly due to the reversal of R$160.4 million in provisions for impairment losses for the Pescada Cluster and the *Camarão* field.

Income (Loss) before Financial Income (Expenses)

Income (loss) before financial income (expenses) varied by R$587.4 million, or 340.7%, from a loss of R$172.4 million in 2020 to income of R$415.0 million in 2021, mainly due to the factors described above.

Financial Income

Financial income increased by R$122.0 million, or 162.5%, from R$75.1 million in 2020 to R$197.1 million in 2021, mainly due to yields from investments in securities in the year ended December 2021.

Financial Expenses

Financial expenses increased by R$452.4 million, or 221,4%, from R$204.3 million in 2020 to R$656.7 million in 2021, mainly due to (i) an increase in expense of R$160.5 million for the contracting of a Brent Oil Price hedge, with the purpose of avoiding losses in the event of a downward curve in the price of oil and, consequently, placing a ceiling in the Brent Oil Price in the event of an upward curve in the Brent Oil Price, (ii) the R$137.8 million an increase in expenses related to the debenture issued by our subsidiary 3R Macau (merged into 3R RNCE) in 2020, prepaid on December 30, 2021, and (iii) an expense of R$139.2 million in marking to market of multimarket

investment funds indexed to foreign currency in 2021. Financial expenses accounted for 90.2% and 100.0% of our net revenue in 2021 and 2020, respectively.

Financial Result

Financial result varied by R$330.3 million, or 255.5%, from an expense of R$129.3 million in 2020 to an expense of R$459.6 million in 2021, mainly due to the factors described above.

Loss Before Income Tax and Social Contribution

Loss before income tax and social contribution decreased by R$257.0 million, or 85.2%, from R$301.6 million in 2020 to R$44.6 million in 2021, mainly due to the factors described above.

Income Tax and Social Contribution

Income tax and social contribution increased by R$35.4 million, or 141.0%, from R$25.1 million in 2020 to R$60.5 million in 2021. The variation was mainly due to a R$87.4 million decrease in income tax and social contribution calculated at the effective rates, and an increase of R$122.8 million in the effects of additions and exclusions in the tax calculation, mainly composed of the following factors: (i) increase in deferred tax credit recognized, referring mainly to the recognition of accumulated tax losses from previous years, in the amount of R$80.0 million; (ii) increase in permanent additions in the amount of R$28.0 million; and (iii) increase of R$24.9 million referring to temporary differences for which deferred tax assets were not recognized.

Net Income (Loss) for the Year

As a result of the foregoing, net income (loss) varied by R$292.5 million, or 105.8%, from net loss of R$276.5 million in 2020 to net income of R$16.0 million in 2021. Net income (loss) for the year accounted for 2.2% and 135.4% of our net revenue in 2021 and 2020, respectively, mainly due to the factors described above.

Liquidity and Capital Resources

Capital Structure

We believe that our capital structure as of September 30, 2023 is adequate to fulfill our obligations and to conduct our activities, with an adequate balance between our equity capital (represented by "Equity" in the table below) and third-party capital (represented by "Total current liabilities *plus* total noncurrent liabilities" in the table below).

As of September 30, 2023, our capital structure comprised 27.3% own capital and 72.7% third-party capital compared to 54.5% own capital and 45.5% third-party capital as of December 31, 2022, 76.6% own capital and 23.4% third-party capital as of December 31, 2021 and 51.1% own capital and 48.9% third-party capital as of December 31, 2020, as shown in the following table.

	As of September 30,		As of December 31,			
	2023	**2023**	**2022**	**2022**	**2021**	**2020**
	(in millions of US$, except percentages)[1]	*(in millions of R$, except percentages)*	*(in millions of US$, except percentages)*[1]	*(in millions of R$, except percentages)*		
Total current liabilities *plus* total noncurrent liabilities (a)	2,799.7	14,020.0	724.9	3,629.9	1,278.1	1,032.0
Equity (b)	1,049.6	5,256.1	866.9	4,341.3	4,175.4	1,077.1
Total capital	**3,849.4**	**19,276.1**	**1,591.8**	**7,971.1**	**5,453.5**	**2,109.1**
Third-party capital % (a/c)	72.7%	72.7%	45.5%	45.5%	23.4%	48.9%
Own capital % (b/c)	27.3%	27.3%	54.5%	54.5%	76.6%	51.1%

(1) Solely for the convenience of the reader, the Brazilian *real* amounts for the nine-month period ended September 30, 2023 and for the year ended December 31, 2022 have been translated into dollars at the September 30, 2023 selling rate of R$5.0076 per US$1.00, as reported by the Central Bank.

On September 30, 2023, the relevant increase in the representation of third-party capital is due to loans and financings, and the issuance of debentures to finance the acquisition of Potiguar Cluster. Regard to the increase in equity, this is directly related to the capital increase authorized on April 12, 2023, and carried out on June 9, 2023, in the amount of R$900.0 million.

On December 31, 2022, the relevant increase in the representation of third-party capital is due to debentures payable in R$895.1 million, loans and financing in R$108.2 million, provision for abandonment (ARO) in R$699.0 million and amounts payable for acquisitions in R$409.2 million. This variation is related to the capital we needed for the acquisition of new assets.

In 2021, our own capital increased as a percentage of total capital, compared to 2020, due to (i) the capital contribution, in the amount of R$822.8 million, as a result of the follow-on offering for our common shares that was completed in March 2021; (ii) the capital increase, in the amount of R$190.4 million, for the payment of part of the purchase price for the acquisition of the Areia Branca Cluster in shares issued by us; (iii) the capital contribution, in the amount of R$2,168.1 million, as a result of the follow-on offering for our common shares that was completed in November 2021.

Sources of Funds

Our main sources of funds in the nine-month period ended September 30, 2023 and in the years ended December 31, 2022, 2021 and 2020 were cash from our operations, funds from our shareholders and third-party funds.

In March 2023, 3R Potiguar issued non-convertible debentures, in an aggregate amount of R$2,646.0 million (US$500 million), as part of our efforts to finance the acquisition of the Potiguar Cluster. For additional information, see note 16 to our unaudited interim financial information.

In August 2022, the Issuer entered into the Term Loan Facility, in the aggregate amount of up to US$500.0 million, as part of our efforts to finance the acquisition of the Potiguar Cluster. For additional information, see note 15 to our unaudited interim financial information.

Also, in August 2022, we issued non-convertible debentures in an aggregate amount of R$900.0 million. The proceeds from the issuance of the debentures to fund capital expenditures of our subsidiaries. For additional information, see note 21 to our 2022 audited financial statements.

In September 2021, 3R Areia Branca (currently 3R RNCE) issued debentures in the aggregate amount of R$47.1 million. For additional information, see note 18 to our 2021 audited financial statements.

For more information our third-party capital, see our unaudited interim financial information, and our 2022 and 2021 audited financial statements.

Additionally, in March and November 2021, we completed two follow-on offerings raising approximately R$3.0 billion, with the purpose of supporting our investment plan, including plans of development of assets, acquisition of new assets, and capitalization and expansion of our offshore activities.

Finally, on April 12, 2023, our board of directors approved a capital increase, in the amount of R$900.0 million. The capital increase was completed on June 9, 2023.

We believe that our sources of funds are suitable to our debt profile and sufficient to meet our working capital and investment needs, in accordance with our financial discipline.

In addition to the generation of cash and the funds obtained from the proceeds of the Notes, we are evaluating our sources of funds to support the development of our business plan and maintain a healthy and stable capital structure. If we require additional capital to fund any short-term liquidity needs, we may obtain loans and financing in the capital markets or with financial institutions.

Cash Flows

The following table sets forth our consolidated cash flows for the periods presented:

	For the nine-month period ended September 30,		For the year ended December 31,		
	2023	**2022**	**2022**	**2021**	**2020**
			(in millions of R$)		
Net cash provided by operating activities	397.2	142.7	90.3	62.8	55.5
Net cash provided by (used in) investing activities	(8,477.4)	64.3	(357.0)	(2,329.4)	(1,375.7)
Net cash provided by financing activities	8,066.8	973.8	957.3	2,092.7	1,552.4
Increase (decrease) in cash and cash equivalents	**(13.5)**	**1,180.9**	**690.6**	**(173.9)**	**232.2**

Operating Activities

In the nine-month period ended September 30, 2023, net cash provided by operating activities increased by R$254.5 million, or 178.3%, from R$142.7 million in the same period in 2022 to R$397.2 million. This increase was primarily due to a rise in our average production volume in 2023 compared to 2022. The growth was largely driven by the consolidation of our portfolio in 2023, with the acquisition and initiation of operation of new assets (the Recôncavo, Fazenda Belém and Peroá Clusters) and the integration of the Papa-Terra and Potiguar Clusters, in December 2022 and June 2023, respectively.

In 2022, net cash provided by operating activities increased by R$27.5 million, or 43.8%, from R$62.8 million in 2021 to R$90.3 million in 2022. This difference is attributable to new assets we acquired in 2022. In 2021, our results of operations included the full operation of the Macau Cluster, 35% of the Pescada Cluster, and the Rio Ventura and Areia Branca Clusters, acquired as of July and November 2021, respectively, while in 2022, our results of operations included, in addition to those assets, the Recôncavo Cluster, acquired in May 2022, the Peroá and Fazenda Belém Clusters, acquired in August 2022, and the Papa-Terra Cluster, acquired in December 2022.

In 2021, net cash provided by operating activities increased by R$7.3 million, or 13.2%, from R$55.5 million in 2020 to R$62.8 million in 2021, mainly due to the commencement of operations of the Rio Ventura and Areia Branca Clusters in July and November 2021, respectively.

Investing Activities

In the nine-month period ended September 30, 2023, net cash provided by (used in) investing activities varied by R$8,541.7 million, from net cash provided by investing activities of R$64.3 million in the same period of 2022 to net cash used in investing activities of R$8,477.4 million in 2023. This variation was mainly due to the consummation of the Potiguar Cluster acquisition in June 2023, which involved a payment of R$5,407.9 million, and by investments of R$809.0 million in the revitalization and redevelopment of our portfolio, corresponding to R$755.7 million for acquisition of fixed assets and R$53.3 million for acquisition of intangible assets.

In 2022, net cash used in investing activities decreased by R$1,972.4 million, or 84.7%, from R$2,329.4 million in 2021 to R$357.0 million in 2022, mainly due to investments in securities made with proceeds from the capital contribution that we used in 2022 for the acquisition of assets, including the Recôncavo Cluster in May 2022, the Peroá and Fazenda Belém Clusters in August 2022, and the Papa-Terra Cluster in December 2022, used as advances for assignment of assets, acquisition of property and intangible assets and acquisitions of oil and gas assets.

In 2021, net cash used in investing activities increased by R$953.7 million, or 69.3%, from R$1,375.7 million in 2020 to R$2,329.4 million in 2021, mainly due to an increase in cash consumption related to investments in securities made in 2023.

Financing Activities

In the nine-month period ended September 30, 2023, net cash provided by financing activities increased by R$7,093.0 million, or 728.4%, from R$973.8 million in the same period of 2022 to R$8,066.8 million in 2023. This increase was mainly due to funds raised through the issuance of debentures and additions on loans and financings, which were intended to finance the acquisition of the Potiguar Cluster, completed in June 2023.

In 2022, net cash provided by financing activities decreased by R$1,135.4 million, or 54.3%, from R$2,092.7 million in 2021 to R$957.3 million in 2022, mainly due to the amount received from capital injections in connection with our follow-on offerings in 2021 in the amount of R$2,990.9 million, partially offset by early settlement of 3R Macau (merged into 3R RNCE)'s debentures, in the amount of R$733.7 million in 2021, and the issuance of loans and financings and debentures by us in 2022, in the amount of R$1,000.0 million.

In 2021, net cash provided by financing activities increased by R$540.3 million, or 34.8%, from R$1,552.4 million in 2020 to R$2,092.7 million in 2021, mainly due to the capital increases resulting from our follow-on offerings, partially offset by the increase in payment of interest accrued by 3R Macau (merged into 3R RNCE)'s debentures and the prepayment of those debentures in December 2021.

Indebtedness

We believe we have sufficient financial capacity to meet our financial obligations. As of September 30, 2023, our general liquidity ratio, calculated as total assets *divided by* total liabilities, and current liquidity ratio, calculated as current assets *divided by* current liabilities, were 1.4x and 1.0x, respectively. As of September 30, 2023: (i) our current and noncurrent debentures totaled R$5,869.3 million; (ii) our current and noncurrent debentures with related parties totaled R$38.3 million; and (iii) our current and noncurrent loans and financings totaled R$148.5 million, excluding the debt under the Term Loan Facility, in the amount of R$2,500.3 million (equivalent to US$500 million), of which R$83.7 million corresponds to the current amount and R$2,416.7 million corresponds to the noncurrent amount.

We proactively assess sources of funds and financing with a number of entities in the market and maintain a relationship with financial institutions, which allows us to prospect and gives us access to additional credit facilities, if necessary.

Material Loans and Financings

We present below a brief description of our main financing agreements with outstanding balances as of September 30, 2023.

3R Macau BNB Financing

On May 31, 2022, 3R Macau entered into a financing agreement with Banco do Nordeste do Brasil S.A., covering an aggregate principal amount of up to R$105.5 million, maturing on June 15, 2030, and indexed to the Non-Rural Interest Rate of the Regional Development Policy Bureau ("3R Macau BNB Financing"). Payments are scheduled quarterly from May 31, 2022 to June 15, 2026, and then monthly thereafter until the maturity date. Funds thereof will be used for the construction and development of the Macau Cluster, including acquisition of equipment. As of September 30, 2023, 3R had drawn R$36.9 million of the total principal amount.

Restrictive Covenants under the 3R Macau BNB Financing

The 3R Macau BNB Financing contains customary affirmative and negative covenants, and provides for certain acceleration clauses, such as in the event of (i) declaration of insolvency or bankruptcy or filing of a judicial or extrajudicial reorganization by 3R Macau; (ii) contracting with other financial institutions financing transactions that finance the same object as that of the 3R Macau BNB Financing, and (iii) default of any pecuniary or non-pecuniary obligations undertaken under the 3R BNB Financing.

Term Loan Facility

On August 2, 2022, the Issuer, as borrower, entered into the Term Loan Facility, with certain financial institutions, as lenders, certain entities of the 3R Group, as guarantors, UMB Bank, N.A., as administrative agent, and TMF Group New York LLC, as collateral agent, for a total aggregate amount of US$500 million (equivalent to R$2,462 million). The Term Loan Facility will mature in February 2027. The Term Loan Facility is secured by certain (i) receivables, (ii) shares, and (iii) concessions emerging rights of certain subsidiaries of the 3R Group. The Issuer intends to use the net proceeds from this offering to permanently and entirely repay the Term Loan Facility. In connection with this repayment, we are seeking a waiver for the twelve-month prepayment lock-up as well as certain other waivers to allow for the repayment of this facility shortly after the closing of this offering.

3R CEF Bank Credit Note

On April 10, 2023, 3R issued, in favor of Caixa Econômica Federal, the Bank Credit Note n. 19.4263.767.18-82, in the aggregate principal amount of R$50 million, maturing on April 10, 2025, indexed to the CDI rate, payable quarterly in the first 6 months and bi-annually in the remaining 18 months, at the fixed rate of 2.67% per year ("3R CEF Bank Credit Note"). Funds thereof will be used as working capital.

Restrictive Covenants under the 3R CEF Bank Credit Note

The 3R CEF Bank Credit Note contains customary affirmative and negative covenants, and provides for certain acceleration clauses, such as in the event of (i) declaration of insolvency or bankruptcy or filing of a judicial or extrajudicial reorganization by 3R; (ii) default in the context of other transactions between 3R and CEF, and (iii) default of any pecuniary or non-pecuniary obligations undertaken under the 3R CEF Bank Credit Note.

3R CCB Bank Credit Note

On April 20, 2023, 3R issued, in favor of China Construction Bank (Brasil) Banco Múltiplo S/A, the Bank Credit Note n. 1305948, in the aggregate principal amount of R$60 million, maturing on October 18, 2024, indexed to the CDI rate, and accruing interest payable bi-annually, at the fixed rate of 1.80% per year ("CCB Bank Credit Note"). Funds thereof will be used as working capital in the context of the business activities of the issuer.

Restrictive Covenants under the 3R CCB Bank Credit Note

The CCB Bank Credit Note contains customary affirmative and negative covenants, and provides for certain acceleration clauses, such as in the event of (i) declaration of insolvency or bankruptcy or filing of a judicial or extrajudicial reorganization by 3R; (ii) acceleration of other debts and/or financial obligations or obligations of 3R and/or any of 3R's controlled companies, within certain financial parameters, (iii) default of any pecuniary obligations undertaken under the CCB Bank Credit Note; and (iv) corporate reorganizations involving 3R, with certain exceptions.

3R Offshore CEF Bank Credit Note

On July 26, 2023, 3R Offshore issued a working capital bank credit note in favor of Caixa Econômica Federal, in the total amount of R$100 million, guaranteed by 3R (the "3R Offshore CEF Bank Credit Note"). The 3R Offshore CEF Bank Credit Note matures on July 27, 2026, indexed to the CDI rate and accruing interest payable on a quarterly basis in the first 18 months of the facility and semi-annually in the remaining 18 months of the facility, at

the fixed rate of 2.42% per year. The funds from the issuance of the 3R Offshore CEF Bank Credit Note will be used to support working capital needs.

Restrictive Covenants under the 3R Offshore CEF Bank Credit Note

The 3R Offshore CEF Bank Credit Note contains customary affirmative and negative covenants, and provides for certain acceleration clauses, such as in the event of (i) declaration of insolvency or bankruptcy or filing of a judicial or extrajudicial reorganization by 3R Offshore; (ii) acceleration of other debts and/or financial obligations or obligations of 3R or other parent companies, within certain financial parameters, (iii) default of any pecuniary or non-pecuniary obligations undertaken under the 3R Offshore CEF Bank Credit Note; and (iv) default in the context of other transactions between 3R Offshore and CEF.

Fifth Issuance of 3R Potiguar Debentures

On May 26, 2023, 3R Potiguar completed its fifth issuance of secured non-convertible debentures, in a single series, with additional collateral, in the aggregate principal amount of R$2,462 million, which was indexed to the PTAX Rate, maturing on May 26, 2028, accruing interest payable quarterly, at a rate ranging from 9.80% to 10.51% per year (the "Fifth 3R Potiguar Debentures"). The Fifth 3R Potiguar Debentures were publicly distributed only to professional investors in accordance with CVM Resolution No. 160 dated as of July 13, 2022, and Trustee Distribuidora de Títulos e Valores Mobiliários Ltda. acts as fiduciary agent and representative of the debenture holders. The proceeds from the Fifth 3R Potiguar Debentures were to be used for general corporate purposes.

Restrictive Covenants under the Fifth 3R Potiguar Debentures

Under the Fifth 3R Potiguar Debentures, 3R is required to maintain (i) a net debt/adjusted EBITDA ratio (as defined in the indenture of the debentures) of 3.5:1.0 between the date of issuance (as defined in the debenture's indenture) and December 31, 2023, of 3.0:1.0 between January 1, 2024 and December 31, 2024, and of 2.5:1.0 as of January 1, 2025; (ii) an asset coverage ratio equal to or greater than 2.00:1.00; (iii) a debt service coverage ratio of (a) 1.15:1.00 between the end of the fourth fiscal quarter after the date the debentures are paid in (as defined in the indenture of the debentures) and the end of the fifth fiscal quarter after the debentures payment date; and (b) 1.50:1.00 thereafter. The Fifth 3R Potiguar Debentures also contains customary affirmative and negative covenants, such as limitations on indebtedness, liens, asse sales, transactions with affiliates, restricted payments, sale and leaseback transactions, hedging agreements, consolidations and mergers, among others.

As of the date of this Offering Memorandum, we were compliant with all the covenants under our financial agreements.

Fourth Issuance of 3R Potiguar Debentures

On March 27, 2023, 3R Potiguar completed its fourth issuance of secured convertible debentures, in a single series, with additional personal guarantee, for private placement, in the aggregate principal amount of R$2,646.1 million, which was indexed to the PTAX Rate, maturing on October 20, 2027, accruing interest payable quarterly, at the fixed rate of 11.1075% per year (the "Fourth 3R Potiguar Debentures"). The Fourth 3R Potiguar Debentures were privately placed and Trustee Distribuidora de Títulos e Valores Mobiliários Ltda. acts as fiduciary agent and representative of the debenture holders. The proceeds from the Fourth 3R Potiguar Debentures were to be used (i) for composition of the amount necessary to satisfy the payment conditions of the acquisition, direct or indirect, by 3R Potiguar of assets of the Potiguar Cluster from Petróleo Brasileiro S.A. – Petrobras, under the terms of the Purchase and Sale Agreement, dated as of January 31, 2022, concluded between 3R Potiguar and Petróleo Brasileiro S.A.; (ii) for payment of costs, expenses and commissions actually due related to the issuance of the Fourth 3R Potiguar Debentures; and (iii) for investments related to capital expenditure of the concessions held by the parties to the Fourth 3R Potiguar Debentures (as defined in the indenture of such debentures), in case there are any remaining proceeds, after the payments set out in items (i) and (ii) above.

Restrictive Covenants under the Fourth 3R Potiguar Debentures

Under the Fourth 3R Potiguar Debentures, 3R is required to maintain (i) a net debt/adjusted EBITDA ratio (as defined in the indenture of the debentures) of 3.5:1.0 between the date of issuance (as defined in the debenture's indenture) and December 31, 2023, of 3.0:1.0 between January 1, 2024 and December 31, 2024, and of 2.5:1.0 after January 1, 2025; (ii) a PDP asset coverage ratio equal to or greater than 2.00:1.00; and (iii) a debt service coverage ratio of (a) 1.15:1.00 at the end of the fourth fiscal quarter after the debentures payment date (as defined in the indenture of the debentures); and (b) 1.50:1.00 thereafter. The Fourth 3R Potiguar Debentures also contains customary affirmative and negative covenants, such as limitations on indebtedness, liens, asse sales, transactions with affiliates, restricted payments, sale and leaseback transactions, hedging agreements, consolidations and mergers, among others.

As of the date of this Offering Memorandum, we were compliant with all of the covenants under our financial agreements.

Third Issuance of 3R Debentures

On October 11, 2023, 3R completed its third issuance of unsecured non-convertible debentures, in a single series, for public distribution with restricted placement efforts, in the aggregate principal amount of R$1.0 billion, maturing on October 15, 2033, indexed to the IPCA rate and accruing interest payable semiannually, at the IPCA rate *plus* 8.4166% per year (the "Third 3R Debentures"). The Third 3R Debentures were publicly distributed only to professional investors in accordance with CVM Resolution No. 160 dated as of July 13, 2022 and Vórtx Distribuidora de Títulos e Valores Mobiliários Ltda. acts as fiduciary agent and representative of the debenture holders. The proceeds from the Third 3R Debentures were to be used for (i) the reimbursement of expenses or new expenses related to the implementation of the project of revitalization of mature oil and natural gas fields in the Potiguar Sedimentary Basin and in the Recôncavo Sedimentary Basin, occurring in the 24 months immediately prior to the closing date of the offering; and/or (ii) future payment of expenses and/or expenses to be incurred as of the issuance date of the Third 3R Debentures related to the referred project.

Restrictive Covenants under the Third 3R Debentures

Under the Third 3R Debentures, 3R is required to maintain a net debt/adjusted EBITDA ratio (as defined in the indenture of the debentures) of 3.5:1.0 between the date of the first date on which the Third 3R Debentures are paid-in (as defined in the indenture of the debentures) and June 30, 2024 (inclusive), and of 3.0:1.0 after July 1, 2024.

The indenture governing the Third 3R Debentures contains customary affirmative and negative covenants, and provides for certain acceleration clauses, such as in the event of (i) declaration of insolvency or bankruptcy or filing of a judicial or extrajudicial reorganization by 3R and/or any of 3R's controlled companies; (ii) acceleration of other debts and/or financial obligations or obligations in the local or international capital markets of 3R and/or 3R's controlled companies, within certain financial parameters, (iii) default of any pecuniary or non-pecuniary obligations undertaken under the indenture; (iv) corporate reorganizations involving 3R or any of its controlled companies, with certain exceptions; (v) early termination or loss of the relevant concessions (as defined under the indenture) by 3R or its controlled companies; (vi) distribution of dividends and/or interest on equity and/or any type of distribution to the shareholders in an amount which exceeds the mandatory minimum dividend established by law of 25% of the net profit, with certain exceptions; and (vii) change of control of 3R within the parameters established in the indenture.

Second Issuance of 3R Debentures

On August 12, 2022, 3R completed its second issuance of unsecured non-convertible debentures, in a single series, for public distribution with restricted placement efforts, in the aggregate principal amount of R$900 million, maturing on August 15, 2025, indexed to the CDI rate and accruing interest payable quarterly, at the fixed rate of 3.00% per year (the "Second 3R Debentures"). The Second 3R Debentures were publicly distributed with restricted placement efforts in accordance with CVM Rule No. 476 dated as of January 16, 2009 and Vórtx Distribuidora de Títulos e Valores Mobiliários Ltda. acts as fiduciary agent and representative of the debenture holders. The proceeds from the Second 3R Debentures were be used for the acquisition of assets by 3R and/or its subsidiaries, as well as for operating activities, including cash reinforcement of 3R and/or its subsidiaries' capital expenditures.

Restrictive Covenants under the Second 3R Debentures

Under the Second 3R Debentures, 3R is required to maintain a (i) net debt/adjusted EBITDA ratio (as defined in the indenture of the debentures) of 3.5:1.0 between the date of the first date on which the Second 3R Debentures are paid-in (as defined in the indenture of the debentures) and December 31, 2023, of 3.0:1.0 between January 1, 2024 and December 31, 2024, and of 2.5:1.0 as of January 1, 2025; and (ii) asset coverage ratio (as defined in the indenture of such debentures) equal to or greater than 1.50:1.00.

The indenture governing the Second 3R Debentures contains customary affirmative and negative covenants, and provides for certain acceleration clauses, such as in the event of (i) declaration of insolvency or bankruptcy or filing of a judicial or extrajudicial reorganization by 3R and/or any of 3R's controlled companies; (ii) acceleration of other debts and/or financial obligations or obligations in the local or international capital markets of 3R and/or 3R's controlled companies, within certain financial parameters, (iii) default of any pecuniary or non-pecuniary obligations undertaken under the indenture; (iv) corporate reorganizations involving 3R or any of its controlled companies, with certain exceptions; (v) early termination or loss of the relevant concessions (as defined under the indenture) by 3R or its controlled companies; (vi) distribution of dividends and/or interest on equity and/or any type of distribution to the shareholders in an amount which exceeds the mandatory minimum dividend established by law of 25% of the net profit, with certain exceptions; and (vii) change of control of 3R within the parameters established in the indenture.

As of the date of this Offering Memorandum, we were in compliance with all of the covenants under our financing instruments.

Contractual Obligations

The following table summarizes our contractual obligations and commitments as of September 30, 2023, including gross and non-discounted values and payment of contractual interest, as applicable:

	Payments due per period				
	Less than One Year	**One to Three Years**	**Three to Five Years**	**More than Five Years**	**Total**
			(in millions of R$)		
Loans granted and debentures	596.4	2,933.6	5,007.6	-	8,537.6
Total	596.4	2,933.6	5,007.6	-	8,537.6

The following table summarizes certain of our contractual and financial obligations and financial liabilities as of September 30, 2023, including gross and non-discounted values and payment of contractual interest, as applicable:

	Payments due per period				
	Book value	**Less than One Year**	**One to Three Years**	**Three to five years**	**More than Five Years**
			(in millions of R$)		
Trade payables	644.7	644.7	-	-	-
Loans granted	2,648.8	139.0	2,392.0	-	-
Debentures	5,869.3	457.4	541.6	5,007.6	-
Debentures – related parties	38.3	16.9	22.9	-	-
Derivatives	187.6	187.6	-	-	-
Accounts payable for acquisitions	1,907.1	808.9	1.102.3	-	-
Other obligations	76.6	25	3.1	112.1	-
Total	**11,372.5**	**2,279.4**	**4,061.9**	**5,119.7**	**-**

Off-Balance Sheet Arrangements

As of September 30, 2023, we had no off-balance sheet arrangements.

Our Investment and Capital Expenditures

Our business plan provides for investments in the maintenance and optimization of our current asset portfolio and in the acquisition and development of new oil and/or gas producing assets in mature fields. Our strategy mainly aims at investing in revamping mature fields, including improvements in drilling process and to facilities and equipment, workover processes and in new drilling sites in familiar areas, in order to access and develop the probable and proven reserves as included in the Reserves Report.

The table below presents a summary of the investment expectation, per basin, based on the Reserves Report, for the development of proved and probable (2P) reserves and the improvement of existing facilities in the coming years, in the assets that comprises our portfolio.

Investments	Potiguar Sedimentary Basin	Recôncavo Sedimentary Basin	Espírito Santo Sedimentary Basin	Campos Sedimentary Basin	Total
			(in millions of US$)		
Total	**1,170.2**	**435.7**	**16.8**	**551.2**	**2,173.9**

We intend to fund our expected investments mostly with our working capital. If we require additional capital to meet our liquidity requirements in the short term, we believe that we are able to obtain loans and financings in the capital markets and/or with first-class financial institutions, including structured debt with Brazilian development banks.

Furthermore, we may also resort to other sources of funding from third parties for structured acquisition transactions and the implementation of future investment plans, according to the availability of credit and market conditions. See "*Risk Factors—Risks Relating to Us—Our business requires significant investments and maintenance expenses which we may be unable to finance*."

Decommissioning Expenses

We are responsible for conducting the decommissioning procedure and restoring the operating environment of all acquired concessions after the completion of the activities, planned for 2052. However, the purchase and sale agreements and other agreements entered into with Petrobras have mechanisms for cost sharing related to the abandonment of specific wells and decommissioning of platforms and pipelines. According to such agreements, the payment of this shared cost will be made by the seller, Petrobras, to the buyers, us, as the assets are decommissioned. For additional information on our critical accounting policies, see notes 5 and 7 to our 2022 audited financial statements, included elsewhere in this Offering Memorandum.

Quantitative and Qualitative Disclosures about Market Risks

We are exposed to certain risks derived from our activities and business, as described below.

Market Risks

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk, and price risk.

Interest Rate Risk

Interest rate risk refers to the risk of variation of the fair value of loans and financial instruments, due to variations in market interest rates. For more information, see note 32 of our unaudited interim financial information.

Currency Risk (Exchange rate)

This risk arises from the possibility that we may incur losses due to fluctuations in US dollar exchange rates, which reduce nominal invoiced amounts or increase financial liabilities and obligations taken in the transactions that involve currency risk and that are recorded in our balance sheet. The following table sets forth our net currency exchange exposure as of September 30, 2023:

	As of September 30, 2023
	(in millions of R$)
Assets	
Cash and cash equivalents	2.8
Securities	2,525.6
Accounts receivable for third parties	67.8
Restricted cash	147.5
Derivative financial instruments	46.9
Liabilities	
Trade payables	(107.8)
Loans and financing	(2,393.2)
Debentures	(4,964.1)
Derivative financial instruments	(187.6)
Accounts payable for assets acquisitions	(1,907.1)
Total net exchange exposure	**(6,769.2)**

Sensitivity Analysis

A possible appreciation (devaluation) of the real against the US dollar on September 30, 2023 would affect the measurement of financial instruments denominated in foreign currency with impacts between assets and liabilities shown below. This analysis assumes that all other variables, especially interest rates, remain constant and ignores any forecast impact on sales and purchases.

For the calculation of the values in the above scenarios, the projection of the average exchange rate disclosed in the FOCUS report issued by the Central Bank for the period ended September 30, 2023 (US$1/R$4.95) was considered the probable scenario (scenario I). In scenario II, this projection was increased by 10% and, in scenario III, by 20%, both in relation to the probable scenario. We consider that this metric is the most appropriate one for analyzing the sensitivity of the presented scenarios. The analysis below considers that all other variables, especially interest rates, remain constant and ignores any impact of provisions for sales and purchases.

	Risk	**As of September 30, 2023**	**Scenario I – Probable**	**Scenario II – 10%**	**Scenario III – 20%**
		(in millions of R$)		*(in millions of R$)*	
Assets					
Cash and cash equivalents	Devaluation of US$	2.8	2.8	2.5	2.3
Securities	Devaluation of US$	2,525.6	2,496.6	2,246.9	1,997.2
Restrict cash	Devaluation of US$	147.5	145.8	131.2	116.6
Trade accounts receivables	Devaluation of US$	67.8	67.0	60.3	53.6
Derivative financial instruments	Devaluation of US$	46.9	46.4	41.7	37.0
Liabilities					
Trade payables	Appreciation of US$	(107,8)	(106.5)	(117.2)	(127.8)
Loans and financing	Appreciation of US$	(2,393.2)	(2,365.7)	(2,602.2)	(2,838.8)
Debentures	Appreciation of US$	(4,964,1)	(4,907.0)	(5,397.7)	(5,888.4)
Accounts payable for assets acquisitions	Appreciation of US$	(1,907.1)	(1,885.2)	(2,073.7)	(2,262.2)
Derivative financial instruments	Appreciation of US$	(187,6)	(185.5)	(204.0)	(222.5)
Total net exposure		**(6,769.2)**	**(6,691.4)**	**(7,912.2)**	**(9,133.0)**

Price Risk

Price risks for us arise from the changes in oil prices. Our derivative transactions had the exclusive objective of protecting part of our expected results of short-term and long-term commercial transactions.

The following sensitivity table deals with a variation in the Brent Oil Price and the effect on the result of the period of marking to market and settlement of the non-deliverable forward ("NDF") and collar transactions, in three scenarios: (i) probable scenario, considering the last closing prices on the market for future agreements outstanding; (ii) scenario II, considering valuation of 10% over the scenario I prices; and (iii) scenario III, considering valuation of 20% over the scenario I prices. We consider that this metric is the most appropriate for the sensitivity analysis of the scenarios presented:

Transaction	Risk	As of September 30, 2023	Probable Scenario	Scenario II (Possible) – 10%	Scenario III (Remote) – 20%
Liabilities			*(in millions of R$, except Brent Oil Prices)*		
Derivative financial instruments.....	Increase in Brent Oil Price	(140.7)	(220.2)	(780.1)	(1,339.9)
Total net exposure.....		**(140.7)**	**(220.2)**	**(780.1)**	**(1,339.9)**

Hedge Transactions

The purpose of our hedging strategy is to mitigate the impact of fluctuations inherent to the global oil market, as the price of this commodity is volatile and affected by global economic and political issues.

Our hedging strategy focuses on the execution of derivative instruments to hedge our revenue derived from the sale of oil and gas. Additionally, we might use foreign exchange hedging instruments to reconcile our U.S. dollar-denominated obligations with our U.S. dollar-denominated revenue over time, and to hedge our cash available in *reais* to meet our obligations denominated in foreign currency.

Our hedging strategy does not limit which hedging instruments, strategies and/or structures we may use. The most commonly used instruments refer to the sale of non-deliverable forwards, or NDF, of Brent Oil Price futures contracts, executed in over-the-counter markets, and put and call options, among others.

As of September 30, 2023, we had NDFs and collar transactions to provide coverage for 8,105 thousand barrels (2,747 thousand on December 31, 2022) expected to be sold in the next 24 months, at an average price of US$81 per barrel. This was obtained with: (i) NDFs entered into by 3R Macau (merged into 3R RNCE), at an average price of US$85 per barrel; (ii) collars entered into by 3R Potiguar, with a floor of US$54 per barrel and a ceiling of US$98 per barrel, (iii) collars entered into by 3R Macau (merged into 3R RNCE), with a floor of US$57 per barrel and a ceiling of US$101 per barrel, and (iv) collars entered into by 3R Candeias (merged into 3R Bahia), with a floor of US$70 per barrel and a ceiling of US$89 per barrel.

INDUSTRY

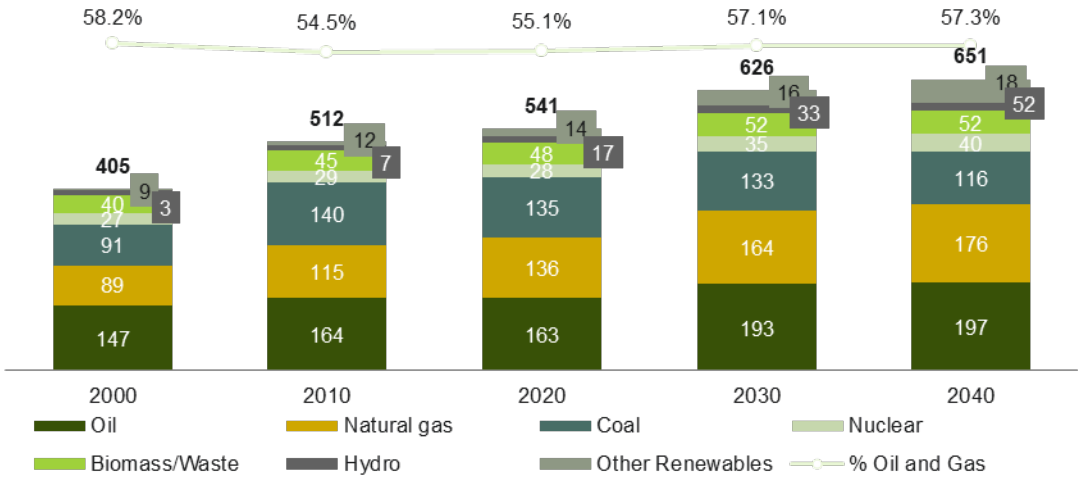
The Global Oil and Natural Gas Industry

Oil and natural gas are significant sources of energy in the world, accounting for over 55% of all energy consumed in 2022, according to the 2023 BP Statistical Review of World Energy. In 2022, crude oil production increased by 4.2%, from 90,076 to 93,848 bbl/d, when compared to 2021, mostly driven by a robust host of factors, including healthy economic and manufacturing activity along with recovery in global airline activity, which continues to support demand for jet fuel. OPEC marginally revised the oil requirement upward for the remaining part of the year, with oil demand in 2024 expecting to grow by an average of 2.2 mb/d and total world oil demand projected to average 104.3 mb/d largely accounting for steady increase in transportation and industrial fuel demand, supported by a recovery in China's activity as well as other non-OECD regions.

In this context, oil demand will remain strong in the long term, going forward as the most relevant source of energy in the coming years. Between 2021 and 2025, OPEC estimates that global oil demand will go from 96.9 million barrels per day to 105.5 million barrels per day. The forecast also considers the future increase in supply from the former OECD members and, as consequence, lower production from the OECD member countries in the coming years. Regarding long-term projections, OPEC considers that global demand will reach 109.8 million barrels per day in 2045.

The following chart sets forth expected global demand for energy sources for the periods indicated:

Global Demand for Energy Sources
(in quadrillion BTU, from 2000 to 2040)



Source: ExxonMobil 2021 Outlook for Energy.

In 2022, oil production saw a rebound of 4.2% above 2021 levels, although continued pressure on demand maintained it 1.2% below 2019 levels. Apart from an expected economic recovery, incremental consumption also stems from long-term trends such as population growth and real GDP expansion, with uneven distribution of global energy consumption putting upward pressure on demand. From 2019 to 2020, global output for crude oil decreased by 6.7% to 88.6MM bbl/d, the largest drop in post-war history. However, after the partial economic recovery after pandemic, global output accounted for 93.8.6MM bbl/d in 2022, indicating a 5.9% growth since 2020. Out of the 5.2MM bbl/d increase, OPEC countries accounted for almost two-thirds of the increase mainly due to Saudi Arabia (+1.0MM bbl/d) and Iran (+702.000 bbl/d), while non-OPEC growth were led by the US (+1.3MM bbl/d).

In 2022, demand for natural gas (a key component to renewable energy transition) decrease by 0.9 Bcf, reaching 391.2 Bcf. Despite a slight decrease, this result was followed by a rebound in 2022 of more than 19.6 Bcf, keeping production volume above the cross mark of 390 Bcf passed for the first time in 2021. Recently, while market tensions eased in the first three quarters of 2023, gas supplies remain relatively tight and prices continue to experience strong volatility, reflecting a fragile balance in global gas markets. Additionally, high storage levels in the European Union allow for cautious optimism ahead of the 2023-2024 heating season.

The gas supply shock of 2022 reinforced the structural trends that are weighing on the longer-term prospects for global gas demand. Nevertheless, the share of gas in primary energy continued to rise, standing around of 24%, with the US (95 Bcf) and Russia (60 Bcf) contributing to the largest increases.

Notwithstanding growing competition from renewable energy sources, crude oil and natural gas are expected to remain critical sources in the global energy matrix for the next decades, accounting for 55% of the world energy demand by 2040. This is explained by the fact that replacement of crude oil and gas by renewable energy is still limited.

Recent Developments in Oil Industry

During the biennium of 2022-2023, the major developments in the industry include the Russia-Ukraine war, the passing of the Inflation Reduction Act in the United States and the Israel-Hamas war. Overall, these major developments are likely to shape the global energy supply and demand dynamics, with implications for economic growth, energy supply and the broader energy transition.

In February 2022, Russia invaded Ukraine after weeks of political tension, intensifying pressures on an already stressed post-pandemic energy market. In that sense, the conflict triggered a fundamental shift in energy trading flows, putting continued pressure on energy markets as western countries heaped sanctions on Russia, with the U.S. and Canada banning Russian oil imports. As consequence, oil prices have risen well above US$100/bbl, with Brent price reaching multi-year high of US$123/bbl in early March of 2022, after posting its largest weekly gains since the middle of 2020.

Recently, according to Oxford Economics, brent crude prices have declined as the geopolitical risk premium has subsided. As fears of conflict escalation in the Middle East have eased, market traders see less risk of serious supply disruption. According to BP Statistical Review of World Energy 2023, from an energy perspective, the disruptions to Russian energy supplies and the resulting global energy shortages seem likely to have a material and lasting impact on the energy system.

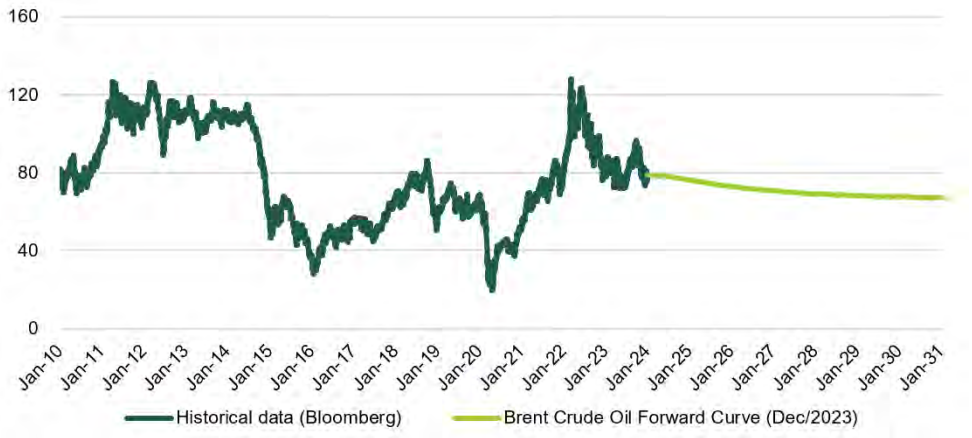
The conflict also deeply affects gas prices, as Russia is a key global gas supplier, especially for Europe. In 2021, Russia was the largest supplier of Europe’s gas, accounting for ~31% of total supply (ex-Turkey) and providing key economies such as Germany, with 32% of the total gas consumed in the country. Amidst efforts to diversify its energy supplies and gradually phase out dependence on Russian gas, the European Union established REPowerEU in mid-May 2022, defining its strategy to accelerate renewable transition and control internal gas demand. Proposals include, for example, a 40-45% target for renewable energy share in total energy supply by 2030, and the simplification of EU legislation towards renewable projects, aiming to accelerate new projects permits. The plan also relies on more imports of LNG from global markets, possibly adding pressure to a currently undersupplied LNG market and reflecting on higher energy costs. At the end, according to BP Statistical Review of World Energy 2023, from an energy perspective, the disruptions to Russian energy supplies and the resulting global energy shortages seem likely to have a material and lasting impact on the energy system.

The Inflation Reduction Act (IRA), signed into law in the US in August 2022, represents a significant package of largely supply-side measures aimed at supporting low-carbon energy sources and decarbonization technologies within the country. The Act is expected to have far-reaching implications for the US energy system, providing substantial support for the development and adoption of low-carb technologies. While the impact for global Oil & Gas Industry is not fully clear, the IRA has potential to generate spillover effects by reducing global technology costs, expanding internationally tradable supplies of certain forms of low-carbon energy, and increasing pressure on other countries and regions to offer similar incentives.

Finally, the third event that shaped the industry dynamics and raised concerns about uncertainty is the Israel-Hamas conflict, with focus on whether this conflagration consequence will result in crude supply disruptions. Initially, the conflict caused a spike in price, but this effect turned out to be temporary. However, it is not expected that this geopolitical conflict will fundamentally alter the oil market outlook since any countries including Iran imposed a global oil embargo in response to this war. Recently, diplomatic efforts have led to greater optimism within oil markets. For the natural gas prices market, the most significant risk is the Israel-Hamas conflict intensifying into a wider regional war. With Qatar as one of the most important natural gas suppliers to both Europe and Asia, any disruption to trade through the Persian Gulf would have serious ramifications for natural gas markets.

The following chart sets forth the evolution of historical Brent oil spot prices (up to December 2023) and a projection of Brent oil future prices for the periods indicated:

Crude Oil Price Evolution
(in US$ per bbl, from 2010 to 2023)

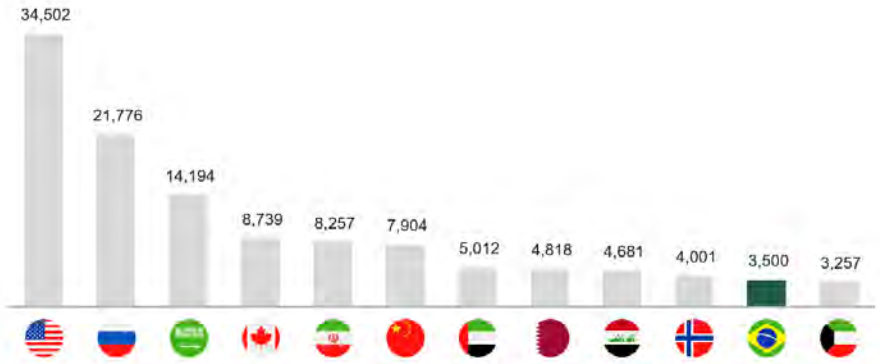


Source: Bloomberg, as of December 2023.

The Brazilian Oil and Natural Gas Industry

Brazil is currently the largest oil and gas producer in Latin America (and the eleventh largest producer in the world), with over 3 million bbl/d in 2022. In the past decade, reserves and output from the so-called offshore pre-salt layer, which now accounts for approximately 75% of Brazil's crude oil production, increased significantly. The remaining 25% of total oil production is produced in offshore post-salt layers, shallow-water and onshore wells. Brazil experienced one of the world's fastest growths in hydrocarbon output between 2015 and 2020. The chart below sets forth the ten largest global oil producers in 2022:

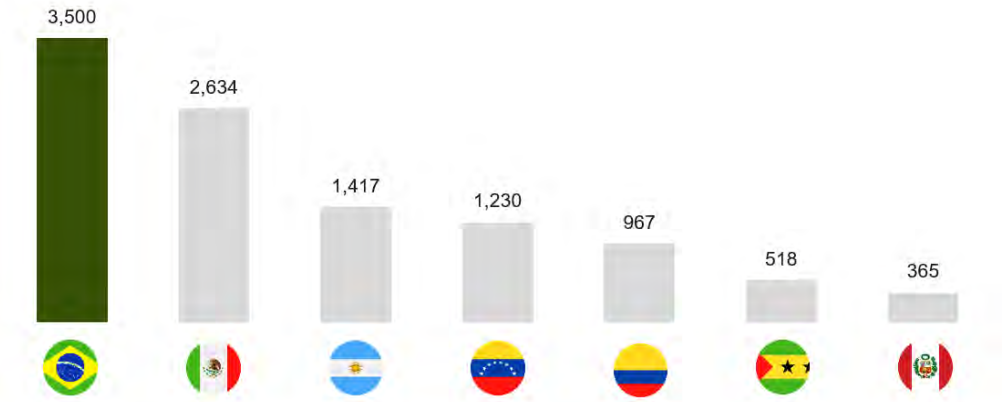
Top Global Oil & Gas Producers
(in thousands of BOEPD, 2022)



Source: BP Energy Outlook 2023.

The chart below sets forth the largest oil and gas producers in Latin America in 2022:

Largest Oil & Gas Producers in Latin America
(in thousands of BOEPD, 2022)

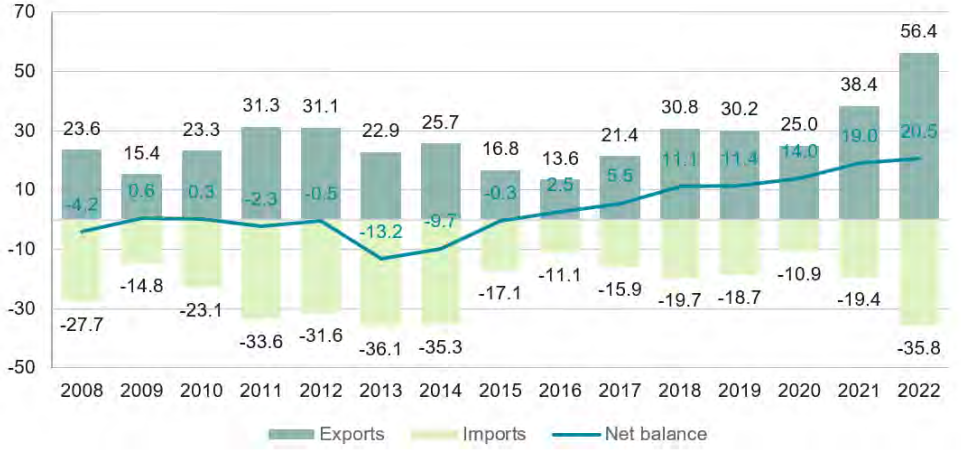


Source: BP Energy Outlook 2023.

According to the BP Statistical Review of World Energy 2023, in 2022, energy demand increased by 1.1% in the world and 4.3% in Brazil. Meantime, in 2020 proved oil reserves in the world reached 1.73 trillion barrels, unchanged levels when compared to 2019. Brazil kept the 9th place in oil production and 16th in global reserves this year, considering proved reserves. Although Brazil has one of the biggest oil reserves and production, ANP reported that the country produced only ~8% of the total discovered oil volume. According to ANP, the recovered fraction of oil in the country is 10.39%, with several clusters presenting recovered fraction below global benchmark of 35%. Despite the recent year's volatility in oil demand, Brazil has maintained its position as a relevant player in international oil trade, reflected by a positive trade balance since 2016 peaking at a historical record in 2022.

The following graphics detail the trade balance of the oil sector for the periods indicated below:

Trade Flow – Oil & Derivatives
\(in US$ billions, 2022)



Source: ANP, SECEX

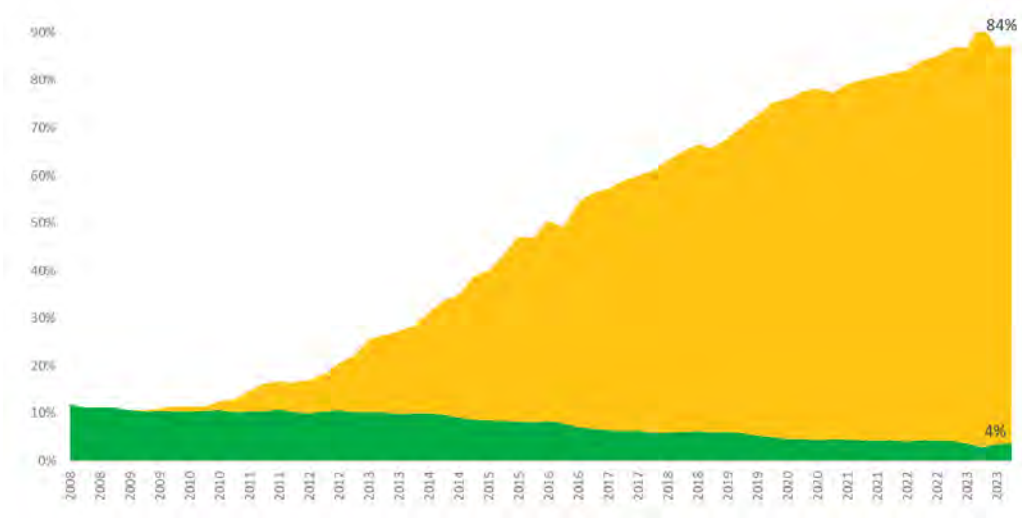
According to the BP Energy Outlook Report 2023: Insights from the evolving transition scenario – As a percentage of the energy matrix, in the period between 2019 and 2050, oil is expected to decrease from 31% to 19%, natural gas is expected to increase slightly from 22% to 23% and renewable energy sources are expected to increase from 12% to 35%, accounting for the highest percentage increase in the period.

Mature Onshore, Offshore and Shallow-water Fields

Crude oil exploration and production occurs on land (onshore), shallow-water or deep-water (offshore). Currently, most of Brazil's output derives from deep-water rigs, most of them in pre-salt fields. These fields require major investments for exploration and underwater production systems, *i.e.*, risers and rigs, during the development phase, which begin as soon as wells are declared commercially viable. These projects are normally associated with long investment cycles before production begins and, as a result, they are undertaken by large corporations, including Petrobras and other major players that look for profitable, high-output projects.

Petrobras has been increasingly focusing on the vast pre-salt reserves and, as a result, its onshore, shallow-water and post-salt production has decreased as a percentage of Brazil's total crude oil output. In 2022, onshore fields produced 192 kboe/d, post-salt fields produced 758 kboe/d and pre-salt fields produced 2.9 million boe/d, accounting for approximately 75% of the total production in Brazil. The chart below sets forth Petrobras' oil production from the pre-salt and onshore fields as a percentage of its total production for the period indicated:

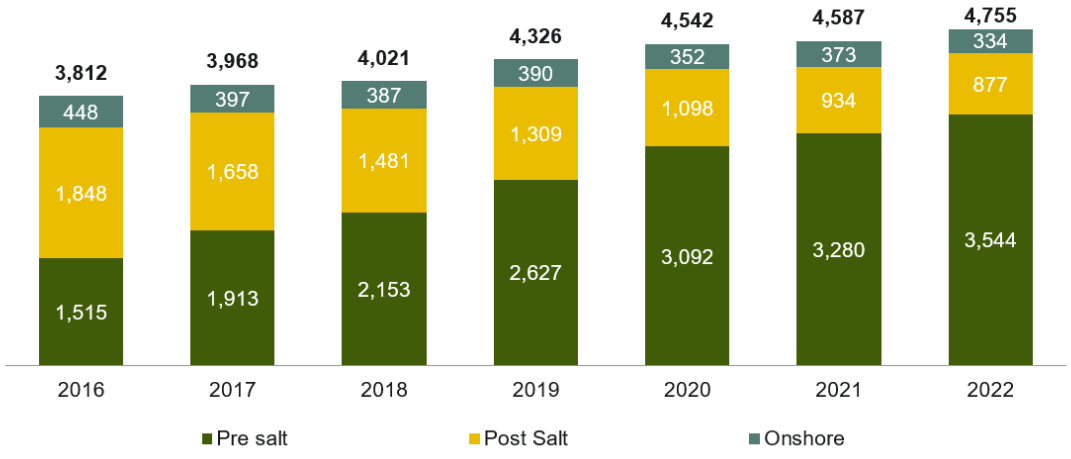
Petrobras Production
(as % of total production)



Source: ANP.

From 2013 onwards, Petrobras changed focus from onshore to pre-salt production, having most of its oil flow coming from such assets. Since then, onshore assets were neglected by Petrobras, opening the path to smaller players to start operating such assets, with small capital expenditures to be invested to revitalize such fields. Once the capital expenditures are invested, those fields are expected to present much higher increase in recovery factors given the executed capital expenditure, in comparison to the required investment in offshore fields. The chart below sets forth the historical production of oil in Brazil from pre-salt, post-salt and onshore fields, for the periods indicated:

Historical Production by Place
(in MMboe/d, from 2016 to 2022)



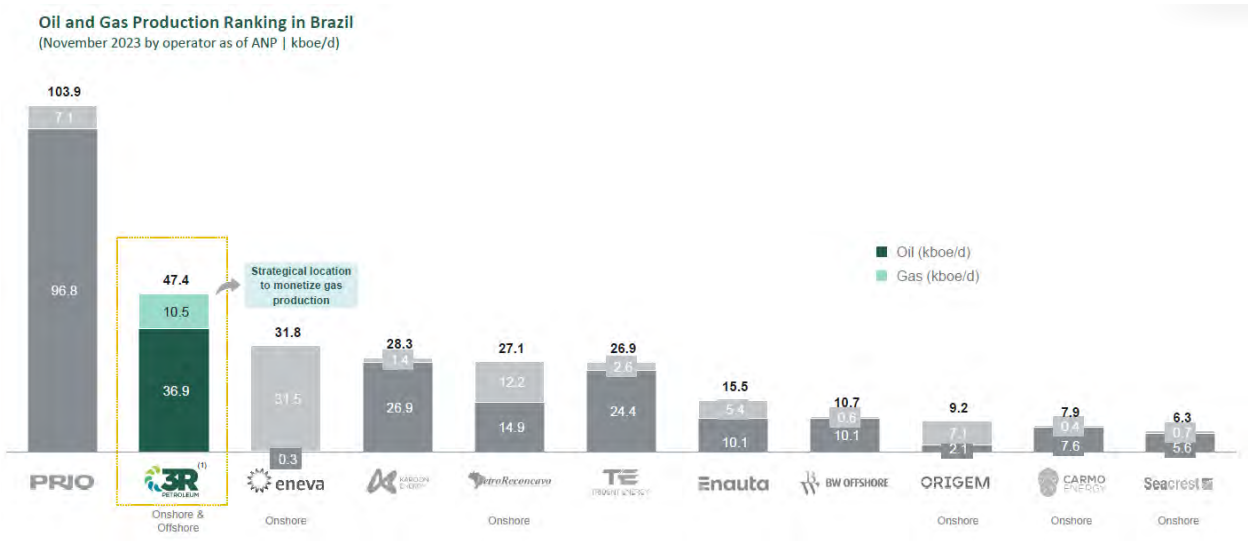
Source: ANP, 2022.

Brazil has significant oil and gas reserves, mostly in the pre-salt layer, where 73% and 72% of the crude oil and gas reserves, respectively, are located. Traditional post-salt reserves account for 25% and 28% of crude oil and natural gas reserves.

According to ANP, Petrobras is the largest oil producer in Brazil, having produced more than 3.6 million boe/d in December 2022 and accounting for approximately 91% of the total oil production in Brazil. Petrobras continues to be the largest onshore and shallow-water producer of crude oil and natural gas in Brazil, with an output of approximately 4.1 million boe/d and a market share of more than 89%, followed by Norwegian producer Equinor, with 104 kboe/d output and a 2.2% market share. As of September 2023, we are one of the largest oil and gas producers in Brazil, with an output of approximately 45.3 kboe/d.

As the larger share of oil and gas production in Brazil is towards offshore (both pre and post salt), major players, including Petrobras, tend to focus more on developing and exploring offshore fields and not focus on onshore fields, which allows smaller players to acquire those assets, revitalize the fields and have better results than those that are spending more to fully develop an offshore asset. Onshore fields also tend to have smaller infrastructure capital expenditures due to easier logistics from well to midstream assets, requiring less technical capabilities towards operating wells, fields and clusters.

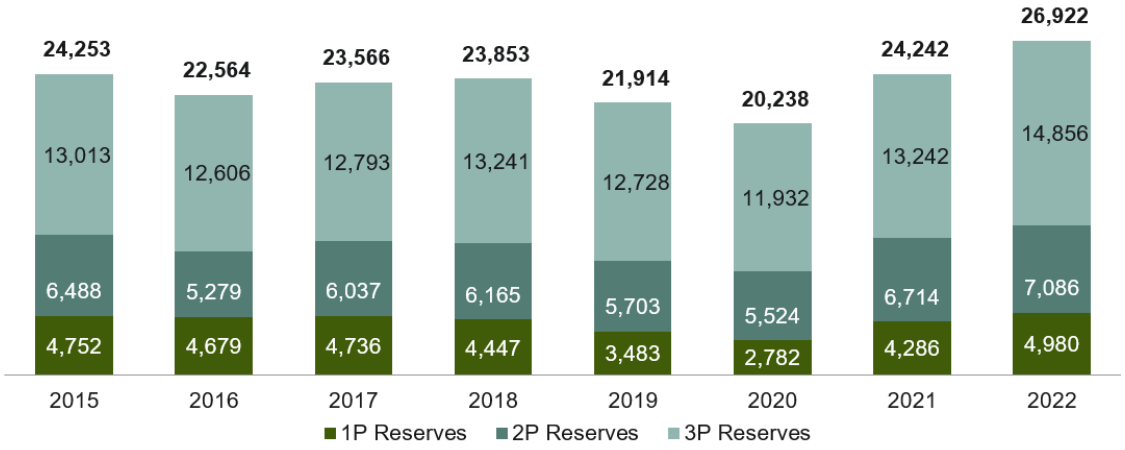
The chart below sets forth the largest independent onshore oil and gas producers in Brazil:



Sources: ANP.

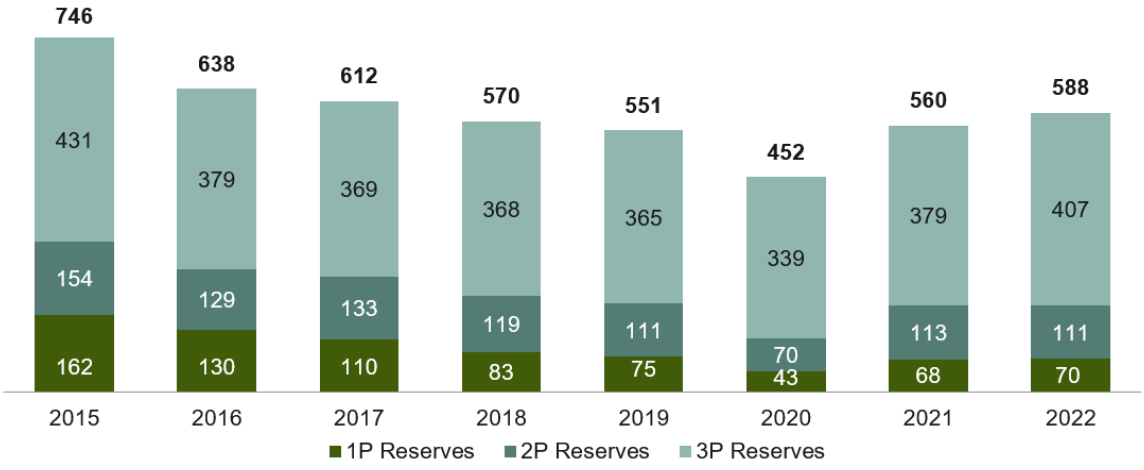
The charts below set forth the evolution of the 1P, 2P and 3P oil and gas reserves in Brazil over the indicated periods:

Evolution of the Oil Reserves (1P/2P/3P)
(in thousands of bbl, from 2015 to 2022)



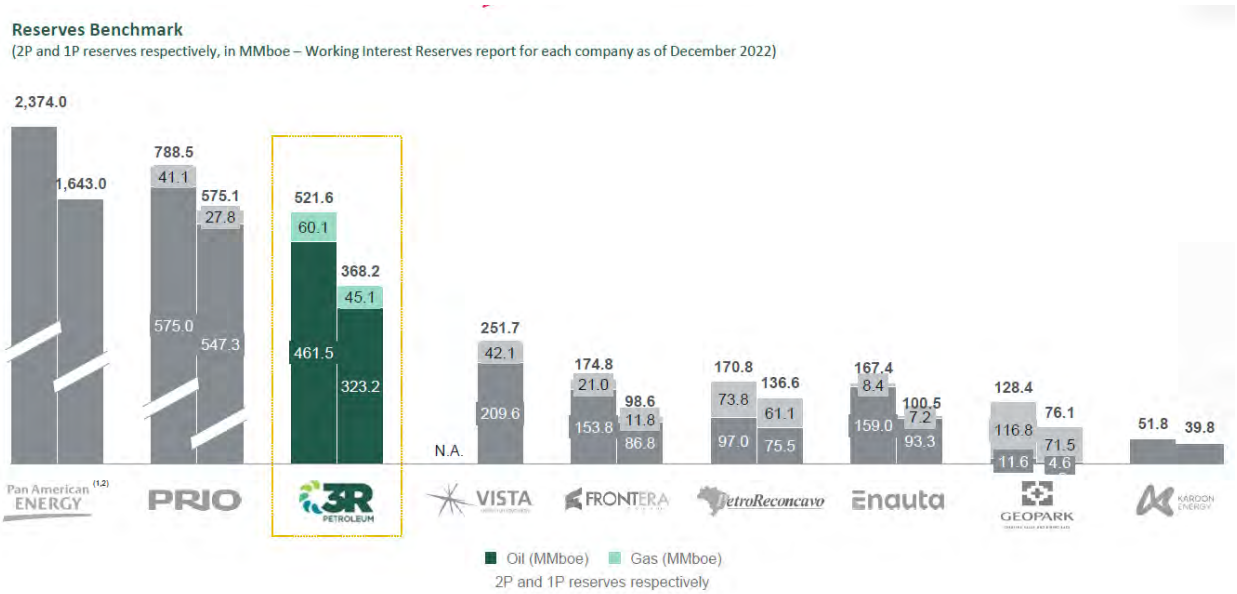
Sources: ANP, 2022.

Evolution of the Gas Reserves (1P/2P/3P)
(in millions of m³, from 2015 to 2022)



Sources: ANP, 2022.

The chart below sets forth the oil and gas reserves for largest independent onshore oil and gas producers in Latin America:



Sources: companies' reserves reports and IR materials.

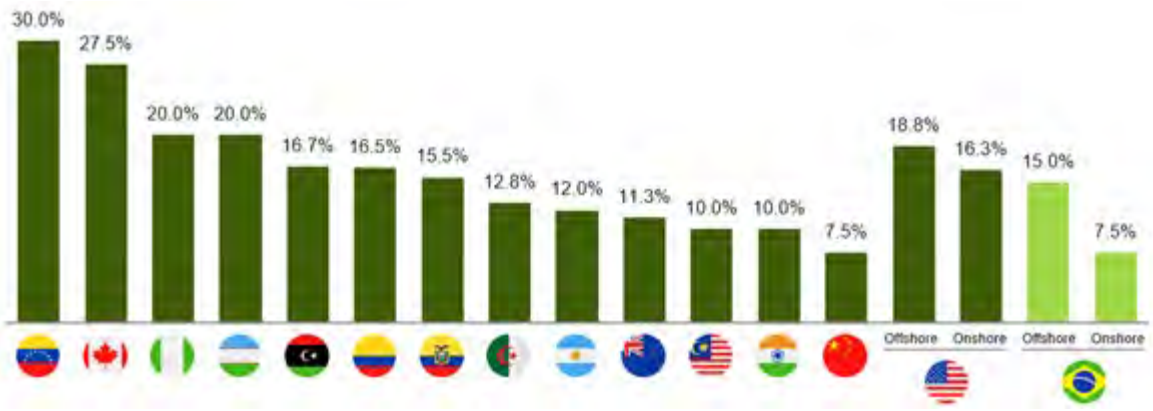
Royalties

Compared to other producing countries, onshore oil and natural gas producers in Brazil have a number of competitive advantages. Brazil charges some of the lowest royalties for onshore production, *i.e.*, 5% to 10%, compared to 10% to 30% charged by most oil and gas producing countries, 15% charged by Kuwait and 30% charged by Venezuela.

On September 28, 2021, ANP published Resolution No. 853/2021, reducing the royalties related to fields granted to small and medium-sized companies. The companies size classification is based on annual average production of the concession holder, as an independent company or corporate group, pursuant to ANP Resolution No. 32/2014, as follows: (i) companies with annual average production of 1,000 boe/d are classified as small companies; and (ii) companies with annual average production of 10,000 boe/d are classified as medium-sized companies.

Crude Oil Royalty Rate

(in percentage, considers simple average of maximum and minimum rate for each country)



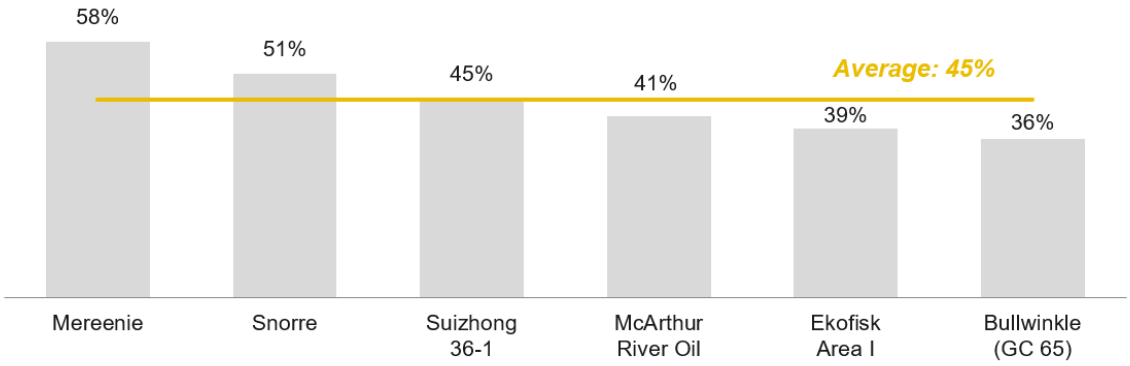
Sources: The Law Library of Congress, Global Legal Research Center

Recovery Factor

Brazil has major potential to improve the recovery factor of its onshore and shallow-water fields, and even offshore fields. The recovery factor is the recoverable amount of hydrocarbon initially in place, calculated as the production of oil and/or gas from the first day of production to date, *divided by* the total oil and/or gas in the reservoir. The average recovery factor of certain selected fields around the world is 45%, well above the 28% recovered fraction of certain selected fields in Brazil. This is mainly due to the past performance of Petrobras in its exploration campaigns. Over the past decades, Petrobras has been extremely successful in its exploration efforts, discovering larger and more productive hydrocarbon provinces every 12 to 15 years.

Before Petrobras started revamping projects in onshore fields, it discovered shallow-water fields in the late 1960s. Similarly, in the late 1980s, Petrobras was successful in its exploratory activities in deep-water fields and discovered new reserves in the Campos basin, with water depth of more than 400 meters. In 2007, Petrobras discovered the first pre-salt fields. As a result, revamping efforts have been consistently deprioritized every time Petrobras discovers new reserves, as one of Petrobras' pillars has always been the exploration and development of new fields. Petrobras never prioritized revitalization or revamping in its business plans. The following chart sets forth the recovery factor of selected fields worldwide in 2022:

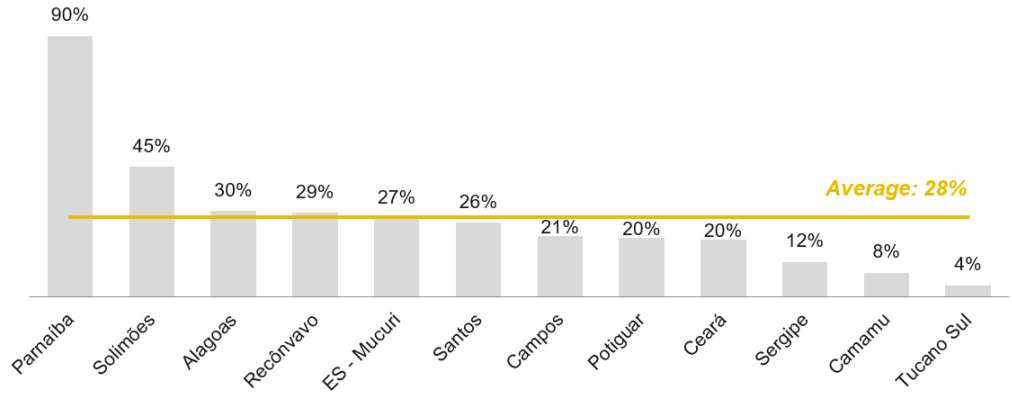
Recovery Factor of Selected Fields Worldwide
(as percentage, 2022)



Sources: ANP and Woodmac.

The following chart sets forth the recovery factor of selected basins in Brazil in 2022:

Recovery Factor of Selected Fields in Brazil
(as percentage, 2022)



Source: ANP.

Several techniques and methods are known to increase the recovery factor. These techniques and methods are readily available and have been amply tested elsewhere in the world. In the fields that comprise our portfolio, as part of our revamping plan, we intend to implement activities with shorter investment cycles and faster pay-back, including: (i) the reactivation of wells that are not operational due to lack of maintenance; (ii) pull-in activities, which consist of intervening in wells with new rigs and/or derricks to replace cladding or well-bottom pumps; and (iii) debottlenecking, which consists of expanding and adjusting processing plants to increase their fluid treatment capacity. The second stage of the revitalization plan includes: (i) workover activities, which consist of interventions in wells to access the less depleted reservoirs and block off reservoirs producing large volumes of water; and (ii) increasing the network density with new vertical, horizontal, and directional wells drilled in reserves that certifiers consider proven or contingent. We are not dependent on a single, ultra-modern or unusual technology to

implement our revitalization plans and we do not plan to drill in unknown areas or undertake more exploratory activities.

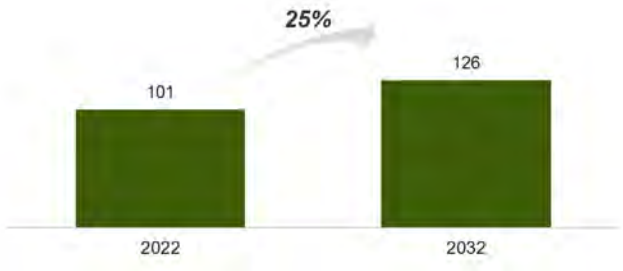
The New Gas Market

The objectives of the New Gas Market (*Novo Mercado de Gás*) program in Brazil, launched in 2019, and the New Gas Law, enacted in 2021, include, among others, lower tariff barriers, unlocking investments along the value chain, improved sector legislation, and integration between gas and electric power and the manufacturing industry. The overall objective is to make natural gas more competitive and attract new market players. We believe that this change will have a significant impact on the sector, potentially impacting onshore production of natural gas.

According to Empresa de Pesquisa Energética, or EPE, in 2023, the demand for natural gas in the Brazilian market is expected to remain stable in the downstream sector, including refineries and nitrogen fertilizer factories, until 2023. However, the demand for natural gas in the thermoelectric sector is expected to increase due to the entry of new facilities into the system, as well as the existing ones that have won auctions. In 2023, the demand for natural gas was affected by the recovery of water levels in reservoirs for hydroelectric generation, which led to a reduction in demand for LNG and a decrease in Brazil's exposure to global LNG prices.

The following chart sets forth the evolution of the 1P, 2P and 3P gas reserves in Brazil from 2022 to 2032:

Evolution of the Gas Reserves (1P/2P/3P)
(in thousands of m³, from 2022 to 2032)



Source: EPE

Accordingly, considering the increased competitiveness of natural gas, the natural gas system requires nationwide development, encouraging the connection of different transportation systems, primarily driven by the downstream chain and the new gas power plant projects to balance supply and demand among the regions in Brazil.

Petrobras Monopoly in the Brazilian Oil and Gas Market

The history of the oil and gas sector in Brazil is closely related to Petrobras, a company created in 1953 by Law No. 2,004, which established Petrobras' monopoly on the exploration, production, refinery, and transportation of oil in Brazil. The pursuit of technical independence and capacity to extract and refine oil is intertwined with the main political and social events in Brazil in the third quarter of the 20th century. In 1997, the Petrobras monopoly officially ended by the Brazilian Oil Law, sanctioned by President Fernando Henrique Cardoso, repealing Law No. 2,004. Pursuant to the Brazilian Oil Law, other Brazilian companies were allowed to operate in each of the stages of the exploration and production chain, from wells to gas stations, under concession or authorization regimes. The Brazilian Oil Law also created ANP and CNPE, key institutions in the oil and gas environment in Brazil.

Petrobras Business Plan

Petrobras disclosed its five-year business plan in 2023, indicating an expanded mandate to explore renewables, petrochemicals, and fertilizers. From 2024 to 2028, the company projects a CAPEX of US$102.0 billion,

with approximately US$46.0 billion allocated for exploration and production in the pre-salt fields. Nonetheless, considering Petrobras' recent divestitures actions held in the last years and the prominent role of ANP in these processes, the market context remains favorable for emerging oil companies to engage in exploration and improve asset fields productivity.

REGULATORY OVERVIEW

Regulatory Environment

Brazilian Federal Constitution

Pursuant to the Brazilian Federal Constitution, the federal government holds the monopoly on the prospecting, exploitation, development and production of oil and natural gas, and of other fluid hydrocarbons, as well as the refining, import, export and ocean or pipeline transportation of crude oil, its by-products and natural gas. The Brazilian Federal Constitution also used to prohibit the assignment or concession of any kind of activity involving oil or gas exploitation to private companies.

On November 10, 1995, the Brazilian Congress approved Constitutional Amendment No. 9, amending the Brazilian Federal Constitution to permit the federal government to contract with state-owned or private companies in regard to the exploitation and production of oil and natural gas, *i.e.*, upstream activities; and the refining of derivatives of oil and natural gas, *i.e.*, midstream and downstream activities, subject to applicable law.

Brazilian Oil Law

Federal Law No. 9,478, dated August 6, 1997, or the Brazilian Oil Law, sets forth the rules and principles for contracting upstream and midstream and downstream activities in Brazil. Among other measures, the Brazilian Oil Law:

- reaffirmed the federal government's monopoly on deposits of oil, natural gas and other fluid hydrocarbons and provided that the exploitation and production of these hydrocarbons is regulated and supervised by the federal government;
- created: (i) the CNPE, a body subordinated to the President of Brazil and responsible for establishing the public policies related to the energy industry; and (ii) ANP, a regulatory agency subordinated to the Ministry of Mines and Energy, or MME, and responsible for regulating upstream and midstream and downstream activities;
- repealed Federal Law No. 2,004/53, pursuant to which the federal government could only exercise its monopoly through Petrobras and its subsidiaries;
- set forth the main terms and conditions applicable to concession agreements pursuant to which the federal government may contract with state-owned or private companies that intend to operate in the refining, development, and production of hydrocarbons; and
- ratified the activities carried out by Petrobras prior to its enactment, granting Petrobras, irrespective of any bidding process, the exclusive right to explore the fields where Petrobras had been producing and the areas in relation to which it could show evidence of previous investments and work.

CNPE

CNPE, created by the Brazilian Oil Law, is a body subordinated to the President of Brazil and led by the Minister of Mines and Energy. CNPE is responsible for establishing the Brazilian energy policies and oil and natural gas production policies and setting forth the guidelines for the bidding processes for the concession of exploitation rights, pursuant to the Brazilian Oil Law.

ANP

The Brazilian Oil Law established the National Agency of Petroleum, Natural Gas, and Biofuels (ANP), a Brazilian federal governmental agency, which is bound to the Ministry of Mines and Energy (MME). ANP is responsible for regulating the Brazilian oil, natural gas, oil derivatives and biofuel industry. One of ANP's main goals is to create a competitive environment for activities related to oil and natural gas in Brazil, thus resulting in lower prices and better-quality services for consumers, including a guaranteed fuel supply. Its main responsibilities include: (i) promoting and requiring compliance with Brazilian oil, natural gas and biofuel industry regulations;

(ii) carrying out bidding processes for the concession of exploitation, development and production rights related to oil, natural gas and biofuels, and entering into, on behalf of the federal government, the relevant concession agreements; (iii) authorizing the transportation, import, export, refining and processing of oil derivatives, natural gas and biofuels; and (iv) overseeing the economic activities of the oil, natural gas and biofuel industries, in accordance with Brazilian interests.

Concessions

In order to attract private investment, the Brazilian Oil Law established the main terms and conditions to be applied by the federal government when granting concessions for the exploitation, development and production of hydrocarbons.

ANP represents the federal government and is responsible for granting concession agreements for the exploration, development and production of oil and natural gas in the Brazilian onshore and offshore sedimentary basins by means of a transparent and competitive bidding process. The only exception to the mandatory bidding process requirement was Round Zero, when concession agreements were granted directly to Petrobras, dismissing the bidding process, in relation to the exploration blocks where Petrobras had already performed activities and/or made investments before the date of enactment of the Brazilian Oil Law. This direct concession was an acknowledgment of the activities already carried out in these areas by Petrobras, as the sole operator of the former monopoly held by the federal government, and a ratification of its vested rights. From 1999 to 2023, ANP conducted 17 bidding rounds for exploration blocks under the concession regime, and six bidding rounds under the production sharing regime. Besides, the ANP has a permanent offer of areas with marginal accumulations – up to this date, the ANP conducted 4 bidding rounds for such areas.

The definition of the blocks subject to concession is based on geological and geophysical data that indicate the presence of hydrocarbons. In addition, in order to prevent environmental impacts, ANP, IBAMA and regional environmental agencies make a prior analysis of the areas to be offered.

After this analysis, ANP publishes the requirements for the environmental license regarding the offered blocks, allowing future concessionaires to assess the environmental aspects related to their areas of interest.

Companies must individually meet all qualification requirements to participate in ANP's bidding rounds and, once qualified, may present their offers, either alone or as part of a consortium. In the case of a consortium, ANP requires the appointment of a consortium leader to act as the operator responsible for the consortium and the operations, and the other consortium members, even if not operators, are jointly and severally liable for the obligations undertaken under the concession agreement.

The first step of the qualification process is the submission of a set of mandatory documents, which constitute the statement of interest. Companies that submit their statement of interest are required to pay a participation fee which may vary according to the basin where the blocks are located. After payment of the participation fee, they receive a data package with all material technical information and geological summaries regarding the area.

Companies that decide to continue in the bidding process undergo a second round of qualification, in which the technical, legal and financial aspects of these companies are evaluated.

Technical Qualification. Each company's technical qualification includes its experience in the exploration and production of hydrocarbons. Companies that wish to qualify as operators must submit a technical summary with information that proves their operating capacity. Conversely, companies that wish to qualify as non-operators may only participate in the bidding round as members of a consortium led by a qualified operator.

Legal Qualification. In order to obtain legal qualification, each company must submit to ANP the relevant corporate documentation, including its bylaws and a description of its corporate structure. A foreign company must submit documentary evidence that it was legally formed according to the laws of its country of origin and, if it wins the bidding process, the foreign company must agree to incorporate a company with headquarters and management located in Brazil.

Financial Qualification. A company's financial qualification is subject to a minimum shareholders' equity that varies based on each qualifying level. Companies with shareholders' equity below the amount required by ANP cannot participate in the bidding process, except as a member of a consortium, *i.e.*, as a non-operator. The financial qualification is also based on the company's audited financial statements, its bank references and/or other financial documents.

Upon fulfillment of all the aforementioned requirements, the company qualifies to participate in the bidding and may submit its proposal for the blocks in the relevant category.

Analysis of the Proposals

ANP analyzes the proposals submitted by the companies and selects the most advantageous offer according to the objective criteria established in the bid notice. Each proposal is scored based on the weighted sum of points given in regard to each evaluation factor. In the last bidding rounds, ANP used a formula that included the following evaluation factors: (i) the signing bonus, accounting for 80% of the score; and (ii) the ANP Minimum Exploratory Program, accounting for 20% of the score.

Government Participation

Pursuant to the Brazilian Federal Constitution, Brazilian Oil Law and other ANP regulations, concessionaires must pay the following fees to the federal government:

- signing bonus;
- area occupation or retention fee;
- special participation fee; and
- royalties.

The minimum amount of the signing bonus is established in the bid notice and the final amount is based on the amount of the winning proposal. The signing bonus must be paid upon execution of the concession agreement with ANP.

The occupation or retention fee for the areas under concession is established in the bid notice and must be paid annually. For the calculation of this fee, ANP takes into account, among other factors, the location and the size of the awarded block and the sedimentary basin and its geological features. Nonetheless, Decree No. 2,705/98 sets forth the minimum and maximum amounts of the occupation or retention fees, in accordance with the stage of the awarded block. Accordingly, fees related to the phases of exploration, development and production are increasingly more expensive.

The special participation fee must be paid if concessionaires for fields with high production or profitability, calculated through progressive rates that vary according to the location, lifetime of the field, and production volumes, pursuant to applicable regulations. The special participation fee related to each field is payable on a quarterly basis from the date the high production or profit occurred and is calculated based on the quarterly net revenue of each field, *less*: (i) royalties paid; (ii) investments made in exploitation; (iii) incurred operating costs; and (iv) depreciation and applicable taxes.

ANP is also responsible for determining monthly royalties related to production. Royalties are calculated at a rate ranging from 5% to 10% of the gross revenue from production. For the determination of the royalty percentage applicable to a specific block under concession, ANP takes into account the block's geological risks and the expected production, among other factors.

Pursuant to the Brazilian Oil Law, onshore concessionaires must pay the landowner a special participation fee, ranging from 0.5% to 1.0% of the gross revenue from production of each well located on the owner's land.

On September 21, 2018, ANP enacted the ANP Resolution No. 749/2018, which regulates the procedure for granting reduction of royalties as an incentive to incremental production in mature fields.

Article 9 of ANP Resolution No. 749/2018 states that mature fields of small production will have royalties calculated at a rate of five percent (5%) on incremental production. On the other hand, for mature fields of high production, according to the Article 10, the royalties will be calculated by applying regressive rates corresponding to seven and a half percent (7.5%) and five percent (5%), according to the percentage of increase achieved.

Mature fields are classified by Article 2, item III, of the Resolution No. 749/2018 as oil or natural gas field with a history of effective production, carried out from definitive production facilities, greater than or equal to 25 years, or whose accumulated production corresponds to at least seventy percent (70%) of the volume expected to be produced, considering the proved reserves.

On the other hand, "incremental production" represents the positive difference between the volumes of oil and natural gas actually produced in a given month and the monthly production volumes forecast for this month corresponding to the forecast calculated according to the reference production curve of the field, as stated in the Article 2, item V, of the Resolution No. 749/2018. Most of the assets in our portfolio are mature fields and may benefit from this incentive.

Moreover, on September 28, 2021, ANP published Resolution No. 853/2021, reducing the royalties rate related to fields granted to small and medium-sized companies. The size classification of a company is based on the annual average production of the concession holder, as an independent company or corporate group, pursuant to ANP Resolution No. 32/2014, as follows: (i) companies with annual average production of less than 1,000 BOEPD are classified as small companies; and (ii) companies with annual average production of less than 10,000 BOEPD are classified as medium-sized companies.

Finally, after ANP's enactment of resolutions granting reduction of royalties' rate to: (i) to incremental production in mature fields; and (ii) to small and medium-sized companies, on August 12, 2022, the National Energy Policy Council's (CNPE) published Resolution No. 5/2022, providing for measures to stimulate the development and production of hydrocarbon accumulations in economically viable marginal fields. The oil and gas fields and deposits with economic potential, as well as those corresponding to marginal fields are defined by ANP Resolution No. 877/2022 depending on their production rate, API grade, level of contaminants and reserves reports.

Concession Agreement

ANP is responsible for granting concession agreements for the exploration, development and production of oil and natural gas reserves to market players, independently or in joint ventures with other ANP-qualified companies, by means of a transparent and competitive bidding process. The only exception to the mandatory bidding process requirement was Round Zero, when concession agreements were granted directly by Petrobras, dismissing the bidding process, in relation to the exploration blocks where Petrobras had already performed activities and/or made investments before the date of enactment of the Brazilian Oil Law.

The concession agreements executed with the ANP set forth the rights and responsibilities of the winning bidders regarding certain exploration blocks, providing for the exploration phase and the production phase. The exploration phase may last from two to eight years and the production phase may last up to 27 years from the date of declaration of commercial feasibility. The production phase may be extended for additional 27 years upon ANP's approval.

Since the fifth concession bidding round, the concession agreements for hydrocarbon exploration and production started to provide for two exploration periods, and the term of each period is provided for in the applicable concession agreement. In practice, each biding round will have its own rule.

Each exploration period is subject to an ANP Minimum Exploratory Program, in which the concessionaire agrees to comply with certain obligations, terms and conditions for the development of its activities. The concessionaire must comply with the ANP Minimum Exploratory Program before advancing to the next exploration or production phase, as set for in the concession agreement.

In the first exploration period, the concessionaire's activities usually consist of geophysical and geochemical surveys and seismic reprocessing related to the concession area. If the concessionaire decides to move on to the

second exploration period and has complied with all the ANP Minimum Exploratory Program obligations, the exploration will move on to the drilling of an exploration well. The concession agreements list the activities to be performed during the exploration phase. Moreover, concessionaires must present a financial collateral to secure the ANP Minimum Exploratory Program, as a condition precedent for the execution of the concession agreement.

The exploration phase ends upon submission of the declaration of commercial feasibility which states that the concessionaire believes it is possible to carry out production in the relevant area. The production phase begins upon delivery of the declaration of commercial feasibility to ANP. The concessionaire then implements the necessary infrastructure and starts producing oil or gas. If the concessionaire decides that the area is not commercially viable, the concessionaire returns it to ANP upon notice and does not initiate the production phase.

Pursuant to the Brazilian Oil Law, the concession agreement must include: (i) the definition of the concession block; (ii) the term of duration and main conditions for exploration and production activities; (iii) the rules and conditions for the partial return and vacation of the concession areas; (iv) the guarantees to be offered by the concessionaire to assure that the concession agreement, including the investments required in each phase, will be complied with; (v) penalties in case the concessionaire fails to comply with the agreement; (vi) the procedures for the assignment of the agreement; (vii) the rules and conditions for the return and full vacancy of the concession areas, with the removal of the equipment and facilities, and reversal of assets; (viii) the procedures to monitor and inspect the exploration, development and production activities, and to audit the agreement; (ix) the obligation of the concessionaire to provide to ANP reports, data and information related to the developed activities; (x) the procedures related to the transfer of the concession agreement, pursuant to Article 29 of the Brazilian Oil Law; (xi) the rules on the resolution of disputes related to the agreement and its performance, including settlement and international arbitration; (xii) the events of termination of the agreement; and (xiii) the penalties applicable in the event of non-compliance by the concessionaire of its contractual obligations.

Concessionaires have the following rights, among others: (i) the exclusive right to the exploration, development and production in the concession area; (ii) ownership of the produced hydrocarbons; (iii) the right to sell the produced hydrocarbons; and (iv) the right to export the hydrocarbons, subject to compliance with obligations regarding domestic supply in the event of declaration of a state of emergency.

The main obligations of a concessionaire include: (i) bearing all costs and risks related to the exploration, development and production of hydrocarbons, including any liability for environmental damages; (ii) complying with the requirements regarding the acquisition of assets and services from domestic suppliers (local content); (iii) complying with the requirements regarding performance under the ANP Minimum Exploratory Program referred to in the winning proposal; (iv) oil reserve conservation; (v) delivering to ANP periodic reports, data and information; (vi) paying government participation fees; and (vii) paying the costs related to the deactivation of facilities, pursuant to Brazilian legislation and best practices of the Brazilian oil industry.

For additional information on our concession agreements, see "*Business—Concession Agreements*."

Consortiums and Joint Operating Agreements

In order to minimize the exploration risks and allow for a more diversified portfolio, a number of oil and natural gas companies join consortiums to present proposals. In this case, before the bidding process, companies must execute an agreement for the submission of a joint proposal, which sets forth a timetable for the joint survey of the relevant area and each member's equity interest in the project, among other conditions. In general, the parties share the costs related to the concession area proportionally to their equity interest in the area. Pursuant to Brazilian law, consortium members are jointly and severally liable and, since the consortium does not have its own legal personality, each consortium member must keep separate and independent accounting records.

Once the bidding round ends, before or after the execution of the concession agreement with ANP, consortium members often enter into a joint operating agreement to establish the responsibilities and investments required for the exploration and production of the bid block. These agreements are usually based on a standard agreement form prepared by the Association of International Energy Negotiators, or AIEN. In general, consortia are managed by an operating committee, which is the highest authority of the consortium, responsible for supervising and setting forth guidelines for joint operations.

Farm-in and Farm-out Agreements

Companies in the oil and natural gas industry may assign a portion or all their equity interest in a specific exploration block by means of farm-in and farm-out agreements, which are a type of profit-sharing agreement. These agreements set forth the percentage of equity interest in the exploration block/field being assigned and are subject to ANP's approval, which is granted upon fulfillment of the technical, economic and legal requirements by the assignee.

We believe that significant farm-in and farm-out opportunities related to the assets in production will continue to be available in the next years. We also believe that a sustainable farm-in and farm-out strategy for assets in production will allow us to decrease risks by diversifying our portfolio, sharing development costs and meeting additional capital requirements to fund subsequent exploration efforts and/or development costs. This is a common approach in the oil and gas industry and the growing participation of Brazilian and foreign private investors increases the chances of future partnerships. The Petrobras Divestment Plan has typically been carried out through farm-in and farm-out agreements.

Bidding Rounds

The most recent and already completed concession bidding rounds include: (i) the 17th bidding round, in 2020, with the offer of 92 blocks in the Campos and Potiguar Sedimentary Basins, as well as in the offshore sedimentary basins of *Pelotas* and *Santos*, totaling an area of 53,900 km²; and (ii) the 16th bidding round, in 2019, with the offer of 36 blocks in the Campos Sedimentary Basin and in the offshore sedimentary basins of *Pernambuco-Paraíba*, *Jacuípe*, *Camamu-Almada*, and *Santos*, totaling an area of 29,300 km².

The last production sharing bidding round was the sixth production sharing bidding round, in 2019, with the offer of the following blocks: *Aram*, *Bumerangue*, *Cruzeiro do Sul*, *Sudoeste de Sagitário* and *Norte de Brava*.

In addition, CNPE Resolution No. 17, dated June 8, 2017, approved the adoption of a permanent offer process, which consists of the continuous offer of returned fields or fields in the process of being returned, and exploration blocks that were not awarded in previous rounds or were returned to the ANP. ANP holds a session for the submission of offers upon receipt of at least one declaration including an offer guarantee for each area of interest. ANP holds this session within 90 days from the date of receipt of the declaration.

The fourth cycle of the permanent offer under concession regime took place in December 2023, with the award of 192 exploratory blocks located in the Potiguar, Espírito Santo, Recôncavo Sedimentary Basins, as well as the *Pelotas*, *Santos*, *Paraná*, *Tucano*, *Amazonas*, and *Sergipe-Alagoas* sedimentary basins, totaling an area of 47,143.86 km². In addition, one marginal accumulation area located in the onshore *Amazonas* sedimentary basin was awarded, totaling an area of 57.29 km².

The second cycle of the permanent offer under production sharing regime took place in December 2023, with the award of one exploratory block located in the *Santos* sedimentary basin, totaling an area of 47,143.86 km².

Pre-Salt and Strategic Areas

The discovery of oil and natural gas in the pre-salt area in Brazil led to a new regulatory framework regarding these and other strategic areas. New laws were enacted, including: (i) Law No. 12,276/10, which authorized the federal government to assign the survey and production of oil, natural gas and other fluid hydrocarbons in pre-salt areas that are not under concession granted to Petrobras, representing up to 5.0 billion barrels of oil, which occurred in September 2010; (ii) Law No. 12,351/10, which established the production sharing regime for the pre-salt and other strategic areas; (iii) Law No. 12,304/10, which authorized the formation of the state-owned company Pré-Sal Petróleo S.A., or PPSA, whose corporate purpose is the management of the production sharing agreements executed by the MME; and (iv) Law No. 13,679/2018, which grants PPSA the right to directly carry out the sale of oil, natural gas and other fluid hydrocarbons of the federal government. Under the production sharing regime, the Brazilian government awards agreements to private companies for the exploration and production of oil and natural gas, pursuant to which these companies are entitled to a share in the production.

Conversely, under the concession regime, the concessionaire is the owner of the entire production, subject to the payment of the government's share, pursuant to the Brazilian Oil Law and the relevant concession agreements. Under the production sharing agreement, the contractor performs the exploration, assessment, development and production activities at its own risk. In the event of a commercial discovery, the contractor receives, as reimbursement, the production volume corresponding to its incurred exploration expenses also known as cost oil. In addition to cost oil, the contractor receives the production volumes corresponding to payable royalties and profit oil or excess oil, in the proportion, conditions and terms set forth in the agreement. The structure proposed by the Brazilian government also includes these traditional concepts of cost oil, whose limits are determined in each agreement, and profit oil. In bidding processes, agreements are awarded to the companies that offer the highest percentage of profit oil to the government, above the percentage limit set forth in the bidding process. In a production sharing partnership, a state-owned company is specially formed to act on behalf of the government.

Pursuant to Law No. 13,365/16, which amended Law No. 12,351/10, or the Sharing Regime Law, Petrobras is no longer required to act as operator in all the blocks under the production sharing regime. Pursuant to the amended Sharing Regime Law, CNPE will grant Petrobras the right of first refusal to operate the blocks to be awarded.

The partnership between the Brazilian government and the consortium, which includes Petrobras and private partners, is managed by an operating board. The Brazilian government elects 50% of the members of the operating board, including the chairman, who has the casting vote and veto rights. The operating board is responsible for all important management and operating decisions regarding the partnership, including decisions on investments and production segregation arrangements, or production unitization.

The first production sharing bidding round occurred in 2013, with the offer of the *Libra* oil field, in the Campos Sedimentary Basin. Even though eleven companies confirmed their interest in the offer, only one consortium, comprising Petrobras, Shell, Total, CNPC and CNOOC, submitted an offer, thus winning the bid. CNPE authorized the seventh and eighth production sharing bidding rounds, the 18th concession bidding round, and the aforementioned permanent concession offer.

More recently, CNPE Resolution No. 26/2021 was published, allowing for the first time, bidding rounds of blocks under the production sharing regime through the permanent offer model. Until then, the permanent offer only covered areas to be offered under the concession regime. In December 2023, the ANP carried out the fourth bidding round of the permanent concession offer. A total of 192 exploratory blocks were auctioned in all nine sedimentary basins that had areas on offer, a record number in the bids held to date in this modality. The previous record was recorded in the Third Cycle, when 59 blocks were sold.

Brazilian Competition Law

Certain asset acquisition transactions and the formation of joint ventures, consortia and collaborative agreements (the so-called *Contratos Associativos*), including those conducted under farm-in and farm-out agreements, are subject to the Brazilian Pre-Merger Control System if they meet the applicable thresholds, pursuant to Law No. 12,529, dated November 30, 2011. Accordingly, these transactions may be subject to both ANP's and CADE's prior approval and cannot be completed before such approvals are duly granted, pursuant to Article 88 of Law No. 12,529/2011. Failure to comply with this obligation exposes all the parties involved in the transaction to the following consequences: (i) fine ranging from R$60,000 to R$60.0 million; (ii) the transaction may be deemed null and void; and (iii) opening of an investigation for anticompetitive behavior due to the practices carried out post-closing.

Environmental Regulations

In view of the specific requirements set forth in the laws of certain locations in which we operate, a portion of our activities is subject to environmental licenses issued by federal, state or municipal environmental authorities. We strive to meet and adjust to the terms and conditions ser forth in these licenses.

Environmental Licensing

The Brazilian Environmental Policy, established by Law No. 6,938/1981, provides that all potentially or effectively polluting activities are subject to an environmental licensing process (without prejudice to other licenses and authorizations legally required). The environmental licensing process encompasses three different stages, including the granting of the preliminary license (*licença prévia*), the installation license (*licença de instalação*) and the operating license (*licença de operação*). However, this licensing process may be simplified, encompassing only one stage, upon the issuance of the simplified environmental license (*licença ambiental simplificada*) or the single environmental license (*licença ambiental única*), subject to the laws and regulations of the involved licensing agencies and, to different extents, the characteristics of each project, including the region, size, construction characteristics, polluting potential and level of impact, among others.

In any event, the aforementioned environmental licenses expire and must be periodically and timely renewed. Pursuant to Complementary Law No. 140/2011, the renewal of any environmental license must be requested at least 120 days before the expiration date to be automatically extended until the environmental agency issues its final decision. Certain environmental licenses may set forth technical conditions for the development of activities that have an environmental impact, under penalty of cancellation of the relevant license.

Failure to obtain licenses or authorizations from the competent environmental agencies for the conception, construction, change, expansion and operation of activities and/or potentially polluting projects, or operations in disagreement with the issued environmental licenses, as well as to the non-compliance with the conditions set forth on such licenses may subject offenders to criminal and administrative penalties, in addition to the obligation to repair any environmental damages. Applicable administrative penalties to this issue include fines, ranging from R$500.00 to R$10.0 million, pursuant to Federal Decree No. 6,514/2008, which regulates Federal Law No. 9,605/1998. State and municipal governments may provide for environmental protection and impose fines in different amounts.

Solid Waste

The Brazilian Solid Waste Policy, established by Federal Law No. 12,305/2010, sets forth the principles, instruments, guidelines, targets and actions related to the integrated and environmentally adequate management of solid waste, except radioactive waste, which is subject to specific laws. Generators of solid waste are responsible for its environmentally adequate segregation, storage, transportation and final disposal, and may be required to repair any environmental damages resulting from the inadequate management of this waste.

The Brazilian Solid Waste Policy established the shared responsibility, pursuant to which the tasks and costs involved in the different stages of management of solid waste are shared by the entire chain, in proportion to the liability of each of the involved parties. Accordingly, even though the civil liability for repairing environment damages is joint and several, strict and tort-based, the administrative liability for managing solid waste divides the burden among the parties involved in the chain.

Accordingly, the engagement of third parties to perform any of the stages of the management of solid waste, including the environmentally adequate final disposal, does not exempt us from liability for any environmental damage caused by the engaged third parties.

The inadequate disposal of solid waste may subject offenders to administrative, criminal and/or civil liability.

Under administrative liability, pursuant to Federal Decree No. 6,514/2008, discharging solid, liquid or gaseous wastes or debris, oils or oily substances in disagreement with the requirements established by legislation, as well as failure, by the party with an obligation, to dispose of products, oil derivatives, packages, residues or substances in an environmentally appropriate manner when so determined by legislation, subjects offenders to penalties, including fines of up to R$50.0 million. Under criminal liability, pursuant to Federal Law No. 9,605/1998, or the Brazilian Environmental Crimes Law, discharging solid, liquid or gaseous wastes or debris, oils or oily substances in disagreement with the requirements established by legislation, subjects offenders to imprisonment for one to four years and fine. In the event of unintentional crime, offenders are subject to imprisonment for six months to one year and fine. These penalties may be applied without prejudice to the obligation to repair the environmental damages.

Contaminated Areas

Contaminated areas are sites that have been confirmedly polluted by the disposal, accumulation, storage or infiltration of substances or waste, resulting in negative impacts on the assets to be protected.

Pursuant to Brazilian environmental laws, the owner and/or possessor of a real estate property located in an environmentally contaminated area may be held liable and required to remediate and repair the associated damages, whether they caused the damages or not, by determination of environmental agencies and the Prosecutor's Office.

Environmental civil liability for repairing the contamination of the soil and underground waters is strict, joint and several and is considered an obligation that accompanies the real estate property.

Causing pollution of any nature, in levels that result or may result in damage to human health or that cause the death of animals or a significant destruction of biodiversity is an administrative infraction that subjects offenders to administrative fines ranging from R$5,000.00 to R$50.0 million, as well as an environmental crime, and imposes the obligation to repair the environment.

Environmental Liability

Environmental liability encompasses the following different and independent liabilities: (i) civil liability; (ii) administrative liability; and (iii) criminal liability. These liabilities are different and independent because one single action may result in environmental liability in these three levels, including the application of administrative and criminal penalties, in addition to the obligation to repair the damage caused. Conversely, the lack of liability in any of these levels does not necessarily exempt offenders from liability in the other levels.

Environmental civil liability is strict, *i.e.*, it is not subject to the existence of fault. The confirmation of the damage and the causation between the damage and the activity of a company suffices to subject offenders to the obligation of repairing the environment.

Irrespective of the existence of fault, the party that causes the pollution is required to indemnify and/or repair the damages caused to the environment and third parties as a result of the party's activities. Accordingly, environmental civil liability is attributed to the party that is directly or indirectly responsible for the activity that caused the environmental damage. Moreover, if the activity is conducted by more than one party and it is not possible to identify the contribution of each party to the environmental damage, government agencies and courts have been imposing joint and several liability on the party that is able to bear the entire environmental damage, having right of recourse against the other involved parties.

Environmental civil liability is strict and joint and several, not subject to the statute of limitation. As a result, the engagement of third parties to provide any service in our units, including the suppression of vegetation, and the transportation and final disposal of waste, does not exempt us from liability for any environmental damages caused if these third parties do not perform their activities in compliance with environmental regulations.

The Brazilian environmental law provides for the piercing of the corporate veil of entities that commit environmental infractions, whenever it represents an obstacle for repairing environmental damages. The piercing of the corporate veil applies under civil liability.

Under criminal liability, the Brazilian Environmental Crimes Law applies to any individual or company that contributes to the commitment of environmental crimes, upon confirmation of intent, *i.e.,* the free will to produce the result, or fault, *i.e.*, the lack of the necessary care, including negligence, recklessness or lack of skill.

Accordingly, the imposition of criminal liability requires the confirmation of an action or omission, and the practiced conduct must be provided for as a crime under the relevant laws.

Individuals are subject to imprisonment; restriction of rights, including community services, temporary interdiction of rights, partial or full suspension of activities, pecuniary indemnification or the obligation to stay at

home at night (*recolhimento noturno domiciliar*); and fines. Restriction of rights is an independent penalty and may replace imprisonment in certain cases.

Companies are individually, cumulatively or alternatively subject to the following penalties: restriction of rights, including the partial or full suspension of activities, temporary interdiction of facilities, construction or activity, or prohibition to contract with the government and obtain government subsidies, incentives or donations; community services; and fine.

Individuals and companies are subject to fines ranging from one-third of to 1,800 times the minimum wage in effect at the time of the facts, based on the culpability of the agent.

Under administrative liability, pursuant to the Brazilian Environmental Crimes Law, regulated by Federal Decree No. 6,514/2008, all actions or omissions that violate the provisions on the use, enjoyment, promotion, protection and recovery of the environment is an environmental administrative infraction. Administrative liability derived from an action or omission of the agent that results in the violation of any rule on environmental preservation, protection or regulation and, similarly to criminal liability, is subject to the confirmation of fault or intent, pursuant to the court precedents of the Superior Court of Justice (*Superior Tribunal de Justiça*). However, certain environmental agencies continue to impose strict administrative liability regarding environmental infractions.

Administrative penalties include warning; fines of up to R$50.0 million, which may be doubled or tripled in the event of recidivism; destruction of the product; suspension of the sale and manufacturing of the product; interdiction of the construction or activity; demolition of construction; suspension of tax benefits and the cancellation or interruption of credit facilities granted by government banks, in addition to the prohibition to contract with the government.

The Prosecutor's Office and environmental agencies may initiate administrative procedures to investigate any environmental damages that may be attributed to our activities. In these cases, we may be required to enter into conduct adjustment instruments (*Termos de Ajustamento de Condutas*), or TACs, and/or generic commitment instrument (*Termos de Compromissos*), or TCs, with the relevant authorities, assuming specific obligations for a certain time. TACs and TCs are out-of-court enforceable instruments and, as a result, in the event of full or partial non-compliance with TACs and/or TCs, we may be subject to risks and penalties, including the payment of fines, enforcement of these instruments and the filing of proceedings with courts.

In addition to licenses, we may be required to obtain certain authorizations and regulations issued by environmental agencies, including in regard to the suppression of vegetation, use of water resources, treatment of effluents and management of waste, among others. Also, we are required to observe applicable rules to preserve and (re)forest protected areas as well as rules related to impacts on traditional communities and historical heritage.

Data Protection and the Brazilian General Data Protection Law

Data privacy and protection laws have evolved in recent years to provide for more detailed rules on how companies may process personal data, *i.e.*, any information related to an identified or identifiable individual.

Until August 2018, when the Brazilian General Data Protection Law (Law No. 13,709/18, or LGPD), was enacted, practices related to the processing of personal data were regulated by sparse legislation and industry-specific regulations.

With the enactment of LGPD on September 18, 2020, Brazil has adopted more robust rules for the processing of personal data, with stronger requirements, applicable across all industries. Inspired by the European Union's General Data Protection Regulation (the GDPR), the LGPD creates a framework in which individuals have more control over their personal data and companies that process this type of information have more responsibilities.

Privacy rights in Brazil are also ensured by the Brazilian Federal Constitution and Law No. 10,406/02, or the Brazilian Civil Code of 2002. Besides, Brazilian Constitutional Amendment No. 115 of February 10, 2022, included the protection of personal data among the fundamental rights and guarantees provided for in the Brazilian Federal Constitution.

The LGPD applies to public and private entities, regardless of the country where they are based or where the data is hosted, provided that (i) the data processing activity is carried out in Brazil; (ii) the data processing activity is intended to offer goods or services to, or processes data of, individuals located in Brazil; or (iii) the personal data involved in the processing have been collected in Brazil. The Brazilian General Data Protection Law applies to all industries and businesses processing personal data and is not restricted only to data processing activities carried out via digital media and/or over the internet but is also applied in the physical environment.

The LGPD provides for, among others, the obligation of transparency by data controllers, the rights of data subjects, the obligation to define legal basis for processing personal data, the obligation to appoint a data protection officer (*encarregado*), rules applicable to information security incidents involving personal data, , the implementation of a privacy governance program as a good practice, as well as the requirements and obligations for international data transfers.

In addition, the LGPD provides for the role of the National Data Protection Authority (*Autoridade Nacional de Proteção de Dados*), or ANPD, which is responsible for protecting, implementing and inspecting compliance with the LGPD, as well as for: (i) investigation, including the power to enact standards and procedures, interpret the LGPD and request information from data controllers and processors; (ii) enforcement, in cases of violations, via administrative proceedings; and (iii) education, including disseminating information and fostering awareness of the LGPD and safety measures, promoting best practices for services and products that facilitate data control, and producing studies about national and international practices for the protection of personal data and privacy, among others.

We have a personal data privacy governance program to comply with the guidelines and requirements presented by the LGPD. In addition, we implement best adequacy practices in all corporate and business areas aim to provide greater protection of personal data in any operation involving the processing of personal data. Furthermore, we establish data protection policies and safeguards based on a regular and systematic monitoring and assessment of privacy impacts and risks.

On the date of this Offering Memorandum, we adopted measures in compliance with the LGPD, such as the appointment of a personal data protection officer (DPO), which is a specialized legal consultancy office to perform such role (DPO as a service).

The data protection officer (DPO as a service) is responsible, among others, for providing the necessary technical and legal support to assist 3R in the effective implementation of its Privacy Governance Program, to ensure that 3R processes personal data in compliance with privacy and data protection rules, as well as respond to data subject requests and interact with the ANPD.

Our privacy and personal data protection governance program demonstrates our commitment to adopting internal processes and policies that ensure comprehensive compliance with standards and good practices relating to data protection and the privacy of data subjects, as well as cybersecurity.

3R also implemented privacy notices to provide information on the processing activities carried out by 3R: (i) Internal Privacy and Data Protection Notice, which applies to all internal employees who had a relationship, at some point, with us; and (ii) Privacy and Data Protection Notice, that is available on our website, with the aim of bringing transparency to data subjects such as customers, business partners, investors and any other interested party that has a relationship with 3R Petroleum, as well as service providers, suppliers and all groups and companies that have a relationship, at some point, with the Company.

For additional information, see "*Risk Factors—Risks Relating to Us—Our business, practices and policies are subject to risks associated with non-compliance with the Brazilian General Data Protection Law and could be adversely affected by the application of penalties, including fines and indemnifications*."

RESERVES REPORT SUMMARY

This is a summary of the Reserves Report prepared by DeGolyer and MacNaughton, which is included as Annex A to this Offering Memorandum, prepared by specialists in the oil and gas industry. It includes financial and operating information and certain forward-looking statements, including information regarding the estimated project schedule, date to begin production and investment, cost and production estimates. This summary does not include all the information you should consider before investing in the Notes. Before making an investment decision, you should read this Offering Memorandum in its entirety, including, but not limited to, the Reserves Report, included elsewhere in this Offering Memorandum, the sections "Cautionary Note to Investors Concerning Prospective Resources, Contingent Resources, Reserves and Projections," "Forward-Looking Statements," "Presentation of Financial and Other Information," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as our unaudited interim financial information and our audited financial statements, included elsewhere in this Offering Memorandum.

Reserves Report

The Reserves Report prepared by *DeGolyer and MacNaughton* presents estimates of the proved, probable, and possible oil and gas reserves of certain fields located in Brazil.

The estimated net proved, probable, and possible reserves, as of December 31, 2022, of the properties evaluated in the Reserves Report are summarized as follows, expressed in thousands of barrels and millions of cubic feet:

	Net Reserves		
	Oil, Condensate and C_{5+} (*in thousands of bbl*)	**Sales Gas (*in millions of cubic feet*)**	**LPG (*in thousands of bbl*)**
Proved Developed			
Producing	142,011.71	135,966.00	0.00
Non-Producing	62,385.70	101,076.00	5,437.00
Total Proved Developed	**204,397.41**	**237,042.00**	**5,437.00**
Proved Undeveloped	118,778.39	33,335.00	1,652.00
Total Proved	**323,174.80**	**270,377.00**	**7,089.00**
Probable	138,333.76	90,458.00	1,896.00
Proved *plus* Probable	**461,508.56**	**360,835.00**	**8,985.00**
Possible	95,508.81	101,367.00	1,680.00
Proved *plus* Probable *plus* Possible	**557,017.37**	**462,202.00**	**10,665.00**

Notes:
1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of the Reserves Report, to the end of the concession extensions as advised by 3R, or to the end of 2052 as a time limit requested by 3R, whichever occurs first.
3. Projected technical forecasts and estimated economic limits are beyond the expiration dates of the concession agreements. 3R has represented meet the conditions required by ANP to obtain concession extensions. Based on this representation, and at 3R's request, the reserves evaluated in the Reserves Report consider the potential concession extensions.

The estimated future net revenue and present worth (at a discount rate of 10%) attributable to 3R's interest in the proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves, as of December 31, 2022, of the properties evaluated under the economic assumptions described in the Reserves Report are summarized as follows, expressed in thousands of U.S. dollars:

	Future Net Revenue (*in thousands of US$*)	**Present Worth at 10 Percent (*in thousands of US$*)**
Proved Developed Producing	3,521,018	2,147,243
Proved Developed	6,115,767	3,527,039
Total Proved	9,048,888	4,803,014

Proved plus Probable	13,227,241	6,471,078
Proved plus Probable plus Possible	17,009,509	7,890,702

* Values for probable and possible reserves have not been risk adjusted to make them comparable to values associated with proved reserves.

The estimated net contingent resources, as of December 31, 2022, of the properties evaluated in the Reserves Report are summarized as follows, expressed in millions of cubic feet:

	Net Contingent Resources		
	1C	**2C**	**3C**
Sales Gas (*in millions of cubic feet*)	52,232.00	82,196.00	94,734.00

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the contingent resources evaluated in the Reserves Report.
3. The contingent resources estimated in the Reserves Report have an economic status of Economically Viable, as defined in the Definition of Contingent Resources section of the Reserves Report.

The estimated potential future net revenue and potential net worth at 10% attributable to the evaluated interest in the contingent resources, as of December 31, 2022, of the properties evaluated under the economic assumptions described in the Reserves Report are summarized as follows, expressed in thousands of U.S. dollars (10^3U.S.$):

	Potential Future Net Revenue (*in thousands of US$*)	**Potential Present Worth at 10 Percent (*in thousands of US$*)**
1C	101,876	58,289
2C	226,943	115,668
3C	276,661	134,135

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the contingent resources evaluated in the Reserves Report.
3. The contingent resources estimated in the Reserves Report have an economic status of Economically Viable, as defined in the Definition of Contingent Resources section of the Reserves Report.

BUSINESS

Overview

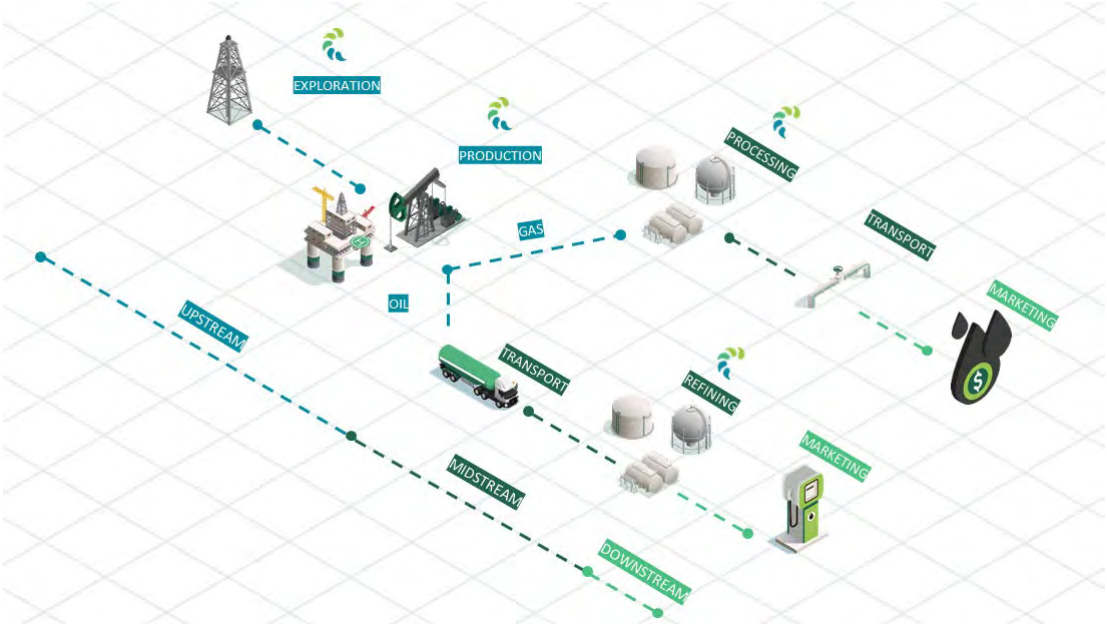
We are one of the largest publicly listed independent oil and gas producers in Latin America in terms of production volume and our main strategy is focused on the redevelopment of mature oil and gas fields.

"**R**edevelop, **R**evitalize and **R**ethink" are the three "R"s that form not only our identity, but also the pillars of our strategy to increase production and reserves in mature oil and gas fields, and to support our position as a leading independent oil producer in Brazil and Latin America.

We are ranked by the ANP as a class "A" operator, which enables us to operate in all types of oil and gas fields in Brazil, from onshore to ultra-deep-water offshore fields. We have a qualified technical team that has a successful track record in (i) revamping mature oil fields, and (ii) structuring complex mergers and acquisitions and funding transactions. As certified by *Degolyer and McNaughton*, our assets had proved and probable (2P) oil and gas reserves of 516.0 Mmboe as of December 31, 2022.

While our core business is the exploration, production and trading of oil and gas (upstream segment of the production chain, or the "exploration and production" or "E&P" segment), our portfolio includes assets in the processing, refining and marketing of oil and gas derivatives (midstream and downstream segment, or the "mid and downstream" segment), which diversifies the range of products we sell.

The following chart shows the flow of our oil and gas operations:



In accordance with our business plan, our strategy is to build our portfolio through opportunistic acquisitions of assets that (i) have been operational for many years; (ii) have proved oil reserves certifiable by independent experts; (iii) we may be able to increase production based on investments with accelerated returns (we use return on investment as a decision-making tool and, accordingly, we consider the time to achieve the expected returns and the amount to be disbursed); (iv) have optimized infrastructure that can be operated with a lean structure; and (v) potentially have (a) synergy with our other assets and (b) can be operated at competitive lifting costs.

Throughout our history, we have acquired a comprehensive portfolio of oil and gas production assets in Brazil following a divestment plan of onshore, shallow-water and offshore oil fields executed by Petrobras, (the "Petrobras Divestment Plan").

In summary, we have positioned ourselves as a strategic company in the oil and gas sector, with a portfolio and an investment thesis anchored in oil and gas production. Our current focus is to integrate and optimize the operations of the assets in our portfolio.

The table below sets forth (i) the assets that are currently operated by us, (ii) the assets that are in process of being acquired by us and (iii) additional information regarding each one of these assets:

Cluster	Type and Reserves	Location in Brazil / Basin	% Working interest	Status	Concession Term/ Maturity
Macau Cluster	Onshore and Offshore (shallow water) – Oil & Gas	Potiguar Sedimentary Basin	100% held by 3R RNCE	In operation by 3R.	From 2025 to 2052 (depending on each field)
Rio Ventura Cluster	Onshore – Oil & Gas	Recôncavo Sedimentary Basin	100% held by 3R Bahia	In operation by 3R.	From 2025 to 2045 (depending on each field)
Areia Branca Cluster	Onshore – Oil	Potiguar Sedimentary Basin	100% held by 3R RNCE	In operation by 3R.	From 2025 to 2052 (depending on each field)
Recôncavo Cluster	Onshore – Oil & Gas	Recôncavo Sedimentary Basin	100% held by 3R Bahia[(1)]	In operation by 3R.	From 2025 to 2039 (depending on each field)
Fazenda Belém Cluster	Onshore – Oil	Potiguar Sedimentary Basin	100% held by 3R RNCE	In operation by 3R.	2025
Peroá Cluster	Offshore – Gas	Espírito Santo Sedimentary Basin	100% held by 3R Offshore[(2)]	In operation by 3R.	2025
Papa-Terra Cluster	Offshore – Oil & Gas	Campos Sedimentary Basin	62.5% held by 3R Offshore[(3)]	In operation by 3R.	2032
Potiguar Cluster	Onshore and Offshore (shallow water) – Oil & Gas	Potiguar Sedimentary Basin	100% held by 3R Potiguar	In operation by 3R.	From 2025 to 2052 (depending on each field)
Pescada Cluster	Offshore (shallow water) – Oil & Gas	Potiguar Sedimentary Basin	100% held by 3R Pescada[(4)]	In operation by Petrobras. Acquisition of 65% working interest by 3R pending consummation (expected for 2024).	2025

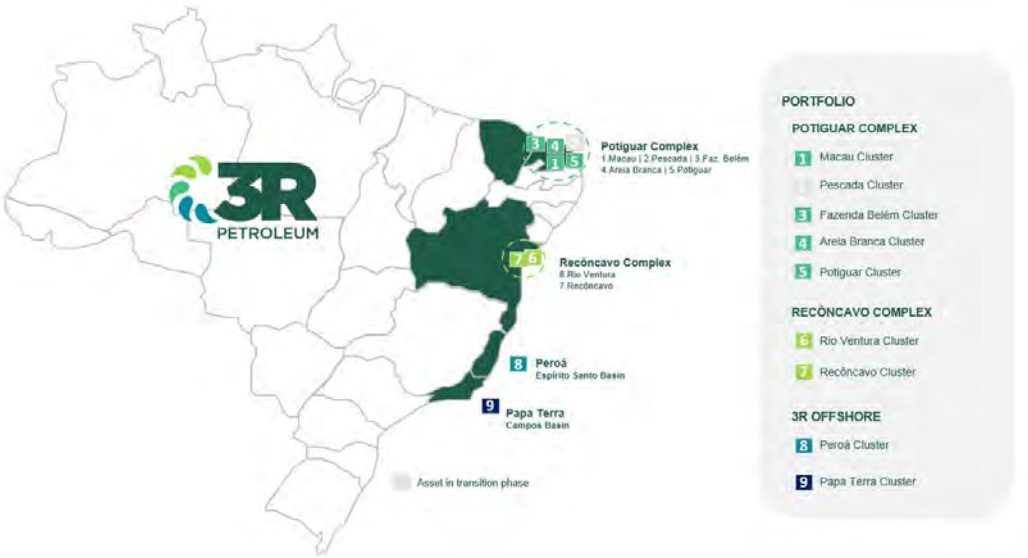
(1) Except for the Cambacica field, which is jointly held by 3R Bahia (75%) and Sonangol Hidrocarbonetos Brasil Ltda. (25%); and the Guanambi field, which is held by 3R Bahia (80%) and Sonangol Guanambi Exploração e Produção de Petróleo Ltda. (20%).
(2) 3R owns 85% of 3R Offshore's equity interest, which represents the equivalent of an 85% indirect working interest in the Peroá Cluster and related assets.
(3) 3R owns 85% of 3R Offshore's equity interest, which represents the equivalent of a 53.1% indirect working interest in the Papa-Terra Cluster and related assets.
(4) As of the date of this Offering Memorandum, we already own 35% of the Pescada Cluster and, on July 9, 2020, we entered into a Sale and Purchase Agreement related to the remaining 65% working interest in this asset. The closing of this transaction remains subject to the satisfaction of customary conditions precedent and is expected to occur in 2024. After such closing date, we will be the sole owner and operator of the Pescada Cluster.

In terms of concession rights, as of the date of this Offering Memorandum, we hold a (i) 100% working interest in the concession rights relating to the Macau Cluster; (ii) 100% working interest in the concession rights relating to the Rio Ventura Cluster; (iii) 100% working interest in the concession rights relating to the Areia Branca Cluster; (iv) 100% working interest in the concession rights (except for the *Cambacica* and *Guanambi* fields) relating to the Recôncavo Cluster, (v) 100% working interest in the concession rights relating to the Fazenda Belém Cluster, (vi) 100% working interest (held by 3R Offshore) in the concession rights relating to the Peroá Cluster (representing an 85% indirect working interest held by 3R), (vii) 62.5% working interest (held by 3R Offshore) in the concession rights relating to the Papa-Terra Cluster (representing a 53.1% indirect working interest held by 3R), (viii) 100% working interest in the concession rights relating to the Potiguar Cluster and (ix) 35% working interest in the concession rights relating to the Pescada Cluster.

On July 9, 2020, we (through 3R Pescada) entered into a Sale and Purchase Agreement with Petrobras to purchase the remaining 65% of the working interest in the concession rights related to the Pescada Cluster (the "Pending Acquisition"). Upon consummation of this acquisition, which is expected to occur in 2024, we will own a 100% working interest in and will be the sole operator of the Pescada Cluster.

For further information on our asset portfolio and our concession agreements, see "*Business—Concession Agreements.*"

The chart below illustrates the location of our operating assets, as of the date of this Offering Memorandum:



In connection with the acquisition of the Potiguar Cluster, we also acquired the Guamaré Industrial Asset, which has a complete oil and gas infrastructure in the state of Rio Grande do Norte, including the processing, refining, storage, transport and outflow of oil and natural gas. For more information on the Guamaré Industrial Asset, see "*Business—Our Distribution Process—Potiguar Cluster Oil and Gas Distribution.*"

Our Competitive Strengths

We believe that certain of our competitive strengths are:

Part of our business generates stable and predictable sales.

We have entered into off-take agreements containing take-or-pay provisions for the purchase of a certain amount of our production volume, subject to quality specifications. Those agreements provide us with stable and predictable sales for part of our oil and gas production. We also have off-take agreements to sell part of the oil derivative products output from the *Clara Camarão* refinery. The rest of our production is sold through sales contracts, with no minimum volume required, and through sales offers made by us. For more information, see "*Business—Our Oil and Gas Sale Agreements*."

Most of our revenue derives from the sale of oil, natural gas and the oil derivatives that we produce. In the nine-month period ended September 30, 2023, and in the year ended December 31, 2022, 42.1% and 81.6% of our net revenue derived from sales of oil, respectively, and 10.6% and 18.3% derived from the sale of gas, respectively. In the nine-month period ended September 30, 2023, by contrast, 46.0% of our net revenue derived from the sale of oil derivatives.

All of our off-take agreements may be extended for subsequent periods, by the mutual agreement between the parties. We have entered into off-take agreements with: (i) Dax Oil, to sell the oil production of the Rio Ventura Cluster, with expiration date in 2025, (ii) Companhia de Gás da Bahia, or Bahiagás, to sell the natural gas production of the Recôncavo and Rio Ventura Clusters, with expiration date in 2024, (iii) Companhia de Gás do Espírito Santo, or ES Gás, to sell the natural gas production of the Peroá Cluster, which expires in 2025, and (iv) Raízen, to sell the very low sulfur fuel oil (VLSFO) bunker production of the *Clara Camarão* refinery, which expires in 2028.

Our business model focuses on simple mechanisms for improving the recovery factor of under-explored mature oil and gas fields.

We conduct our operations based on well-known and simple mechanisms such as: (i) reactivating idle wells, (ii) pull-in interventions (to replace piping and well-bottom pumps), (iii) workover activities (executed to access less depleted reserves with a static pressure closer to the original pressure, blocking off reserves with high water production), (iv) repressuring oil wells by injecting water to offset extracted volumes, and (v) improving or increasing the fluid injection volume, as well as increasing the drainage network by drilling new vertical, horizontal and directional wells in reserves considered proved or possible by the certifiers. Accordingly, we do not rely on any specific, ultra-modern or disruptive technologies, which would require significant investments.

According to data from ANP, the average recovery factor (which is the volume of extracted oil from a specific field reservoir compared to the total volume of oil in place in such reservoir) in Brazil is close to 20%, while the world average is close to 35%. In relation to our assets, the recovery factor of our portfolio is below the Brazilian recovery factor. As a result, our business plan is to increase the recovery factor as we improve the operational efficiency through the revitalization and redevelopment of those assets.

Since we took over the operation of the assets that comprise our portfolio, we have been able to implement strategies to optimize production processes, reducing costs as we increase production. The operational and financial results that we achieved since 2020 support the potential of the assets that we operate, and our technical capacity to increase the recovery factor of these assets will be further expanded as we implement a more focused and lean operation.

Our assets are strategically located.

We currently have nine clusters of oil and gas fields in our portfolio, five of which are located in the Potiguar Sedimentary Basin, two are located in the Recôncavo Sedimentary Basin, one is located in the Espírito Santo Sedimentary Basin and one is located in the Campos Sedimentary Basin. For more information, see "—Overview." Proximity among these assets allows us to gain scale in local production and develop operating and financial

synergies through an integrated management. Potential optimization initiatives include the integration of teams and suppliers, and the centralization of logistics, telecommunications and field control. Additionally, our portfolio includes assets located in the Brazilian coast and/or shallow waters with implemented logistics infrastructure, as well as an asset located in deep waters, diversifying our portfolio and, therefore, minimizing operational risks.

Moreover, the integration of our assets in the state of Rio Grande do Norte (Macau, Potiguar, Areia Branca and Pescada Clusters), from which the total production is sent to the Guamaré Industrial Asset, allows the integration of upstream activities (exploration, production and trading) with midstream and downstream activities (processing, refining and marketing of oil and gas derivatives), which also creates value in our overall production process.

Our portfolio has a resilient profile.

We are a low-cost company in terms of operating, general and administrative expenses. Most of our assets are located onshore and in shallow-water and close to the coast, and our facilities are directly connected to the land, making them operationally efficient and with competitive lifting costs, especially when compared to Brazilian and international industry average market players. For instance, in the third quarter of 2023, our lifting costs were US$18.5 per BOE, as compared to other players in the market. This makes us resilient in challenging scenarios of Brent Oil Price fluctuations. Most of the crude oil produced by our clusters is shipped through pipelines that connect wells to processing plants. Unlike deep and ultra-deep offshore wells, we do not need to use oil tankers to ship our production.

Our corporate structure, which is tailored for the entire asset portfolio, also allows for a broad dilution of fixed costs and integration of the organizational structure, with consequent gains in operational and financial efficiency. Finally, the proportion of production on land and shallow waters generates flexibility in the application of our capital expenditures, considering that the mobilization time for interventions in this area are significantly shorter than the capital expenditure plan for offshore operations. In this sense, we are able to better manage oil prices stress scenarios by calibrating our capital expenditure plan, supported by the possibility of selecting projects with better returns.

High ESG standards

We conduct our activities aiming to comply with the highest levels of corporate governance, sustainability, environmental protection and social responsibility practices.

We also seek to positively interact with the communities of the locations in which we operate, providing new opportunities for them to prosper through the creation of jobs and fostering the local economy. We offer to our employees a robust career plan, with personal and professional growth potential, including stock option plans and the opportunity to become our shareholders.

We are developing our ESG standards connecting our strategic plan with what we believe to be the best ESG guidelines. In 2023, we published our first sustainability report, for the year 2022, following the standards of the Global Reporting Initiative (GRI). The sustainability report encompasses environmental, social and governance aspects and indicators relating to the main material themes identified for the business plan. This is a relevant milestone in the evolution of our Sustainability Journey, as it increases transparency about the projects, initiatives and results achieved, as well as creating an opportunity for self-evaluation for a sustainable cycle of generating value for the entire society.

Our business model carries a series of opportunities that can contribute to the socio-environmental aspect, namely: (i) minimization of gas emissions and water disposal, (ii) generation of employment and income for communities adjacent to the operating zones, (iii) application of a strict ethics and integrity program in the industry as a whole, among others.

Our Strategy

Our main strategies are:

Position ourselves to continue to capture opportunities in the oil and gas sector.

We are the company that acquired the largest number of assets from Petrobras in the Petrobras Divestment Plan, which clearly shows our strong position as an oil and gas consolidator of assets in production, supported by the technical qualifications of our team in disruptive acquisitions. We maintain our fiduciary duty to evaluate opportunities that generate value for our investment thesis and may continue to conduct acquisitions in the future.

We are rated as a class "A" operator by ANP, and therefore we are authorized to operate production fields located both onshore, on shallow water and deep waters (offshore), including pre- and post-salt. This "A" qualification gives us flexibility to diversify our portfolio between different producing areas, favors our participation in the process of acquiring assets that require an "A" qualification, and creates opportunities for partnerships with other companies that require such qualification for its counterparties. Therefore, we are well-positioned to evaluate potential business opportunities in the oil and gas industry, as compared to our peers.

Continuously evaluate opportunities to optimize the monetization of our products.

Our portfolio includes oil and natural gas production assets. We believe that the exposure to both types of hydrocarbons minimizes the risk of concentration in a specific segment and diversifies our revenue sources. Our business plan is based on the strategy of increasing efficiency in assets that we operate, reducing costs and increasing production scale, through the revitalization of the mature fields and the infrastructure that supports their operation.

In relation to oil production, we constantly evaluate opportunities to: (i) access new clients and/or improve the terms of current take-or-pay and/or spot sales contracts with third parties, whether in the local market or through exports through our own infrastructure and (ii) refine the majority of the oil produced at the Potiguar Complex using our own refining units, the *Clara Camarão* refinery, and our own infrastructure to treat, store and sell the refined output.

Regarding gas production, we constantly evaluate opportunities to: (i) negotiate take-or-pay and/or spot sales contracts with third parties, and (ii) diversify the portfolio of clients, as we access companies that are focused on compressed natural gas (CNG), liquefied natural gas (LNG), and interested in power generation through gas, known as "gas-to-wire" players. Alternatively, the produced gas can be used as an input to improve production of some of the heavy oil fields that we operate, through the generation and injection of steam into the reservoirs.

In relation to the oil derivatives that are produced at the *Clara Camarão* refinery, those are traditionally sold to local distributors, but we also have commercial flexibility to export them to other regions through cabotage, using our private waterway terminal that is part of the Guamaré Industrial Asset.

Assess strategic partnerships to obtain complementary experiences, technical know-how and financial support and mitigate our risk exposure.

One of our strategies is to continue assessing strategic partnerships to add value to different aspects of our business and obtain complementary experiences, technical know-how, financial support and mitigate our risk exposure, among others, such as the partnership we entered to with DBO (now Maha Energy Offshore (Brasil) Ltda.) for the management of offshore activities through our subsidiary 3R Offshore (which equity interests are held 85% by 3R and 15% by Maha Energy Offshore (Brasil) Ltda.). We believe these strategic partnerships may be important to enhance our operational knowhow and increase our profits and cash flow.

History

The 3R Group is focused on oil and gas exploration and production in Brazilian sedimentary basins. 3R was incorporated in 2010 and began its activities focusing on onshore and offshore exploration and production assets. We participated in several bidding rounds promoted by ANP and Petrobras Divestment Plan.

We started our operations under the name Ouro Preto Óleo e Gás S.A. ("Ouro Preto"). In 2014, we purchased an equity interest in companies held in Brazil by El Paso Óleo e Gás do Brasil Ltda., a U.S. provider of natural gas and related energy products, and therefore indirectly acquired assets in the production phase in the Espírito Santo Sedimentary Basin and in the Potiguar Sedimentary Basin, as well as other assets in the development phase.

Since 2016 to 2023 we have been participating in the Petrobras Divestment Plan, seeking to expand our portfolio with mature assets in production phase.

On February 18, 2020, Ônix, a company directly controlled by StarÔnix AG and indirectly controlled by Starboard Special Situations II Fundo de Investimento em Participações Multiestratégia, or SSFII, completed the acquisition of all shares issued by 3R and held by Angel Fundo de Investimento em Participações Multiestratégia, or FIP Angel, and became 3R's sole shareholder. On June 30, 2020, Ônix and its shareholders approved the reverse merger of Ônix into 3R, by means of which 3R assumed all of Ônix's rights and liabilities.

On July 9, 2020, we purchased the remaining 65% of the concession rights related to the Pescada Cluster from Petrobras. 3R Pescada previously held 35% of these concession rights. Upon consummation of this acquisition, 3R Pescada will be the sole owner and operator of the fields comprising the Pescada Cluster. As of the date of this Offering Memorandum, Petrobras remains the operator of the Pescada Cluster, as the operation of this cluster is being transitioned to 3R Pescada.

On November 9, 2020, we acquired 3R Petroleum e Participações S.A., an oil and gas field operator focused on revamping mature oil fields, and merged it into us, becoming 3R Petroleum Óleo e Gás S.A., our current corporate name (the "Merger"). With the Merger, we integrated a management team comprised of professionals with over 30 years of experience in revamping oil fields in South America, including in Brazil, Venezuela, Peru and Argentina. Before the Merger, 3R Petroleum e Participações S.A. was the controlling shareholder of our subsidiaries 3R Macau and 3R Fazenda Belém (both merged into 3R RNCE) and 3R Rio Ventura (merged into 3R Bahia).

In November 2020, we carried out an initial public offering of our common shares on the *Novo Mercado* listing segment of the São Paulo Stock Exchange (*B3 S.A. – Brasil, Bolsa, Balcão*) (the "B3"), which was an important step for our growth strategy and granted us access to funds for investment and creation of value for our shareholders. On March 30, 2021, our board of directors approved our capital increase, in the amount of R$822.8 million, as a result of our follow-on equity offering on the B3.

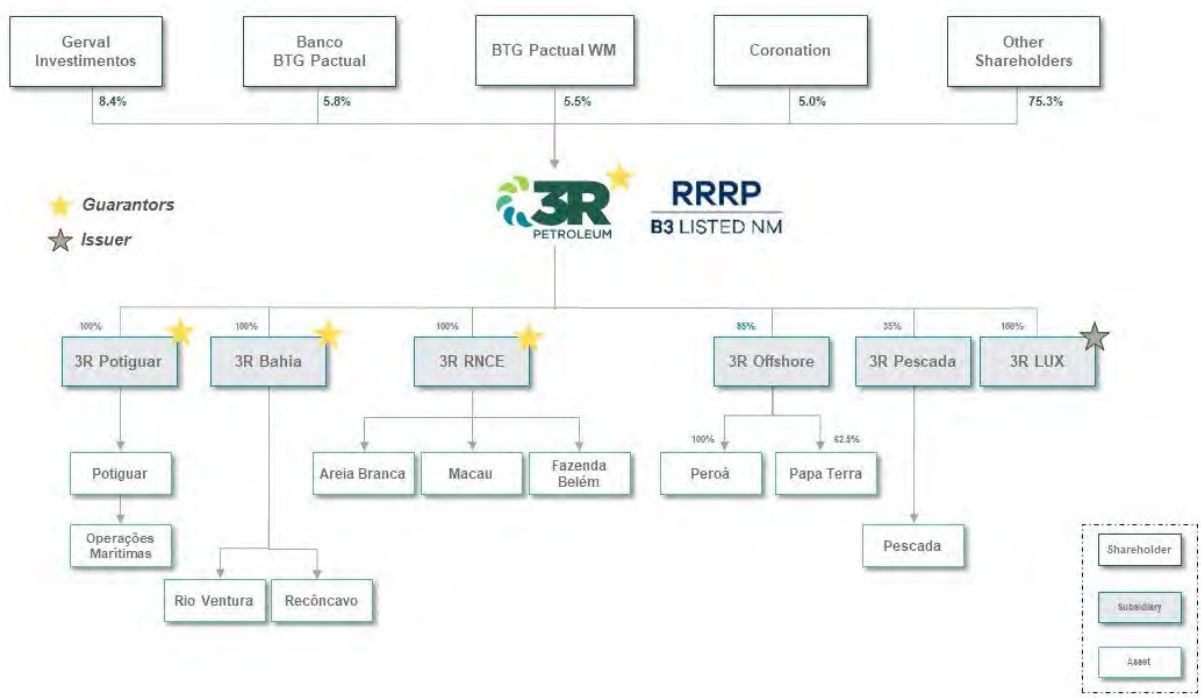
On May 6, 2021, our board of directors approved our partnership with DBO (now Maha Energy Offshore (Brasil) Ltda.), pursuant to which we agreed to the joint capitalization of 3R Offshore. Among other provisions, we and DBO agreed that 3R would remain as controlling shareholder, holding a 70% equity interest, and DBO would remain as minority shareholder, holding a 30% equity interest. On September 22, 2022, we purchased an additional 15% equity interest of 3R Offshore from DBO and, as a result, we became the holder 85% of the equity interest of 3R Offshore. As of the date of this Offering Memorandum, we hold through 3R Offshore an indirect 85% of the working interest in the Peroá Cluster, and an indirect 53.1% of the working interest in the Papa-Terra Cluster.

On November 4, 2021, our board of directors approved a capital increase, in the amount of R$2,168.1 million, as a result of our second follow-on equity offering on the B3. As of the date of this Offering Memorandum, none of our shareholders holds more than 50% of our equity interest.

In April 2023, our board of directors approved a capital increase, in the amount of R$900.0 million. As of the date of this Offering Memorandum, none of our shareholders holds more than 50% of our equity interest.

Corporate Structure

The following chart shows our corporate structure as of the date of this Offering Memorandum:



(1) 3R Offshore is 85% held by 3R and 15% held by Maha Energy Offshore (Brasil) Ltda. 3R Offshore holds 100% of Peroá Cluster and a 62.5% working interest in the Papa-Terra Cluster. Accordingly, 3R holds a 53.1% indirect working interest in the Papa-Terra Cluster and related assets.

Corporate Reorganization

On January 1, 2024, we partially implemented a corporate reorganization approved by our board of directors on December 21, 2022. This reorganization had the purpose of simplifying our organizational structure by unifying the operations of certain subsidiaries optimizing our operational management and, consequently, generate efficiencies in operational and administrative costs.

Pursuant to the corporate reorganization, our subsidiaries 3R Macau and 3R Fazenda Belém were merged into 3R Areia Branca, which was then renamed "3R RNCE S.A." On the same date, our subsidiary 3R Rio Ventura was merged into 3R Candeias, which was renamed "3R Bahia S.A."

Our Activities

We operate in the exploration and production of oil and natural gas, focusing on the redevelopment of mature onshore, shallow-water and offshore producing fields.

As explained below, the development of oil fields can be divided into the exploration, development and production phase.

- *Exploration Phase*. Crude oil and natural gas activities begin in the exploration phase through geological surveys and the drilling of exploratory wells. This phase lasts until the drilling of the exploratory well.

- *Development Phase*. If a crude oil and/or natural gas reserve is discovered upon drilling an exploratory well, it is assessed to determine if the reserve is commercially viable. It will be deemed not commercially viable if there is insufficient volume to be sold, in which case the exploration area is returned to the ANP. Once a reserve is considered commercially viable, the installation of the necessary equipment commences, until the reserve becomes operational, concluding the development phase.
- *Production Phase*. After the development phase, if the reserve is deemed commercially viable, the production phase begins. It is in this stage that the (i) necessary equipment for the extraction, production flow and treatment of fluids produced is installed, and (ii) operator recovers the investment made in the exploration phase and manages the reserves so as to extract the maximum amount of oil and gas that is commercially viable.

By definition, mature oil and gas fields are those in which production has reached its peak and are in the decline phase. However, mature fields may be revamped through the use of secondary recovery techniques or the optimization of operations.

Our business model, in general, comprises the acquisition and production of oil and gas in mature oil and gas fields, which are commercial producing fields that provide opportunities to enhance the production by means of the improvement of the recovery factor. This substantially decreases our exposure to the exploratory risks inherent to our industry since those fields were already declared commercially viable and have been producing oil and gas for at least two decades.

The improvement of the recovery factor is achieved through several revamping techniques, including (i) reactivating idle wells due to the lack of corrective maintenance, (ii) workover activities, consisting of intervening in existing wells aiming at opening new production zones in oil and gas reserves and blocking off reserves with high water production, (iii) replacing pumps and other artificial lifting methods, (iv) infill drilling, consisting of drilling of new wells between existing wells, and (v) injecting fluids to maintain or enhance the pressure of the reserves.

A small portion of our portfolio also comprises exploratory assets, which requires low investment in minimum exploratory programs.

Since the consummation of the Potiguar Cluster acquisition in June 2023, we have also incorporated midstream and downstream assets (processing, refining and marketing of oil and gas derivatives) into our portfolio in the State of Rio Grande do Norte, with emphasis on the Guamaré Industrial Asset's *Clara Camarão* refinery, UPGNs and a private waterway terminal facility. The integration between midstream and downstream facilities with our upstream assets (exploration and production of oil and gas) is an important competitive advantage for the 3R Group, as it expands our commercial options and range of products, adding operational and strategic flexibility to our business plan in the Potiguar Sedimentary Basin, where we concentrate most of our assets.

Classification of Oil and Gas Reserves

Oil and natural gas reserves are classified using the level of certainty associated with the estimates and based on the development and production status of a specific project. According to the standards of the PRMS, approved in March 2007, as amended, by various international organizations in the sector, including the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists, the Well Log Analysts, and the European Association of Geoscientists & Engineers, the classification of oil and natural gas reserves are divided as follows:

- Proved Reserves (1P): means those additional reserves of oil and gas that, as per the analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable from a given date forward from known reservoirs and under defined economic conditions, operating methods, and government regulations. If deterministic methods are used, the term "reasonable certainty" is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used,

there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the estimate;

- Probable Reserves (2P): are those additional reserves of oil and gas that, as per the analysis of geoscience and engineering data, are less likely to be recovered than proved reserves but more certain to be recovered than possible reserves. It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated proved plus probable reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability that the actual quantities recovered will equal or exceed the 2P estimate; and
- Possible Reserves (3P): are those oil and gas reserves that, as per the analyses of the geoscience and engineering data, are less likely to be recovered than probable reserves. The total quantities ultimately recovered from the project have a low probability to exceed the sum of proved plus probable plus possible reserves (3P), which is equivalent to the high estimate scenario. When probabilistic methods are used, there should be at least a 10% probability that the actual quantities recovered will equal or exceed the 3P estimate.

Material Consummated and Pending Acquisitions

In the context of Petrobras Divestment Plan and in accordance with our growth strategy, we have entered into several purchase and sale agreements with Petrobras, one of which is still subject to conditions precedent for closing. Our investment agenda focuses on assets that (i) are currently producing; (ii) have proved reserves that can be certified; (iii) are able to increase production following investments with accelerated pay-back terms; (iv) have facilitated infrastructure; and (v) potentially have operations at competitive lifting costs.

In December 2022, we concluded the acquisition of the Papa-Terra Cluster. In June 2023, we concluded the acquisition of the Potiguar Cluster. In December 2023, we participated in the fourth cycle of the ANP permanent offer and acquired the concession rights for three onshore exploratory blocks in the Potiguar Sedimentary Basin, in regions close to our current assets. The offers were made by 3R Areia Branca and amounted to a total signing bonus of R$300,000.00.

As of the date of this Offering Memorandum, we hold a (i) 35% working interest in the concession rights relating to the Pescada Cluster; (ii) 100% working interest in the concession rights relating to the Macau Cluster; (iii) 100% working interest in the concession rights relating to the Rio Ventura Cluster; (iv) 100% working interest in the concession rights relating to the Areia Branca Cluster; (v) 100% working interest in the concession rights (except for the *Cambacica* and *Guanambi* fields) relating to the Recôncavo Cluster, (vi) 100% working interest in the concession rights relating to the Fazenda Belém Cluster, (vii) 100% of the interest in the concession rights relating to the Potiguar Cluster, (viii) 100% working interest (held by 3R Offshore) in the concession rights relating to the Peroá Cluster (representing an 85% indirect working interest held by 3R) and (ix) 62.5% working interest (held by 3R Offshore) in the concession rights relating to the Papa-Terra Cluster (representing a 53.1% indirect working interest held by 3R).

On July 9, 2020, we (through 3R Pescada) entered into a Sale and Purchase Agreement with Petrobras to purchase the remaining 65% of the interest in the concession rights related to the Pescada Cluster. Upon consummation of this acquisition, which is expected to occur in 2024, we will own a 100% working interest in and will be the sole operator of the Pescada Cluster.

Our Portfolio

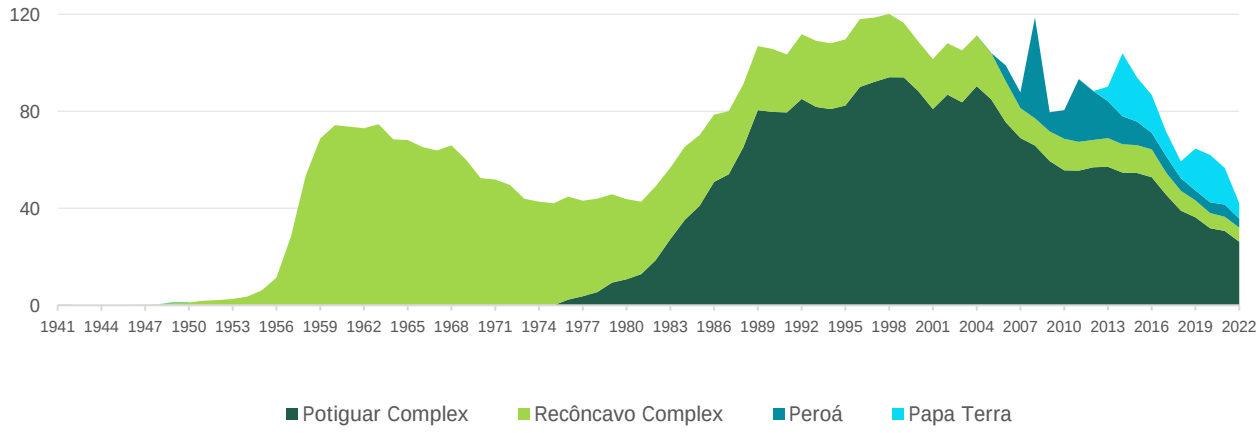
As of the date of this Offering Memorandum, we have nine clusters in our portfolio, distributed across four sedimentary basins in five states, with onshore and offshore production concessions, in addition to operations in the midstream and downstream segment, which involves the processing, refining and marketing of oil and gas derivatives in local and foreign markets.

The location of the assets is strategic from an integration standpoint, as: (i) five clusters are located in the Potiguar Sedimentary Basin, forming the Potiguar Complex: Macau Cluster, Areia Branca Cluster, Fazenda Belém Cluster, Pescada Cluster and Potiguar Cluster, (ii) two clusters are located in the Recôncavo Sedimentary Basin,

forming the Recôncavo Complex: Rio Ventura Cluster and Recôncavo Cluster, and (iii) two clusters make up the portfolio of 3R Offshore: Peroá Cluster, located in the Espírito Santo Sedimentary Basin, and Papa-Terra Cluster, located in the Campos Sedimentary Basin.

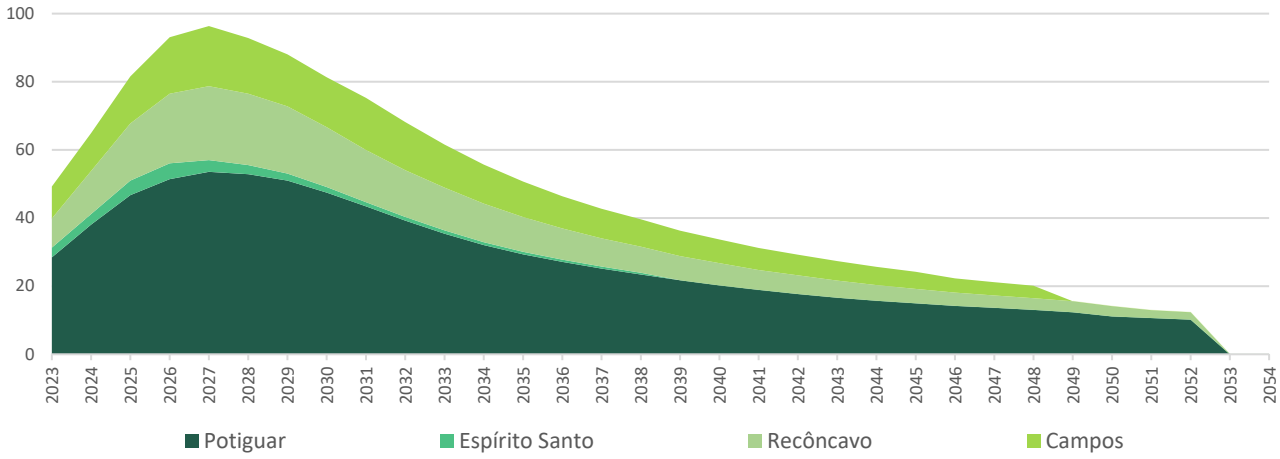
The following charts set forth the historical and expected oil and gas production information of our assets:

Historical Production of Oil and Gas
(in BOEPD)



Source: ANP.

Future Production of Oil and Gas (Based on 2P Reserves)
(3R WI in BOEPD) [1]



Source: Reserves Report. The values presented are estimates and may present different results than expected.

(1) 3R holds 85% of 3R Offshore's share capital, and 3R Offshore holds 100% and 62.5% of the working interests in the Peroá and in the Papa-Terra Clusters, respectively. Accordingly, 3R indirectly holds 85% and 53.1% of the working interests in the Peroá and Papa-Terra Clusters and related assets, respectively. The chart considers the indirect working interests held by 3R in the Peroá and Papa-Terra Clusters.

The following table sets forth the net present value of the future generation of cash from certified reserves, based on the Reserves Report, considering our working interest in the assets in which we hold interest.

	Certified volumes (1P)	Certified volumes (2P)	Certified volumes (3P)
	(in millions of BOE)	*(in millions of BOE)*	*(in millions of BOE)*
Potiguar Sedimentary Basin[(1)]	230.3	305.0	353.2
Recôncavo Sedimentary Basin	73.6	104.7	139.5
Espírito Santo Sedimentary Basin (85% WI)[(2)]	8.6	11.5	12.1
Campos Sedimentary Basin (53.1% WI)[(3)]	54.7	94.8	121.6
Total	**367.2**	**516.0**	**626.4**
Net present value (in billions of US$)[(4)]	**US$4.71**	**US$6.32**	**US$7.70**

(1) Includes the Pescada Cluster, in which the acquisition of a 65% working interest is pending consummation.

(2) The Reserves Report presented elsewhere in this Offering Memorandum, reports a net reserves volume (in millions of BOE) of 10.1, 13.5 and 14.3 for 1P, 2P, 3P reserves, respectively, for the Espírito Santo Sedimentary Basin, considering the 100% working interest held by 3R Offshore. 3R owns 85% of 3R Offshore, which represents the equivalent of an 85% indirect working interest in the Peroá Cluster, located in the Espírito Santo Sedimentary Basin.

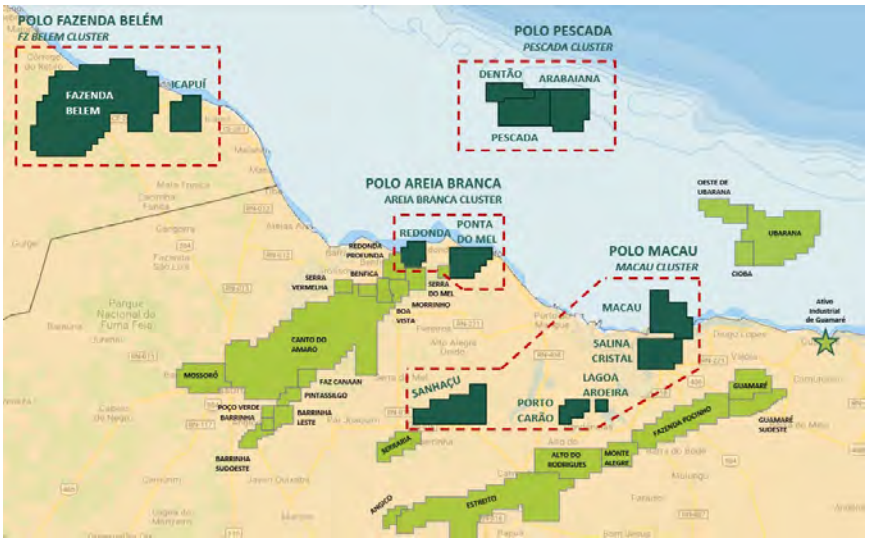
(3) The Reserves Report presented elsewhere in this Offering Memorandum, reports a volume (in millions of BOE) of 64.4, 111.6, and 143.1 for 1P, 2P, 3P reserves, respectively, for the Campos Sedimentary Basin, considering a 62.5% working interest of our subsidiary, 3R Offshore. 3R owns 85% of the stake of 3R Offshore, which represents the equivalent of a 53.1% indirect working interest in the Papa-Terra Cluster, located in the Campos Sedimentary Basin.

(4) The Reserves Report presented elsewhere in this Offering Memorandum reports a net present value of US$4.80 billion, US$6.47 billion, and US$7.89 billion, for the 1P, 2P, and 3P reserves, respectively, considering a 62.5% working interest in our assets located in the Campos Sedimentary Basin and a 100% working interest in our assets located in the Espírito Santo Sedimentary Basin.

On a consolidated basis, taking into account the acquisition amount and the volume of 2P certified reserves, we have a prominent history of transactions, reaching significantly competitive entry multiples, including a multiple of 2.9x (of the acquisition price *divided by* the 2P certified reserves) for our current portfolio, of which: (i) 3.5x refers to the Potiguar Complex, including the Macau Cluster, Pescada Cluster, Fazenda Belém Cluster and Areia Branca Cluster; (ii) 4.0x refers to the Recôncavo Complex, including the Rio Ventura Cluster and Recôncavo Cluster; (iii) 1.0x refers to the Papa-Terra Cluster; and (iv) 2.2x refers to the Peroá Cluster. Considering that Potiguar Cluster has an important mid-downstream infrastructure, and one total consolidated amount of acquisition, it is not possible to calculate the 2P entry multiple indicator for this specific asset.

In relation to publicly held independent companies with operations in Brazil, we have a prominent portfolio, based on proved plus probable reserves, with exposure to oil and gas. This is the result of a selective strategy, focused on the development of clusters of assets and supported by a long-term view, including reserves with an estimated useful life of more than 30 years.

Potiguar Sedimentary Basin

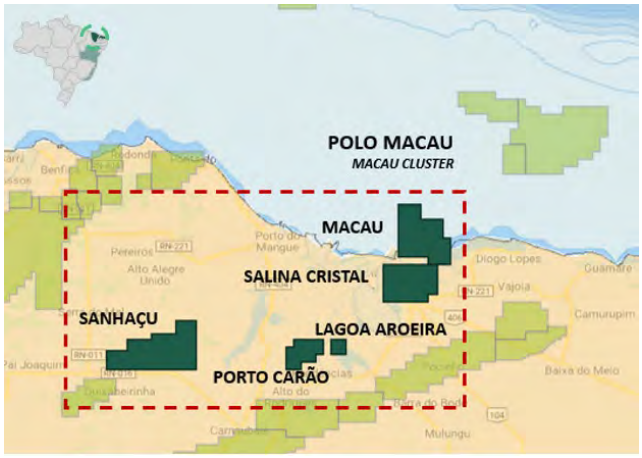


Our assets located in the Potiguar Sedimentary Basin form the Potiguar Complex. The integration of such assets allows for the capture of operational, financial and commercial synergies, optimizing resources, expanding regional scale and, consequently, reducing cost.

The flexibility built by an integrated operation is one of the vectors of value generation for us in our asset revitalization and production redevelopment project. Particularly in the Potiguar Complex, we have additional flexibility with the verticalization of operations based on our own infrastructure available at the Potiguar Cluster (upstream, midstream and downstream), and which receives the majority of the production of the Potiguar Sedimentary Basin.

Macau Cluster

The Macau Cluster includes onshore oil and gas fields, namely *Macau*, *Salina Cristal*, *Lagoa Aroeira*, *Porto Carão*, *Carcará* and *Sanhaçu*, all located in the Potiguar Sedimentary Basin in the state of Rio Grande do Norte, as shown in the map below:



On May 29, 2020, 3R Macau (currently 3R RNCE) consummated the acquisition, from Petrobras, of the onshore and offshore oil and gas concessions that make up the Macau Cluster from Petrobras. Petrobras held a 100% stake in all the concessions, with the exception of the *Sanhaçu* field, in which it was the operator with a 50% stake,

while the remaining 50% was owned by Petrogal Brasil S.A. (“GALP”). In August 2021, we signed a contract to acquire GALP's stake in the *Sanhaçu* field, which was consummated on December 21, 2021.

All fields in the Macau Cluster are exclusively operated by 3R RNCE (formerly 3R Macau). As of the date of this Offering Memorandum, we own 100% of 3R RNCE and 3R RNCE has the direct ownership of 100% of all six concessions.

The Macau Cluster started its operations in 1982 and we believe that this cluster will be commercially viable until 2052, aligned with the Reserves Report.

Although we concluded the acquisition of the Macau Cluster on May 29, 2020, with the transfer of the concession rights of the Macau Cluster from Petrobras to 3R Macau, the transition period of such cluster began on August 6, 2019, as provided for in the Sale and Purchase Agreement entered into with Petrobras, executed on the same date, to give us sufficient time to conduct in-depth technical studies and prepare to take over the operations of this cluster.

The concession agreements we entered into with ANP for the concessions relating to the Macau Cluster will expire between 2025 and 2052, subject to an extension of up to 27 years, depending on the amount invested and the reserves stated in the development plan that we will submit to the ANP. As of the date of this Offering Memorandum, we have obtained extensions to the concessions of the *Macau* and *Salina Cristal* fields of up to 27 years, which expire in 2052.

Our strategy is to reactivate wells that are closed and intervene in producing wells to quickly increase the production from the Macau Cluster with reduced investment. A significant portion of the non-producing wells only requires maintenance and/or the repair or exchange of non-complex equipment, allowing us to quickly turn them into producing wells with a significantly reduced investment.

Wells may be closed as part of the strategy of an operating company, or because of some type of failure or a lack of available teams to reopen the well could force the operator to keep it closed. We do not intend to open wells that are not commercially viable. As the closed wells already possess environmental permits, our only obligation is to inform the ANP regarding which wells will be reopened.

The following table sets forth information on the wells of the Macau Cluster in May 2023, according to ANP:

Macau Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	178	173	37	388

Areia Branca Cluster

The Areia Branca Cluster is comprised of the *Ponta do Mel* and *Redonda* onshore oil production fields, located in the Potiguar Sedimentary Basin.

On November 1, 2021, we consummated the acquisition of all the shares issued by Duna Energia S.A. (later renamed 3R Areia Branca, and currently 3R RNCE), holder of the onshore production concessions that make up the Areia Branca Cluster. With the consummation of the transaction, 3R Areia Branca (currently 3R RNCE) took over the operations of the asset, and became our wholly owned subsidiary.

The Areia Branca Cluster is integrated with the Macau Cluster, which strengthens our strategy to form synergetic clusters of assets, optimizing resources and, as a result, potential to reduce costs of integrated operation of the assets in our portfolio.

As of the date of this Offering Memorandum, the concession for the fields in the Areia Branca Cluster expire between 2025 and 2052, but there is the possibility of requesting an extension for up to 27 additional years, as provided for in the concession contracts with the ANP. We are in the process of preparing a new development plan for the *Redonda* field concession, in order to file the extension request with the ANP. For further information, see *"—Concession Agreements."*

The following table sets forth information on the wells of the Areia Branca Cluster in May 2023, according to ANP:

Areia Branca Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	44	29	20	93

Fazenda Belém Cluster

The Fazenda Belém Cluster includes the onshore oil fields of *Fazenda Belém* and *Icapuí* located in the Potiguar Sedimentary Basin, in the state of Ceará.

On August 14, 2020, 3R Fazenda Belém (currently 3R RNCE) signed a contract for the purchase of Petrobras' entire stake in the fields that make up the Fazenda Belém Cluster. On August 5, 2022, the transaction was consummated and 3R Fazenda Belém (currently 3R RNCE) took over the operation of the asset.

Similar to the other clusters, the fields comprising the Fazenda Belém Cluster are in the production phase. Therefore, the exploratory risks inherent to this cluster are substantially reduced. After the closing of the acquisition of the Fazenda Belém Cluster, which occurred on August 5, 2022 the reserves discovered by Petrobras were directly transferred to us.

The concession agreements relating to the oil fields of the Fazenda Belém Cluster will expire in 2025, and may be extended for an additional 27 years, depending on the amount invested and the reserves stated in the development plan that we will submit to ANP. We believe that we fulfill the requirements needed to obtain the 27-year extension to the concession agreement, which will be subject to ANP approval. For further information, see "*—Concession Agreements*."

The Fazenda Belém Cluster has various opportunities which will be reflected in the new development plan that will be submitted by us to ANP, after the acquisition is completed, which includes the drilling of wells, the opening of new producing zones, the reopening of wells and the use of secondary recovery technology.

Combined, the concessions regarding the two fields in the Fazenda Belém Cluster have 985 wells. Our strategy includes intervening in producing wells to quickly increase the production of the Fazenda Belém Cluster, with reduced investment. A significant portion of the non-producing wells only requires maintenance and/or the repair or exchange of non-complex equipment, allowing us to quickly turn them into producing wells with a significantly reduced investment.

The following table sets forth information on the wells of the Fazenda Belém Cluster in May 2023, according to ANP:

Fazenda Belém Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	248	678	59	985

The Fazenda Belém Cluster also includes collection stations, an oil treatment facility, a water treatment facility, a station to treat the water that will be used to generate steam, and steam-generating units.

Pescada Cluster

The Pescada Cluster includes the shallow water oil and gas fields *Pescada*, *Arabaiana* and *Dentão*, located on the continental shelf of the state of Rio Grande do Norte in the Potiguar Sedimentary Basin, approximately 31km off the coast of the city of Areia Branca, at an average water depth of 25 meters.

The *Pescada* field started its operations in 1999. As of the date of this Offering Memorandum, we hold a 35% working interest in the concession rights relating to the Pescada Cluster, and are in the process of completing the acquisition of the remaining 65% from Petrobras. This acquisition has been approved by CADE and, in July 2020, was approved by ANP, subject to the fulfillment of certain conditions, including the establishment of financial guarantees for the abandonment of wells. As of the date of this Offering Memorandum, Petrobras is the operator of the Pescada Cluster, and we expect that 3R Pescada will become the operator in the 2024. The operating licenses for the fields, held by Petrobras as of the date of this Offering Memorandum, will be transferred to 3R Pescada in a more streamlined process in comparison to the one required for obtaining a new license. For additional information on the acquisition, see "*—Our Oil and Gas Sale Agreements.*"

The concession agreements relating to the oil fields of the Pescada Cluster will expire in 2025, and may be extended for 27 years, according to the terms of the agreements with the ANP, subject to ANP's approval. We will prepare a development plan for the Pescada Cluster, in order to file a request for the extension of the concessions with the ANP. For further information, see "*—Concession Agreements.*"

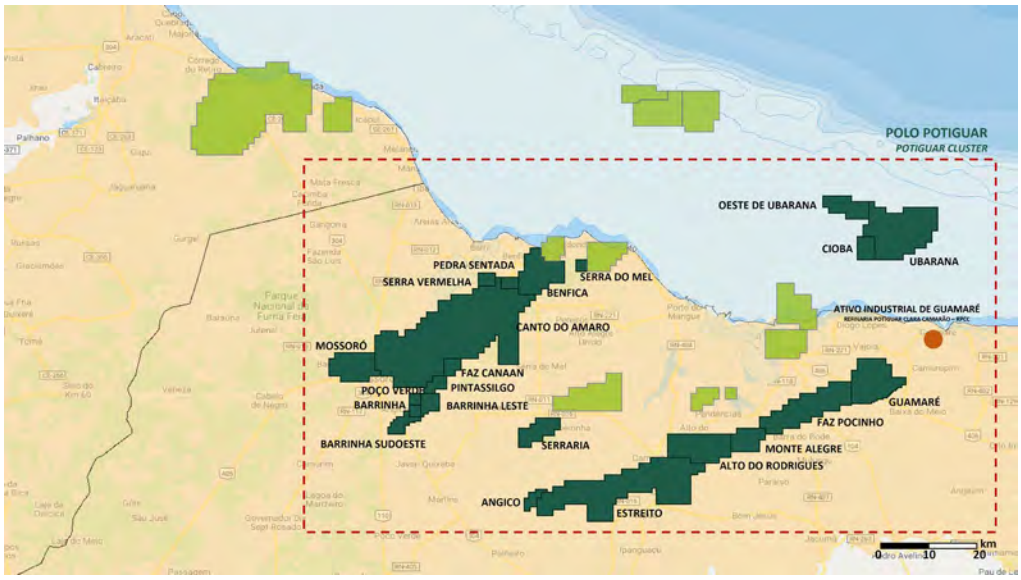
The following table sets forth information on the wells of the Pescada Cluster in May 2023, according to ANP:

Pescada Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	7	34	-	41

We believe the commercial conditions to sell natural gas and oil from the Pescada Cluster are attractive and make this a resilient asset. With respect to our stake at the Pescada Cluster (35%), we entered into a fixed-price gas sale agreement with Petrobras, as a buyer of gas extracted from the Pescada Cluster, which will expire in 2025. With respect to the remaining portion (65% stake), the natural gas production is priced at a minimum and a maximum and is indexed to the Brent Oil Price.

Potiguar Cluster

The Potiguar Cluster is located in the Potiguar Sedimentary Basin, in the state of Rio Grande do Norte, comprising 22 onshore and offshore concessions, as well as the *Clara Camarão* refinery, in addition to a production and transportation infrastructure that services these concessions and the Guamaré Industrial Asset, located in the city of Guamaré, in the state of Rio Grande do Norte.



On January 31, 2022, 3R Potiguar signed a purchase and sale agreement for 100% of Petrobras' stake in the Potiguar Cluster. On June 7, 2023, the transaction was consummated and 3R Potiguar took over operation of the asset on June 8, 2023.

The Potiguar Cluster has full infrastructure and operating autonomy for the production of oil and natural gas, including processing, treatment, refinement, storage, logistics and transportation infrastructure. Additionally, the Potiguar Cluster, through its industrial asset, has logistics connection with the main points of sale of oil byproducts in the region.

The Potiguar Cluster encompasses three concession sub-clusters, as follows: (i) *Canto do Amaro*, which consists of 12 onshore production concessions, (ii) *Alto do Rodrigues*, made up of seven onshore production concessions, and (iii) *Ubarana*, consisting of three concessions located in shallow waters between ten and 22 km from the coast of the city of Guamaré. Cluster logistics are optimized, in that the entire oil and gas production is piped to processing installations located in the Guamaré Industrial Asset. The three sub-clusters have complete infrastructure to support operations, highlighted by: (i) collection, compression and water injection stations; (ii) electric power substations; (iii) system for steam generation with pipelines and generation and injection stations; (iv) offshore rigs connected to the Guamaré Industrial Asset installations by means of pipelines; (v) system for pipeline distribution of the onshore and offshore production; and (vi) operational bases, laboratories for analyses, and sheds for maintenance and inventory of supplies.

In addition, the Guamaré Industrial Asset brings together all the necessary infrastructure for processing, treating, refining, and storing of oil and gas from all the onshore and offshore fields in the state of Rio Grande do Norte, including those already acquired by us in the region (Macau Cluster, Areia Branca Cluster, and Pescada Cluster).

Among the structures that constitute the Guamaré Industrial Asset, the following deserve highlighting:

- oil and water treatment stations with total capacity for handling more than 750 thousand barrels of fluids per day;
- tanks with storage capacity for more than 1.8 million barrels of oil and oil derivatives;
- *Clara Camarão* refinery, with rated capacity for refining 39.6 thousand BOE, which meets the needs of local markets for gasoline, diesel oil, bunker oil and jet fuel in the Northeast Brazilian States of Rio Grande do Norte, Ceará and Paraíba and further has the potential to expand in both these local markets and even reach other neighboring states;

- UPGNs with capacity for handling 1.8 million m³ of gas per day, in addition to compressors for exports of gas that are connected to the gas transportation grids of Brazil's Northeast and Southeast regions;
- Guamaré Waterway Terminal, with tremendous capacity for exportation, importation and coastal shipping of oil and oil derivatives.

The terminal and the monobuoys included in the industrial asset add significant operating independence and flexibility by simplifying and facilitating exports of the production, with a significant tank capacity, and imports of products, thus supporting the supply in the region.

The acquisition of the Potiguar Cluster, consummated in June 2023, substantially increased our scale of production and capacity for replenishment and increase our reserves in the future, and we believe it will position us as the principal and the largest independent player in Brazil's oil and gas industry in forthcoming years.

With the Potiguar Cluster integrated to our portfolio, we have an important part of our production anchored in onshore and near-shore assets (*i.e.*, in shallow waters and connected by pipelines that ship the production to on-land installations), thus guaranteeing competitive lifting costs and greater flexibility for implementation of investment projects when compared with a largely offshore portfolio. Furthermore, the asset guarantees access to international markets and, combined with the offshore portfolio we have, it is expected to grant us greater flexibility to export a relevant part of the oil production in our portfolio, as well as of the production of other players in the Potiguar Sedimentary Basin.

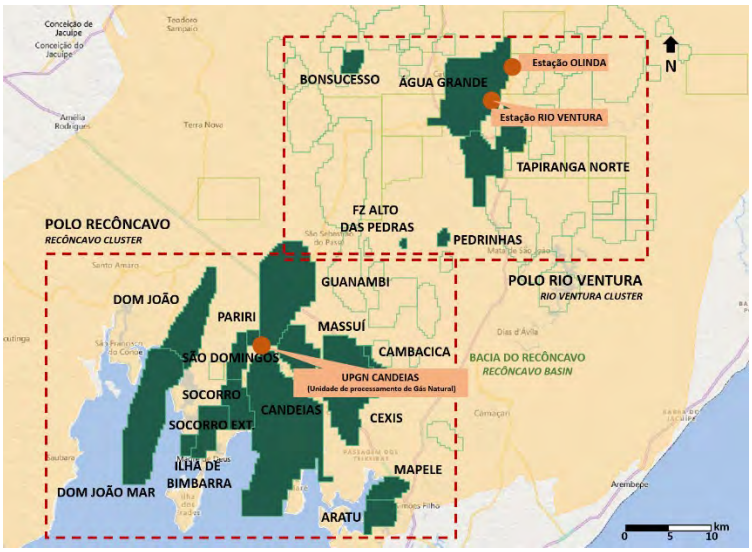
The Potiguar Cluster is an important asset that provides commercial flexibility for all of our production from the concessions located in the state of Rio Grande do Norte: (i) with respect to our oil production, we have independent access to international markets, as we can export the oil via the *Guamaré* Waterway Terminal and/or refine it at the *Clara Camarão* refinery, for supply to local distributors; and (ii) with respect to gas, we have access to a new portfolio of customers located along the Brazilian coast, with our own capacity for processing and compression of the volumes to be potentially sold.

The concession agreements relating to the Potiguar Cluster will expire in between 2025 and 2052 and may be extended up to 27 additional years upon the filing of a new development plan with investments and commitments to ANP, subject to ANP's approval. We will prepare a development plan for the Potiguar Cluster in order to file a request for the extension of the concessions with the ANP. For further information, see "*—Concession Agreements*."

The following table sets forth information on the wells of the Potiguar Cluster in May 2023, according to ANP:

Potiguar Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	2,898	3,175	156	6,229

Recôncavo Sedimentary Basin



Our assets located in the Recôncavo Sedimentary Basin form the Recôncavo Complex. The integration of such assets allows us to capture operational, financial and commercial synergies, optimizing resources, expanding regional scale and, consequently, reducing cost.

Rio Ventura Cluster

The Rio Ventura Cluster started operations in 1951, and includes five onshore oil fields: *Água Grande*, *Bonsucesso*, *Fazenda Alto das Pedras*, *Pedrinhas*, and *Tapiranga Norte*, all located in the Recôncavo Sedimentary Basin in the state of Bahia.

On August 21, 2020, 3R Rio Ventura, entered into an agreement to purchase Petrobras' entire stake in the five onshore fields that make up the Rio Ventura Cluster. The acquisition was approved by the ANP on January 14, 2021, and consummated on July 14, 2021, with the transfer of the operating licenses for the fields. 3R Rio Ventura became the operator as of July 15, 2021.

The concession agreements relating to the oil fields of the Rio Ventura Cluster will expire in 2025 and 2045, and may be extended for an additional 27 years. We believe we are qualified to comply with all the requirements to obtain an extension to these concession agreements, which will be subject to ANP approval. For further information, see "*—Concession Agreements*."

We believe the fields in the Rio Ventura Cluster offer numerous opportunities, including the drilling of new wells, the deployment of secondary recovery techniques, and the opening of new producing areas.

The concessions have a total of 591 wells, 69 of which are currently producing. All other wells have been abandoned, closed, scorched or returned. Our strategy is to reactivate wells and intervene in producing wells to quickly increase the production in the Rio Ventura Cluster with low investment. A significant portion of the non-producing wells only requires maintenance and/or the repair or exchange of non-complex equipment, allowing us to quickly turn them into producing wells with a reduced investment.

A well may be closed as part of the strategy of an operating company, or because of some type of failure or a lack of available teams to reopen the well could force the operator to keep it closed. We do not intend to open wells that are not commercially viable and must inform the ANP regarding which wells will be reopened during the development of the field.

The following table sets forth information on the wells of the Rio Ventura Cluster in May 2023, according to ANP:

Rio Ventura Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	69	423	99	591

Recôncavo Cluster

The Recôncavo Cluster includes the following 12 onshore fields: *Aratu*, *Ilha de Bimbarra*, *Massuí*, *Candeias*, *Cexis*, *Socorro*, *Dom João*, *Pariri*, *Socorro Extensão*, *São Domingos*, *Cambacica* and *Guanambi*, located in the Recôncavo Sedimentary Basin in the state of Bahia. Currently, we are the sole operator of these concessions having 100% working interest in the concession rights, except for the *Cambacica* and *Guanambi* fields, in which we have a majority interest of 75% and 80%, respectively.

On December 17, 2020, 3R Candeias (currently 3R Bahia) entered into an agreement to purchase Petrobras' entire stake in the 12 onshore fields that make up the Recôncavo Cluster. The transaction was consummated in May 10, 2022, when 3R Candeias became the operator of the fields, with a 100% working interest in the concessions, with the exception of the *Cambacica* and *Guanambi* fields, in which it holds majority working interests of 75% and 80%, respectively.

The Recôncavo Cluster started its operations in 1941, and is strategic due to its potential to increase our oil and gas recovery factor, production and reserves, which is its core business, and due to the potential synergies with the Rio Ventura Cluster, also located in the Recôncavo Sedimentary Basin, through the optimization of teams, suppliers and service providers related to the operation, and the centralization of the logistics and telecommunications infrastructure, control and automation.

The current concessions in the Recôncavo Cluster expire between 2025 and 2039, but there is the possibility of requesting an extension for up to 27 additional years, as provided for in the concession agreements with the ANP. We believe the fields in the Recôncavo Cluster offer numerous opportunities that we will analyze and include in the new development plan to be submitted by us to the ANP. The plan for the Recôncavo Cluster includes drilling new wells, deploying secondary recovery techniques, and opening new producing areas. For further information, see "— *Concession Agreements*."

Our strategy is to reactivate wells and intervene in producing wells to quickly increase the production in the Recôncavo Cluster with low investment. A significant portion of the non-producing wells only requires maintenance and/or the repair or exchange of non-complex equipment, allowing us to quickly turn them into producing wells with a significantly reduced investment.

The following table sets forth information on the wells of the Recôncavo Cluster in May 2023, according to ANP:

Recôncavo Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	135	837	449	1,421

Espírito Santo Sedimentary Basin

Peroá Cluster

The Peroá Cluster includes the *Peroá* and *Cangoá* shallow water fields and the deep water Malombe Exploratory Block (BM-ES-21), located in the Espírito Santo Sedimentary Basin, in the state of Espírito Santo.

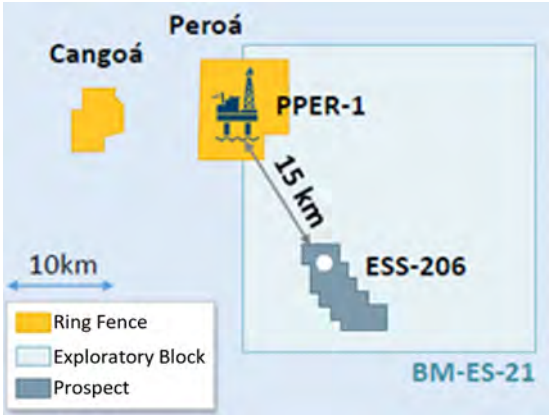
On January 29, 2021, 3R Offshore signed a contract for the purchase of 50% of Petrobras' working interest in the fields and the exploratory block that make up the Peroá Cluster, consummated on August 2, 2022. As a result of

a partnership signed between 3R Offshore and DBO (now Maha Energy Offshore (Brasil) Ltda.), 3R Offshore became the holder a 100% working interest in the Peroá Cluster. 3R holds an 85% stake in 3R Offshore, with Maha Energy Offshore (Brasil) Ltda. holding the remaining 15%.

The Peroá Cluster represented a significant addition to our production of gas, placing us as a relevant independent gas producer in the Brazilian industry.

The Malombe Exploratory Block was discovered in 2011, with the drilling of the exploratory well 1 ESS 206. The commencement of production in this exploratory block is subject to well completion and tie-in with the fixed platform located in the concession area of the Peroá Cluster.

The chart below illustrates the Peroá Cluster:



The concession agreements relating to the oil fields of the Peroá Cluster will expire in 2025 and may be extended for an additional 27 years, subject to the amount invested and the reserves stated in the development plan that will be submitted to ANP. For further information, see "*—Concession Agreements*."

We believe the fields in the Peroá Cluster offer numerous opportunities that we will include in the new development plan that we will submit to ANP.

Our strategy is to review and optimize the production structure of the Peroá Cluster to quickly increase its production with a low investment through the inspection and maintenance of facilities, pipelines and pumps, which are not complex activities and require a low investment. Initiatives for the *Malombe* field are under study and may add a significant production volume to this cluster, based on the interconnection of the field with the platform located in Peroá.

A well may be closed as part of the strategy of an operating company, or because of some type of failure or a lack of available teams to reopen the well could force the operator to keep it closed. We do not intend to open wells that are not commercially viable and must inform the ANP regarding which wells will be reopened during the development of the field.

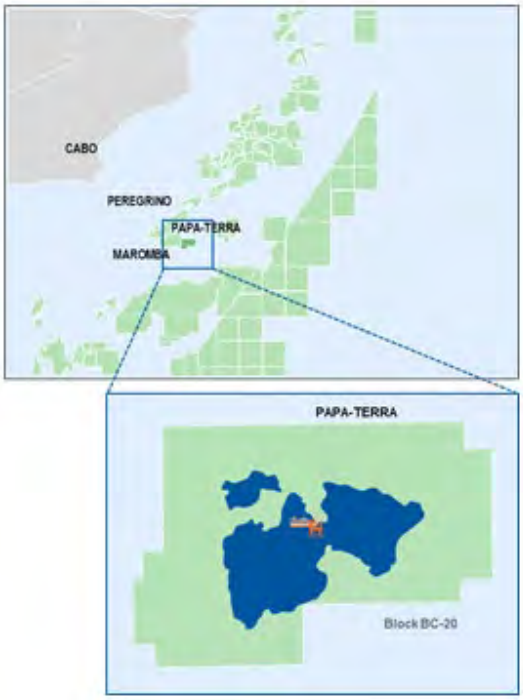
The following table sets forth information on the wells of the Peroá Cluster in May 2023, according to ANP:

Peroá Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	2	16	-	18

Campos Sedimentary Basin

Papa-Terra Cluster

The Papa-Terra Cluster includes the *Papa-Terra* offshore field, in the Campos Sedimentary Basin, at the coast of the state of Rio de Janeiro, as shown in the map below:



On July 9, 2021, 3R Offshore signed an agreement for the acquisition of 62.5% of Petrobras' working interest in *Papa-Terra* field. The additional 37.5% belongs to Nova Técnica Energy Ltda. The transaction was concluded on December 23, 2022, when 3R Offshore became the operator of the asset.

The *Papa-Terra* field has a processing capacity of 140,000 bpd, an injection capacity of 340,000 barrels of water per day, a storage capacity of 1.4 million barrels, and slots that connect to new producing wells and/or injecting wells. All systems have sufficient idle capacity to implement revamping and redevelopment activities, which are our core business. We are studying these opportunities and will include them in our development plan, to be submitted to ANP after consummation of this acquisition.

The concession agreements relating to the oil field of the Papa-Terra Cluster will expire in 2032 and may be extended up to an additional 27 years, subject to the amount invested and the reserves stated in the development plan that will be submitted to ANP. We will prepare a new development plan for the Para Terra Cluster in order to file a request for the extension of the concessions with the ANP. We believe we are qualified to comply with all the requirements to obtain an extension to the concession agreements. For further information, see "*—Concession Agreements*."

Our strategy is to review and optimize the production structure of the Papa-Terra Cluster to utilize the assets' full capacities, which is sufficient to implement our development strategy.

The following table sets forth information on the wells of the Papa-Terra Cluster in May 2023, according to ANP:

Papa-Terra Cluster	Producing, injecting or under intervention	Abandoned or closed	Scorched or returned	Total
May 2023	3	48	-	51

Our Distribution Process

The assets that are part of our portfolio include all the infrastructure necessary for the development and distribution of the production. The distribution of production to the sales areas is done mainly through oil and gas pipelines present in the assets, but in some assets, it also occurs through tanker trucks.

The offshore Papa-Terra Cluster relies on the traditional outflow method of relief ships, while the offshore Pescada, Peroá and Potiguar Clusters (in the *Ubarana* field), despite being located in shallow waters, have the infrastructure to flow the production to the coast through pipelines.

Macau Cluster Oil and Gas Distribution

Oil and gas production from the Macau Cluster is sent to two collection stations, the Conceição-B, or the CN-B, and the Macau-A, or the MA-A, and three collection points, the *Lagoa Aroeira*, *Porto Carão* and *Sanhaçu* fields. Collecting stations have treatment facilities, while collection points are comprised only of tanks that unload the oil onto tankers that transport the oil to the collection stations. The gas sold is delivered through pipelines to the CN-B and the MA-A. The oil sold is also delivered through pipelines to the CN-B and the MA-A, or in the case of the *Sanhaçu* collection point, is delivered by tanker trucks.

Distribution of Oil Production

Oil production from the *Salina Cristal*, *Lagoa Aroeira* and *Porto Carão* fields is sent to the CN-B. The *Salina Cristal* field uses pipelines to send oil to the CN-B, while the *Porto Carão* and *Lagoa Aroeira* fields use tankers. Petrobras receives the oil in Guamaré, and does not use its infrastructure for such delivery, as it does, for example, at the Alto do Rodrigues-A collection station.

Oil production from the *Macau* fields go to the MA-A. All three fields send their oil to the MA-A through pipelines.

The oil collected at the CN-B and the MA-A is then sent to the Guamaré Industrial Asset through pipelines. Before being sent, the oil is treated in the oil-water separation plants, classified as per ANP legislation, and fiscally measured. The law states that fiscally measured oil can contain no more than 1% of water.

Because oil from the *Sanhaçu* field has a very low water content (low BSW), it is fiscally measured in tanks and then shipped directly to the Guamaré Industrial Asset by tanker trucks. At the Guamaré Industrial Asset, lab tests are performed on the oil to determine the sales price. Lab tests determine the water content, which must be less than 1%, and the API grade (an arbitrary scale that measures the density of crude derivatives) of the oil, which in turn determine its price.

Distribution of Gas Production

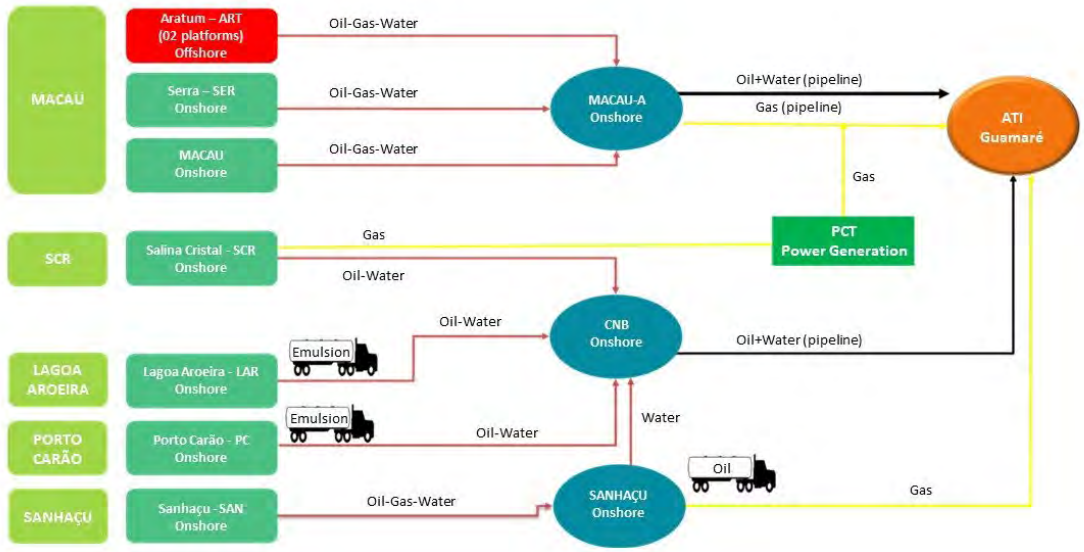
Commercial gas in the Macau Cluster comes from the *Sanhaçu, Salina Cristal* and *Macau* fields, and consists only of associated gas. Associated gas is gas that is dissolved in crude oil or is a layer of gas in the geological reserves. In other words, it is comprised of fractions that are separated from the crude oil.

Sanhaçu, *Salina Cristal* and *Macau* commercial gas production flows through gas pipelines to the UPGN, in *Guamaré*.

As part of our strategy, we decided to develop a project to use gas from the Macau Cluster to generate power, which, as of the date of this Offering Memorandum, is operational.

Production flow process
Macau Cluster

The diagram below illustrates the production process of the Macau Cluster, as described above.

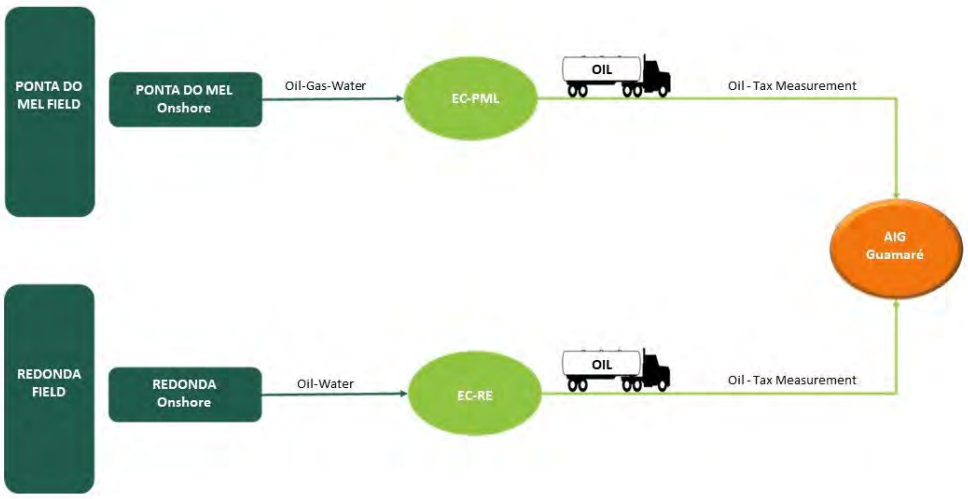


Areia Branca Cluster Oil Distribution

Oil production from the Areia Branca Cluster is drained through pipelines to the *Ponta do Mel* and *Redonda* collection stations, infrastructures included in such cluster which centralize the treatment and disposal of oil. From these stations, we sell and send our production, by tanker trucks, to the Guamaré Industrial Asset, located in the Potiguar Complex.

The diagram below illustrates the production process of the Areia Branca Cluster, as described above.

Production flow process
Areia Branca Cluster



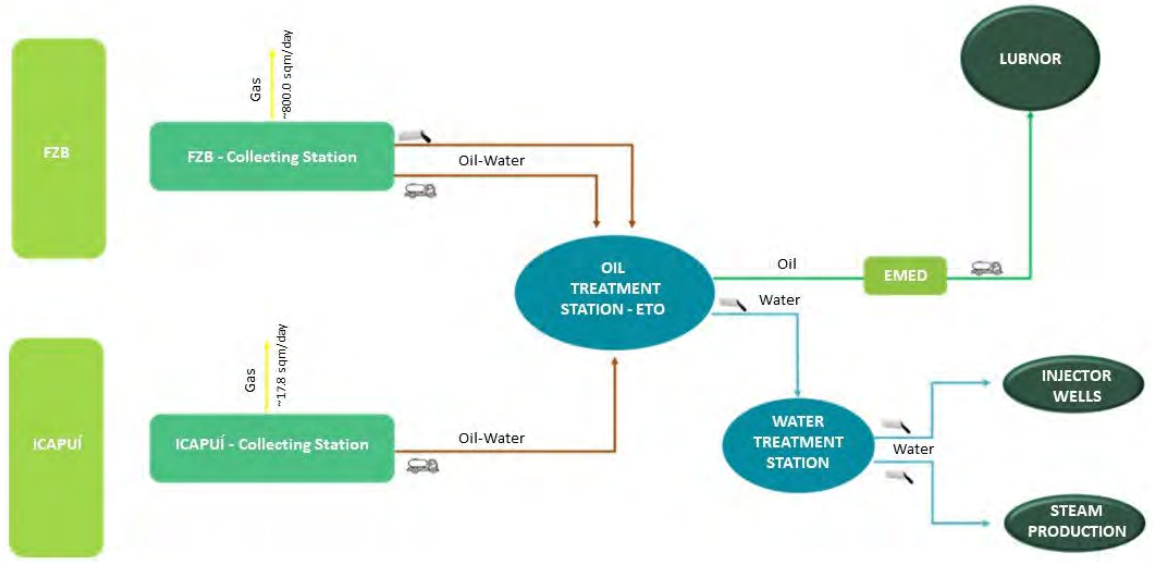
Fazenda Belém Cluster Oil and Gas Distribution

Oil produced at the Fazenda Belém Cluster is transported to collection stations, and from the collection stations to the treatment plant, through oil pipelines.

Considering our business model, the volume of gas produced at the Fazenda Belém Cluster is not economically viable, as the quantity produced is too small to justify building the infrastructure to sell it.

The diagram below illustrates the production process of the Fazenda Belém Cluster, as described above.

Production flow process
Fazenda Belém Cluster



Pescada Cluster Oil and Gas Distribution

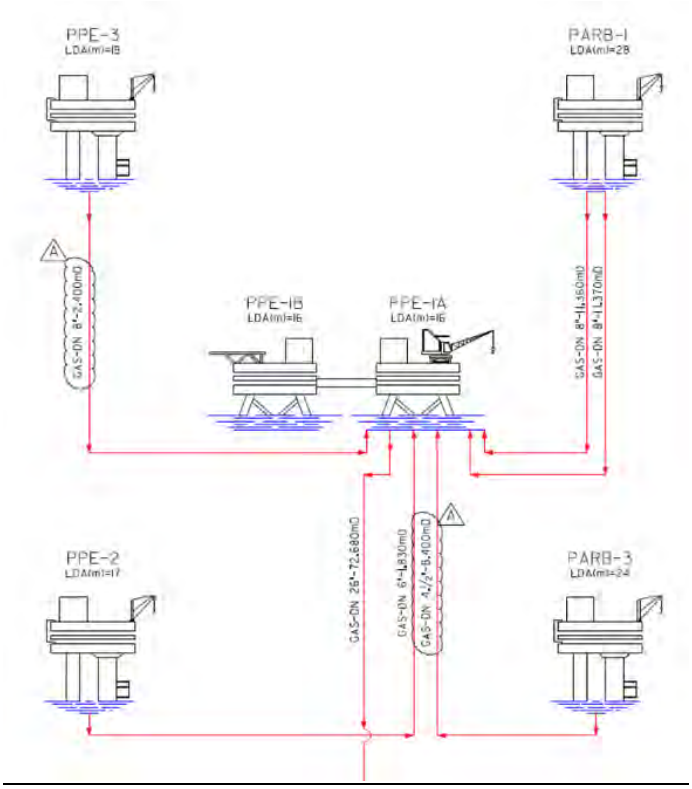
The gas and condensed-oil produced at the Pescada Cluster is sent to the *Pescada* field central platform, or the PPE-1A, from where it is sent directly to the processing facility at the Guamaré Industrial Asset, through an underwater pipeline in a multiphase flow that connects PPE-1A to the onshore processing plant.

Once it arrives at the processing plant of the Guamaré Industrial Asset, the production is collected in a slug catcher and from there sent to gas, condensate and water separation, gas treatment, condensate stabilization and basic sediment and water reduction. After this, the gas is measured and recorded by the fiscal measuring station using an orifice plate and the condensate is measured and recorded using a turbine meter, in daily batches.

Production flow process

Pescada Cluster

The following diagram illustrates the production process of the Pescada Cluster, as described above.



Potiguar Cluster Oil and Gas Distribution

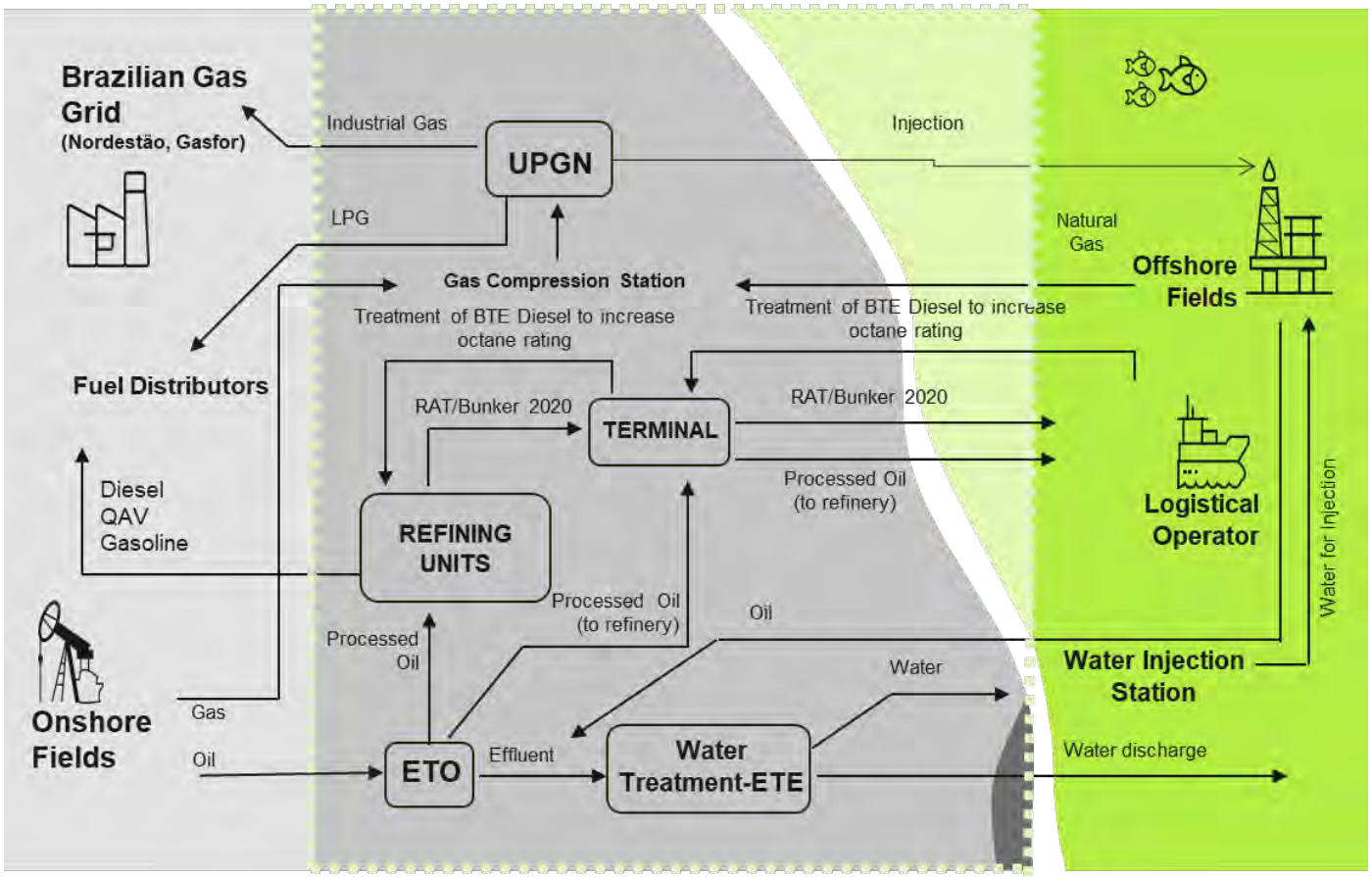
The Potiguar Cluster has infrastructure and pipeline systems that support its operations, in addition to the Guamaré Industrial Asset, which includes natural gas processing units (UPGNs), oil treatment station, effluent treatment station, the *Clara Camarão* refinery and the Guamaré waterway terminal, with a large storage capacity (over 1.8 million barrels) and systems that allow the export, import, and cabotage of crude oil and by-products.

The logistics of the cluster are optimized, since the oil and gas production is transported through pipelines to processing facilities located in the Guamaré Industrial Asset. In addition, it has complete infrastructure to support the cluster's operations, among which are: (i) collection, compression, and water injection stations; (ii) power substations; (iii) steam generation system with pipelines and generating and injection (iv) offshore platforms connected to the Guamaré Industrial Asset's facilities by pipelines; (v) onshore and offshore production; and (vi) operational bases, laboratories for analysis, maintenance sheds and materials storage.

Additionally, the Guamaré Industrial Asset brings together all the necessary infrastructure for the processing, treating, refining, transporting and storing of oil and gas from all onshore and offshore fields in the State of Rio Grande do Norte, including the including our Macau, Areia Branca and Pescada Clusters, and the fields operated by other companies in the oil and gas industry.

The following diagram illustrates the production and distribution process of the Potiguar Cluster, as described above.

Production flow process
Potiguar Cluster

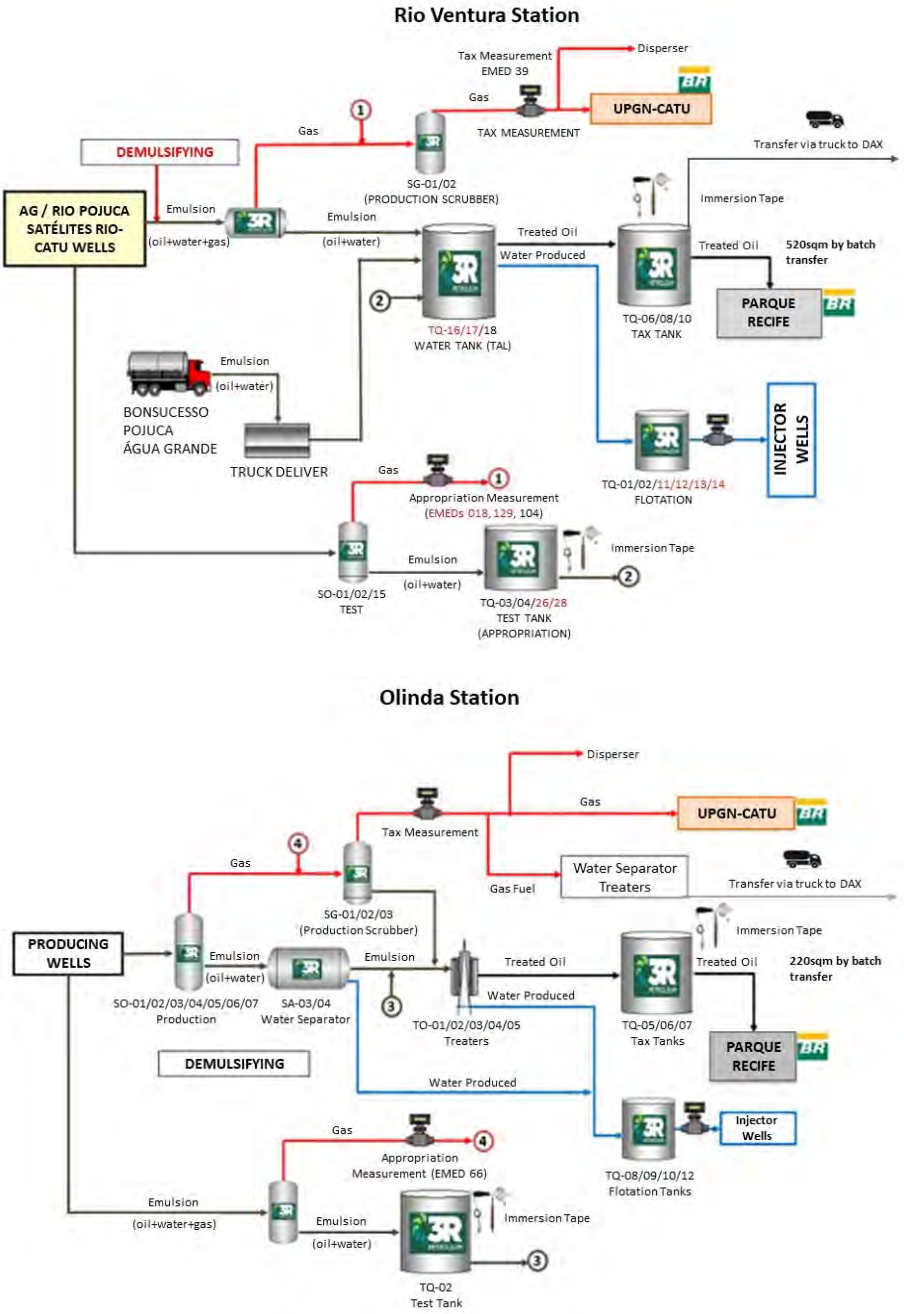


Rio Ventura Cluster Oil Distribution

Oil produced at the Rio Ventura Cluster is shipped by tanker trucks or pipelines to the *Rio Ventura* treatment station. At this treatment plant, the water content of the oil is specified according to ANP regulations and the production is then sent by pipelines to the *Parque Recife* or the *Catu* UPGNs, where it is processed and sold.

The following diagram illustrates the production process of the Rio Ventura Cluster, as described above.

Production flow process
Rio Ventura Cluster

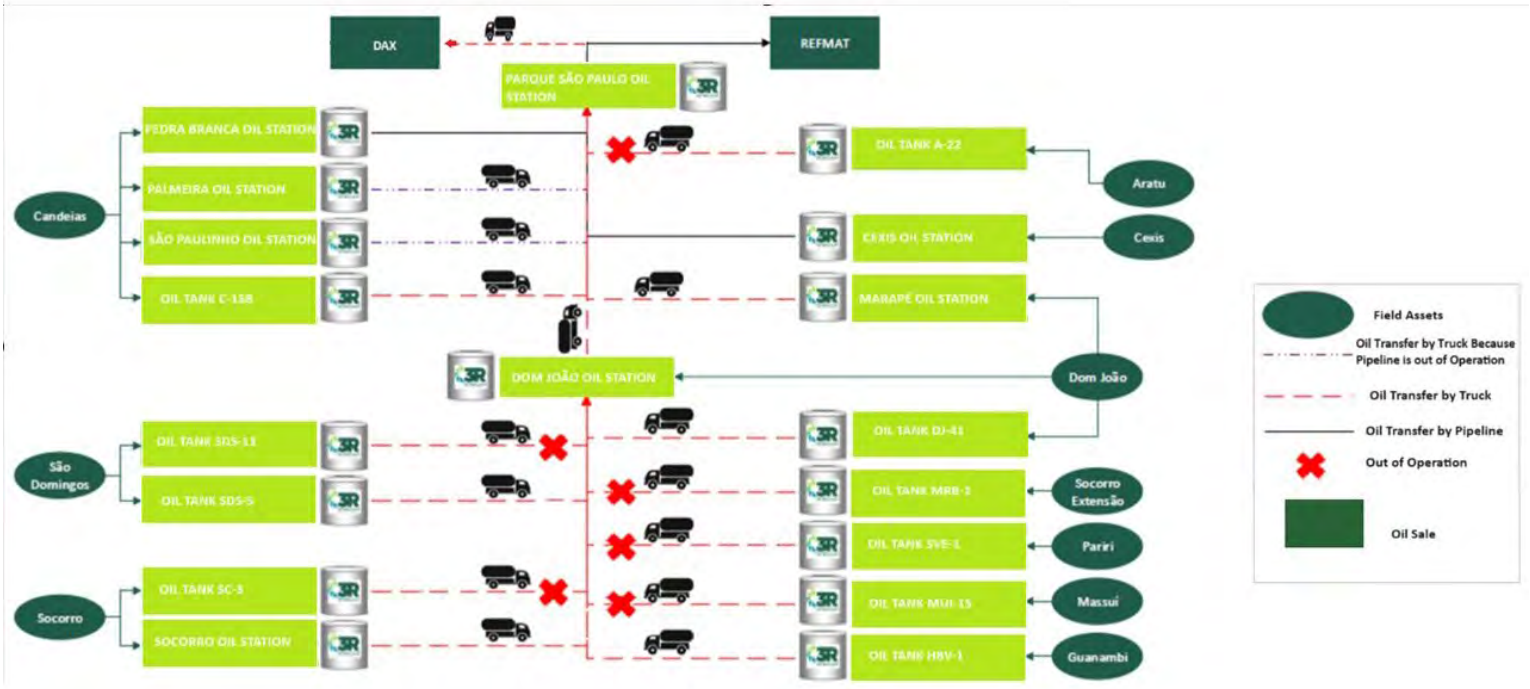


Recôncavo Cluster Oil and Gas Distribution

Oil produced at the Recôncavo Cluster is shipped by tanker trucks or pipelines to the *Parque São Paulo* pipeline station, an infrastructure that is part of such cluster and that centralizes the treatment and shipment of oil.

The diagram below illustrates the oil production process of the Recôncavo Cluster:

Oil production flow process
Recôncavo Cluster

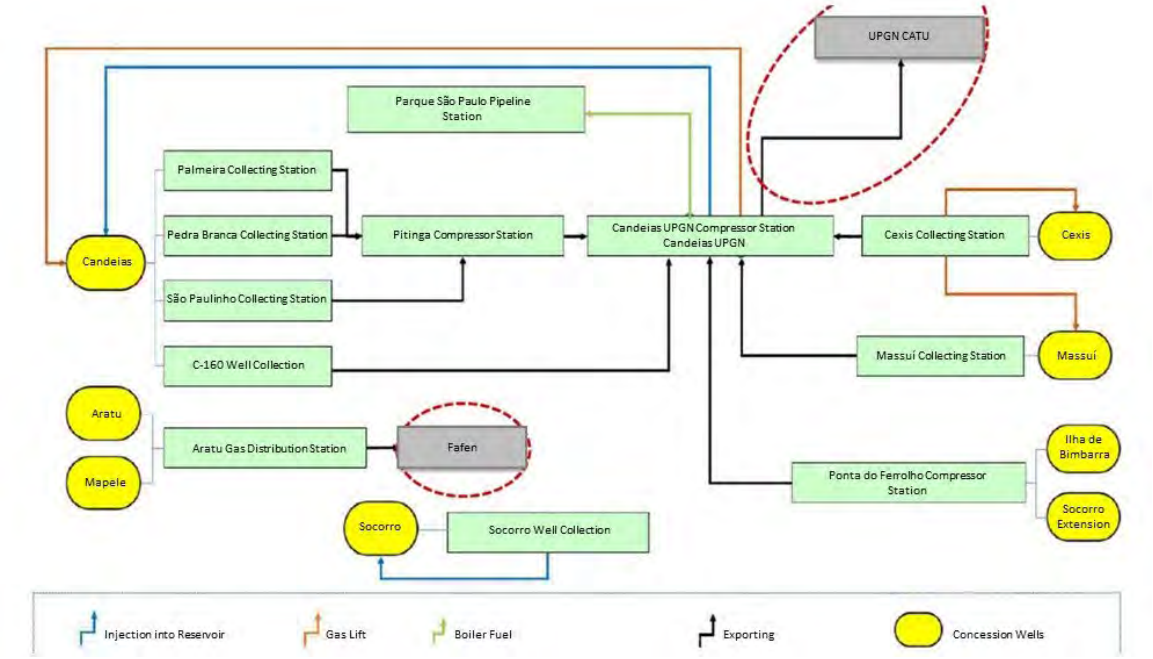


**RLAM – Landulpho Alves Refinary*

Gas produced at the Recôncavo Cluster is transported through pipelines, which are part of the cluster, to *Candeias* UPGN, which is non-operational as of the date of this Offering Memorandum, and to the *Catu* ECOMP. From the *Candeias* UPGN, the gas is transported for processing at the *Catu* ECOMP. Gas produced in the *Aratu* field is shipped to the *Fafen* UPGN.

The diagram below illustrates the gas production process of the Recôncavo Cluster, as described above.

Gas production flow process
Recôncavo Cluster

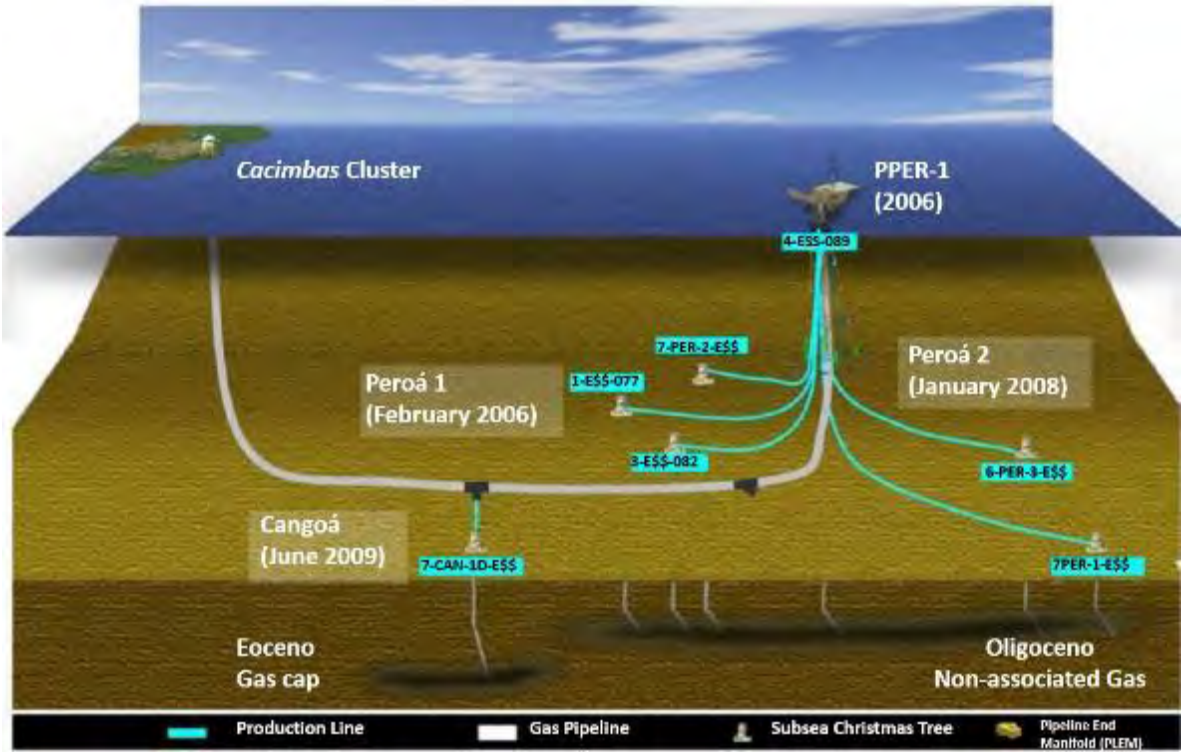


Peroá Cluster Oil and Gas Distribution

Gas produced at the Peroá Cluster is fully shipped through pipelines connected to the *Cacimbas* UPGN, located in the coast of the state of Espírito Santo, where the UPGN is located. Certain producing wells are connected to the uninhabited platform located at the cluster, while the others are directly interconnected to the pipeline that connects them to the *Cacimbas* UPGN.

The diagram below illustrates the current production process of the Peroá Cluster, excluding the potential development of the *Malombe* field:

Oil production flow process
Peroá Cluster



Papa-Terra Cluster Oil Distribution

The production of oil in the Papa-Terra Cluster, an offshore field which 62.5% is owned by 3R and 37.5% owned by Nova Técnica Energy Ltda., is fully transported by relief ships, which connect to the floating production storage and offloading ("FPSO") unit 3R-3, and collect oil for transportation, pursuant to the sale agreements.

The production occurs through FPSO unit 3R-3, which is connected to oil producing and water injecting wells through the tension leg wellhead platform ("TLWP") 3R-2, all of which encompass subsea completion and wet Christmas trees (a type of subsea wellhead equipment used in underwater oil and gas production) at the bottom of the sea, as well as production lines connecting the wells to the platform.

Our Oil and Gas Sale Agreements

We sell our oil and gas production through take-or-pay agreements and/or spot selling to different clients. These agreements establish: (i) minimum levels of production to be purchased by the buyer, (ii) product quality conditions, and (iii) fixed prices or prices referenced to Brent Oil Prices. Additional volumes are sold in spot market transactions, according to market supply and demand conditions. We have different alternatives to sell our production and products in the regional, domestic and international markets, in most cases using our own infrastructure.

In relation to oil derivatives, we sell our production in regional, domestic and international markets, through regular demand, purchase offers and spot negotiations. Oil derivatives' pricing takes into account the international

prices, logistical costs and commercial strategic aspects. In the nine-month period ended September 30, 2023, we had a diversified base of clients, with 40% of our total oil and gas production purchased by Petrobras. In the years ended December 31, 2022, 2021 and 2020 (before the acquisition of the Potiguar Cluster), most of our net revenue derived from the sale of oil and natural gas to Petrobras.

Concession Agreements

ANP is responsible for granting concession agreements for the exploration, development and production of oil and natural gas reserves to market players, independently or in joint ventures with other ANP-qualified companies, by means of a transparent and competitive bidding process. The only exception to the mandatory bidding process requirement was Round Zero, when concession agreements were granted directly to Petrobras, dismissing the bidding process, in relation to the exploration blocks where Petrobras had already performed activities and/or made investments before the date of enactment of the Brazilian Oil Law.

The concession agreements executed with the ANP set forth the rights and responsibilities of the winning bidders regarding certain exploration blocks, providing for: (i) the exploration phase; and (ii) the production phase. The exploration phase may last from two to eight years and the production phase may last up to 27 years from the date of declaration of commercial feasibility. The exploration and production phase may be extended upon ANP's approval.

The term of the concession agreements of the assets relating to Round Zero is equal to the sum of the time elapsed between the effectiveness of the concession agreement until the declaration of its commercial feasibility *plus* a period of 27 years, which may be subject to extension upon ANP's approval.

The conditions for extending the term of the concessions are set forth in the respective concession agreements. Extension requests must be submitted prior to termination of the concession agreement in writing to ANP. This request must be accompanied by a new development plan, which comprises a technical-economic report addressing the period of the extension, the production forecasts, the operations and services to be performed and the investments to be made, as well as the expected operational costs and all the other elements that justify the application. Additionally, the concessionaire must also comply with the provisions of CNPE Resolution No. 02/2016. Under this provision: (a) the extension must be made only for fields for which the extension of the production period beyond the original agreement term is commercially viable; (b) the new development plan to be submitted by us must indicate the new investments to be made in the field; and (c) the extension period must be compatible with the production expectations given in the new development plan and the new investments, limited to 27 years. CNPE Resolution No. 02/2016 also applies to extensions of concessions granted after Round Zero.

ANP has 180 days after the submission of the new development plan to approve the request for extension, and may ask for amendments to the new development plan or justify its non-approval. The granting of the extension is subject to ANP's approval of the new development plan. Some of the concessions in our portfolio have already been granted extensions, as detailed in the table below.

The extension of the concession agreements relating to mature oil and gas fields is subject to compliance with Article 4 of ANP Resolution No. 785/2019, meaning that a new development plan must be presented by the assignee and the concessionaire, and approval will take place jointly and simultaneously with the assignment request of the concession agreement. Accordingly, the new development plan and assignment will become effective at the same time.

The ANP is not required to approve our requests to extend any of the concession agreements to which we are a party (or which we expect to be assigned to us), and may reject them in full or request amendments to the technical-economic report and investments to be made. For additional information on the assets that are in the process of being acquired from Petrobras Assets Portfolio, see "*Management's Discussion and Analysis of Financial Condition and Results of Operations—Principal Factors Affecting our Results of Operations—Acquisitions of Oil and Gas Fields*."

According to the Brazilian Oil Law, the concession agreements are subject to early termination in certain circumstances, including: (i) by agreement between the parties; (ii) at the end of the exploration phase, if no

commercially viable discovery is made; and (iii) during the exploration phase, if the concessionaire exercises the option to withdraw and return the areas in which, at its discretion, investments in development are not justified. In the event of early termination, for any reason, the assets relating to the concession agreement must be returned to ANP.

For additional information on the risks relating to our concession agreements and on other terms of the concession agreements, see "*Risk Factors—Risks Relating to Us—We are subject to risks relating to the conditions that may be imposed by ANP for the approval of the assignment of the concession agreements*," and "*Regulatory Overview—Concessions*."

The table below sets forth a summary of the main terms of the effective concession agreements we entered into with ANP:

Type of asset	Description of the asset	Working interest held in the asset	Concession term / status[(1)]
Assets in exploration phase (blocks)			
Concessions	Concession agreement of block BAR-M-387, in the *Barreirinhas* sedimentary basin (48610.005442/2013-13) Date of execution of the agreement: August 30, 2013	3R holds 100% of the concession rights.	(1st exploratory period) The 1st exploratory period under this agreement is valid for seven years, the last two years of which were included by an amendment. In the event of a 2nd exploratory period, it must occur by 2027, pursuant to the concession agreement. In the event of declaration of commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration of commerciality. On November 29, 2023, the suspension of this concession was approved by ANP until the new Resolution of PEM is published.
Concessions	Concession agreement of block ES-M-414 (BM-ES-21), in the Espírito Santo Sedimentary Basin (48610.007977/2004) Date of execution of the agreement: November 24, 2004	3R Offshore holds 100% of the concession rights.	(2nd exploratory period) The Malombe prospect under block ES-M-414 is being currently assessed through the Discovery Evaluation Plan (PAD) of well 1-BRSA-983-ESS and had its Declaration of Commerciality postponed until February 1st, 2026.
Concessions	Concession agreement of block POT-T-326, in the Potiguar Sedimentary Basin (48610.215436/2022-63) Date of execution of the agreement: November 28, 2022	3R RNCE holds 100% of the concession rights.	The Exploration Phase will consist of a single period, until November 28, 2027. In the event of declaration of commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration.
Concessions	Concession agreement of block POT-T-353, in the Potiguar Sedimentary Basin (48610.215438/2022-52) Date of execution of the agreement: November 28, 2022	3R RNCE holds 100% of the concession rights.	The Exploration Phase will consist of a single period, until November 28, 2027. In the event of declaration of commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration.
Concessions	Concession agreement of block POT-T-437, in the Potiguar Sedimentary Basin (48610.215444/2022-18) Date of execution of the agreement: November 28, 2022	3R RNCE holds 100% of the concession rights.	The Exploration Phase will consist of a single period, until November 28, 2027. In the event of declaration of commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration.
Concessions	Concession agreement of block POT-T-524, in the Potiguar Sedimentary Basin (48610.215453/2022-09) Date of execution of the agreement: November 28, 2022	3R RNCE holds 100% of the concession rights.	The Exploration Phase will consist of a single period, , until November 28, 2027. In the event of declaration of commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration.
Concessions	Concession agreement of block POT-T-525, in the Potiguar Sedimentary Basin	3R RNCE holds 100% of the	The Exploration Phase will consist of a single period, until November 28, 2027. In the event of declaration of

	(48610.215454/2022-45) Date of execution of the agreement: November 28, 2022	concession rights.	commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration.
Concessions	Concession agreement of block POT-T-568, in the Potiguar Sedimentary Basin (48610.215455/2022-90) Date of execution of the agreement: November 28, 2022	3R RNCE holds 100% of the concession rights.	The Exploration Phase will consist of a single period, until November 28, 2027. In the event of declaration of commercial feasibility, the agreement may be extended by up to 27 years from the date of declaration.
Concessions	Concession agreement of block POT-T-403, in the Potiguar Sedimentary Basin. Concession won in auction of December 13, 2023: forecast for signing the contract until May 31st, 2024.	3R Potiguar will hold 100% of the concession rights upon contract signing.	According to the concession agreement to be signed.
Concessions	Concession agreement of block POT-T-488, in the Potiguar Sedimentary Basin. Concession won in auction of December 13, 2023: forecast for signing the contract until May 31st, 2024.	3R Potiguar will hold 100% of the concession rights upon contract signing.	According to the concession agreement to be signed.
Concessions	Concession agreement of block POT-T-531, in the Potiguar Sedimentary Basin. Concession won in auction of December 13, 2023: forecast for signing the contract until May 31st, 2024.	3R Potiguar will hold 100% of the concession rights upon contract signing.	According to the concession agreement to be signed.
Assets in the production development phase or production phase			
Concessions	Concession agreement of *Camarão* (CAM) field (48610.003890/2000) Date of execution of the agreement: September 15, 2000	3R Offshore holds 100% of the concession rights.	2034 (subject to extension)
Concessions	Concession agreement of *Pinaúna* (PIN) field (48610.003890/2000) Date of execution of the agreement: September 15, 2000	3R Offshore holds 100% of the concession rights.	2033 (subject to extension) Approved proposal for the early return of the field concession, on December 21, 2023.
Potiguar Cluster – Potiguar Sedimentary Basin – Rio Grande do Norte			
Concessions	Concession agreement of *Alto do Rodrigues* field (48000.003784/97-04) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2040 (extended)
Concessions	Concession agreement of *Angico* field (48000.003484/97-62) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2028 (subject to extension)
Concessions	Concession agreement of *Estreito* field (48000.003793/97-97) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2052 (extended)
Concessions	Concession agreement of *Fazenda Pocinho* field (48000.003799/97-73) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2035 (extended)
Concessions	Concession agreement of *Guamaré* field (48000.003800/97-51) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2044 (extended)

Concessions	Concession agreement of *Monte Alegre* field (48000.003809/97-25) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2034 (extended)
Concessions	Concession agreement of *Serraria* field (48000.003830/97-11) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of *Barrinha* field (48000.003786/97-21) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of *Barrinha Leste* field (48610.003901/2000) Date of execution of the agreement: September 15, 2000	3R Potiguar holds 100% of the concession rights.	2037 (subject to extension)
Concessions	Concession agreement of *Barrinha Sudoeste* field (48610.003901/2000) Date of execution of the agreement: September 15, 2000	3R Potiguar holds 100% of the concession rights.	2037 (subject to extension)
Concessions	Concession agreement of *Benfica* field (48610.004003/98) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2043 (extended)
Concessions	Concession agreement of *Canto do Amaro* field 48000.003792/97-24) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2052 (extended)
Concessions	Concession agreement of *Fazenda Canaan* field (48000.003796/97-85) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2045 (extended)
Concessions	Concession agreement of *Mossoró* field (48000.003811/97-77) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2050 (extended)
Concessions	Concession agreement of *Pedra Sentada* field (48610.004001/98) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of *Pintassilgo* field (48610.003901/2000) Date of execution of the agreement: September 15, 2000	3R Potiguar holds 100% of the concession rights.	2033 (subject to extension)
Concessions	Concession agreement of *Poço Verde* field (48000.003814/97-65) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2033 (extended)
Concessions	Concession agreement of *Serra do Mel* field (48000.003828/97-70) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)

Concessions	Concession agreement of *Serra Vermelha* field (48000.003829/97-32) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of *Cioba* field (48000.003906/97-81) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of *Oeste de Ubarana* field (48000.003910/97-59) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of *Ubarana* field (48000.003782/97-71) Date of execution of the agreement: August 6, 1998	3R Potiguar holds 100% of the concession rights.	2034 (extended)
Pescada Cluster – Potiguar Sedimentary Basin – Rio Grande do Norte			
Concessions	Concession agreement of *Pescada* (PES) field (48000.003912/97-84) Date of execution of the agreement: August 6, 1998	3R Pescada holds 35% of the concession rights relating to the Pescada Cluster, while Petrobras holds the remaining 65% and is responsible for operating the cluster before ANP.	2025 (subject to extension)
Concessions	Concession agreement of *Arabaiana* (ARB) field (48000.003913/97-47) Date of execution of the agreement: August 6, 1998	3R Pescada holds 35% of the concession rights relating to the Pescada Cluster, while Petrobras holds the remaining 65% and is responsible for operating the cluster before ANP.	2025 (subject to extension)
Concessions	Concession agreement of *Dentão* (DEN) field (48000.003907/97-44) Date of execution of the agreement: August 6, 1998	3R Pescada holds 35% of the concession rights relating to the Pescada Cluster, while Petrobras holds the remaining 65% and is responsible for operating the cluster before ANP.	2025 (subject to extension)
Areia Branca Cluster – Potiguar Sedimentary Basin – Rio Grande do Norte			
Concessions	Concession agreement of *Ponta do Mel* (PML) field (48000.003816/97-91) Date of execution of the agreement: August 6,	3R RNCE holds 100% of the concession	2025 (extension until 2052 granted, amendment expected to be signed in January 2024)

	1998	rights.	
Concessions	Concession agreement of *Redonda* (RE) field (48000.003818/97-16) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2025 (subject to extension)
Macau Cluster – Potiguar Sedimentary Basin – Rio Grande do Norte			
Concessions	Concession agreement of the *Lagoa Aroeira* (LAR) field (48000.003804/97-10) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Macau* (MA) field (48000.003808/97-62) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2052 (extended)
Concessions	Concession agreement of *Carcará* (CCR) field (48610.009127/2005-55) Date of execution of the agreement: January 12, 2006	3R RNCE holds 100% of the concession rights.	2035 (subject to extension)
Concessions	Concession agreement of the *Porto Carão* (PC) field (48000.003817/97-53) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Salina Cristal* (SCR) field (48000.003825/97-81) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2052 (extended)
Concessions	Concession agreement of the *Sanhaçu* (SAN) field (48610.007998/2004) Date of execution of the agreement: November 24, 2004	3R RNCE holds 100% of the concession rights.	2036 (subject to extension)
Fazenda Belém Cluster – Potiguar Sedimentary Basin – Ceará			
Concessions	Concession agreement of the *Fazenda Belém* (FZB) field (48000.003795/97-12) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Icapuí* (IC) field (48000.003801/97-13) Date of execution of the agreement: August 6, 1998	3R RNCE holds 100% of the concession rights.	2025 (subject to extension)
Rio Ventura Cluster – Recôncavo Sedimentary Basin – Bahia			
Concessions	Concession agreement of the *Água Grande* (AG) field (48000.003629/97-43) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2045 (extended)
Concessions	Concession agreement of the *Bonsucesso* (BSU) field (48000.003658/97-41) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Fazenda Alto das Pedras* (FAP) field (48610.004004/98) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)

Concessions	Concession agreement of the *Pedrinhas* (PDR) field (48000.003678/97-59) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the Tapiranga Norte (TPGN) field (48610.001429/2008-28) Date of execution of the agreement: March 12, 2008	3R Bahia holds 100% of the concession rights.	2038 (subject to extension)
Recôncavo Cluster – Recôncavo Sedimentary Basin – Bahia			
Concessions	Concession agreement of the *Aratu* (A) field (48000.003632/97-58) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Cambacica* (CAM) field (48610.009228/2002) Date of execution of the agreement: September 2, 2002	3R Bahia holds 75% of the concession rights.	2036 (subject to extension)
Concessions	Concession agreement of the *Candeias* (C) field (48000.003638/97-34) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Cexis* (CX) field (48000.003641/97-49) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Dom João* (DJ) field (48000.003644/97-37) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Guanambi* (GNB) field (48610.008017/2004) Date of execution of the agreement: November 24, 2004	3R Bahia holds 80% of the concession rights.	2034 (subject to extension)
Concessions	Concession agreement of the *Ilha de Bimbarra* (IB) field (48000.003657/97-89) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Massuí* (MUI) field (48000.003669/97-68) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Pariri* (PRI) field (48610.001557/2009-52) Date of execution of the agreement: April 30, 2009	3R Bahia holds 100% of the concession rights.	2039 (subject to extension)
Concessions	Concession agreement of the *São Domingos* (SDS) field (48000.003693/97-42) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Socorro* (SC) field (48000.003697/97-01) Date of execution of the agreement: August 6,	3R Bahia holds 100% of the concession	2025 (subject to extension)

	1998	rights.	
Concessions	Concession agreement of the *Socorro Extensão (SCX)* field (48000.003698/97-66) Date of execution of the agreement: August 6, 1998	3R Bahia holds 100% of the concession rights.	2025 (subject to extension)
Peroá Cluster – Espírito Santo Sedimentary Basin – Espírito Santo			
Concessions	Concession agreement of the *Cangoá* (CAN) field (48000.003902/97-21) Date of execution of the agreement: August 6, 1998	3R Offshore holds 100% of the concession rights.	2025 (subject to extension)
Concessions	Concession agreement of the *Peroá* (PER) field (48000.003903/97-93) Date of execution of the agreement: August 6, 1998	3R Offshore holds 100% of the concession rights.	2025 (subject to extension)
Papa-Terra Cluster – Campos Sedimentary Basin – Rio de Janeiro			
Concessions	Concession agreement of the *Papa-Terra* field (48000.003556/97-71) Date of execution of the agreement: August 6, 1998.	3R Offshore holds 62.5% of the concession rights.	2032 (subject to extension)

(1) The concession agreements that have been extended may continue to be extended, provided that we are able to demonstrate the economic viability of the applicable field in terms of production capacity, and that we are able to maintain our investments in such field.

Extension of Our Concession Agreements

The ANP announced that it will extend the terms of concession agreements, upon the filing of a new development plan within 180 days from the date of execution of the amendment to the relevant concession agreement. This requirement applies to agreements related to all rounds.

Pursuant to CNPE Resolution No. 02/2016 and 06/2020, the guidelines for concession agreements executed from Round Zero are:

- extensions are permitted only for fields whose production is shown to be feasible beyond the original term of the agreement;
- concessionaires interested in the term extension must submit a new development plan to ANP for approval, listing the investments to be made; and
- the extension term must be compatible with the expected output under the new development plan and new investments, limited to 27 years.

Accordingly, we believe that we may obtain extensions for the most concessions of our portfolio, as we are supported by technical and financial evidence that shows that their production curves are feasible beyond the original terms of the agreements, as set forth in the Reserves Report.

Competition

Petrobras is the largest crude oil and natural gas company in Brazil. Other important players are Shell, Repsol, Petrogal, Equinor, Sinopec, Eneva, Prio and Chevron. Given that our focus is to explore mature fields, we believe we are strategically positioned in the industry.

Since Petrobras' monopoly on exploration and production activities ended, and especially following the latest rounds of ANP tenders and the Petrobras Divestment Plan, the oil and gas industry in Brazil has attracted a number of new players. The competitive landscape created by Law No. 9,478 dated August 6, 1997 revealed opportunities

for small exploration and production players in Brazil, especially on onshore fields, as these operations demand less capital.

In recent years, under the Petrobras Divestment Plan, Petrobras has divested assets that were considered non-essential to its business, including numerous exploration fields and refineries. Despite the instability created by the new federal government elected for 2023-2026 period, regarding the continued sale of assets, CADE and ANP's efforts to diversify and attract new players to the oil and gas industry in Brazil have been resulting in a greater diversity of competitors in the energy sector.

Tax Incentives

As of the date of this Offering Memorandum, we benefit from certain tax incentives and special regimes in Brazil, as described below.

These tax incentives are subject to certain conditions. If we fail to meet the requirements to maintain these tax benefits and special regimes or the laws providing for these tax incentives and special regimes are amended, we may be adversely affected. For more information, see "*Risk Factors—Risks Relating to Us—We may be adversely affected by changes in Brazilian tax law, unfavorable outcomes related to tax contingencies or the change, suspension or cancellation of tax benefits and special regimes*."

REPETRO-SPED

We benefit from a tax relief under the Special Customs Regime for the Suspension of Taxes for Goods Used in the Research and Production of Oil and Natural Gas Fields (*Regime Tributário Aduaneiro Especial de Utilização Econômica de Bens Destinados às Atividades de Exploração, Desenvolvimento e Produção das Jazidas de Petróleo e de Gás Natural*), or REPETRO-SPED, as follows:

- REPETRO-SPED special regime granted to 3R Areia Branca (which has been renamed 3R RNCE) that (i) exempts its headquarter and one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts another one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Areia Branca's corporate name, to 3R RNCE;
- REPETRO-SPED special regime granted to 3R Candeias (which has been renamed 3R Bahia) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Candeias' corporate name, to 3R Bahia;
- REPETRO-SPED special regime granted to 3R Fazenda Belém (which has been merged into 3R RNCE) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Fazenda Belém's corporate name, to 3R RNCE;
- REPETRO-SPED special regime granted to 3R Macau (which has been merged into 3R RNCE) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts two of its

branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Macau's corporate name, to 3R RNCE;

- REPETRO-SPED special regime granted to 3R and to six of its branches that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country;
- REPETRO-SPED special regime granted to 3R Potiguar that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts four of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country;
- REPETRO-SPED special regime granted to 3R Rio Ventura (which has been merged into 3R Bahia) that (i) exempts its headquarter from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time; and (ii) exempts one of its branches from the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will remain in Brazil for a period of time and suspends the payment of import tax, IPI, PIS on imports and COFINS on imports in connection with imported assets that will permanently remain in the country. We are taking all necessary measures to update the incentive, which is currently under 3R Rio Ventura's corporate name, to 3R Bahia.

SUDENE Tax Incentive

Our subsidiaries 3R Rio Ventura (which has been merged into 3R Bahia), 3R Macau (which has been merged into 3R RNCE), 3R Potiguar, 3R Offshore, 3R Candeias (which has been renamed 3R Bahia), 3R Fazenda Belém (which has been merged into 3R RNCE) and 3R Areia Branca (which has been renamed 3R RNCE) enjoy a tax incentive from SUDENE, an agency related to the Ministry of Regional Development, which grants a 75% income tax reduction related to the profits arising from the exploitation of the project enrolled in the relevant special regimes. We are taking all necessary measures to update the incentives which are currently under 3R Rio Ventura's and 3R Candeias' corporate name to 3R Bahia, and the incentives which are currently under 3R Macau's, 3R Fazenda Belém's and 3R Areia Branca's corporate name to 3R RNCE.

Accordingly, this benefit decreases the combined income tax and social contribution (PIS and COFINS) rate applicable to the production of oil and natural gas of those subsidiaries from 34% to 15.25%. Pursuant to Brazilian law, the exploration income is calculated as the accounting net income for the period, *less* specific items, including, but not limited to, financial income that exceed financial expenses, equity income and losses, non-operating income and expenses, investment incentives (*subvenções governamentais*), and gains or losses derived from the assessment of assets or liabilities at fair value.

The tax benefit is subject to certain conditions, including, but not limited to: (i) the filing of a request with the Federal Revenue Office for the recognition of the tax benefit; (ii) compliance with labor and environmental laws; (iii) annual presentation to SUDENE of a copy of the tax bookkeeping record (*Escrituração Contábil Fiscal* – ECF), debt clearance certificate related to federal taxes and federal debt, and FGTS debt clearance certificate; (iv) prohibition to distribute to partners or shareholders the amount of the tax that is not paid as a result of the exemption; (v) maintenance of a board informing about the tax benefit at the location of the project that benefits from this incentive; (vi) participation in an annual survey, upon SUDENE's request; and (vii) communication to SUDENE of any capital increase.

The SUDENE tax incentive for 3R Potiguar started on January 1, 2018 and will expire on December 31, 2027. The SUDENE tax incentive for 3R Macau and 3R Areia Branca (merged into 3R RNCE) started on January 1, 2021

and will expire on December 31, 2030. The SUDENE tax incentive for 3R Rio Ventura (merged into 3R Bahia) started on January 1, 2022 and will expire on December 31, 2031. The SUDENE tax incentive for 3R Candeias (merged into 3R Bahia), 3R and 3R Fazenda Belém (merged into 3R RNCE) started on January 1, 2023 and will expire on December 31, 2032.

State ICMS tax benefits

At State level, we benefit from ICMS tax benefits, as follows:

COTEPE Act No. 05/2020, which grants to: (i) 3R Areia Branca (which has been renamed 3R RNCE), from November 16, 2022 on; (ii) 3R Candeias (which has been renamed 3R Bahia), from September 6, 2022 on; (iii) 3R Macau (which has been merged into 3R RNCE), from November 18, 2021 on; (iv) 3R Offshore, from December 20, 2022 and October 5, 2023 on; and (v) 3R Rio Ventura (which has been merged into 3R Bahia), from August 16, 2022 and on; a reduced calculation basis, resulting in an ICMS import tax rate of 3%. This tax benefit is connected with the REPETRO-SPED special regime. We are taking all necessary measures to update the incentive which are currently under 3R Rio Ventura's and 3R Candeias' corporate name to 3R Bahia, and the incentives which are currently under 3R Macau's and 3R Areia Branca's corporate name to 3R RNCE.

COTEPE Act No. 43/2023 which grants 3R Potiguar the deferral of the ICMS-*monofásico* for diesel (from May 1, 2023 and on), GLP (from May 1, 2023 and on) and gas (from June 1, 2023 and on) on import transactions and on remittances between its own establishments.

These tax benefits will be amended due to the tax reform provided under the Constitutional Amendment No. 132/2023. Please see "tax reform" points described under the "*Risk Factors— Risks Relating to Brazil*."

Environmental, Social and Governance Project

In the fourth quarter of 2021, we engaged a specialized firm and started the first evaluation of our materiality matrix to identify the risks related to the ESG agenda. In the fourth quarter of 2022, we took a significant step by initiating our first sustainability report, based on the globally recognized 2021 GRI Standards, showcasing our commitment to aligning its operations with the latest benchmarks in sustainability reporting.

The materiality matrix underwent a thorough revision, incorporating both socioenvironmental and financial impacts—termed double materiality. Stakeholders' perceptions of our business impact were taken into consideration to define the main material items to be tracked. The report was officially released on October 2, 2023, marking a key milestone in our commitment to transparent and responsible business practices.

Social Matters

In the social sphere, based on our business model anchored on the revitalization and redevelopment of mature fields and on the extension of the useful lives of such assets, we aim to collaborate with the generation of long-term economic and social benefits for the communities located in the vicinity of our operations. Fostering the national and regional economy is a major achievement of our proposal, through the creation of jobs, and the increase in income and tax revenues in regions that depend on activities linked to the oil and gas chain.

Environmental Matters

Our integrated management system manual establishes the guidelines and general procedures relating to environmental management to ensure an environmentally-friendly and sustainable production process. We identify and analyze the risks of incidents that may compromise our operating and occupational security and that result in environmental impacts by using recognized tools with documented results and establishing measures to control and reduce these incidents.

We also establish programs, objectives and goals, taking into account legal requirements, significant environmental aspects, technological options and financial requirements, among others. The efficiency of our

integrated management system is supported by the commitment of all involved parties and all activities must be carried out in the safest way possible, in accordance with the applicable regulations.

We have guidelines applicable to all areas to ensure that our production process is developed in harmony with the environment and our employees are provided with the required knowledge regarding the environmental aspects and impacts of our activities. We are committed to the principles of sustainable development by: (i) ensuring the correct, ethical, transparent and responsible management of our business; (ii) identifying and minimizing risks; and (iii) improving the management of processes and duties at all levels, including operational control, response to emergencies and focus on pollution and incident prevention.

As of the date of this Offering Memorandum, although we have not adopted any specific Brazilian or international environmental protection standard, our integrated management system policy establishes the guidelines and general procedures relating to environmental management to ensure an environmentally friendly and sustainable production process. We identify and analyze the risks of incidents that may compromise our operating and occupational security and that result in environmental impacts by using recognized tools with documented results and establishing measures to control and reduce these incidents.

We also establish programs, objectives and goals, taking into account legal requirements, significant environmental aspects, technological options and financial requirements, among others. The efficiency of our integrated management system is supported by the commitment of all involved parties and all activities must be carried out in the safest way possible, in accordance with the applicable regulations.

We are preparing a greenhouse gas emissions inventory and gathering data related to the consumption of electric power, water and resources. We believe that the creation and processing of a database enable us to map, monitor and manage in a targeted manner the efforts allocated in our environmental management program.

We are committed to the principles of sustainable development by: (i) ensuring the correct, ethical, transparent and responsible management of our business; (ii) identifying and minimizing risks; and (iii) improving the management of processes and duties at all levels, including operational control, response to emergencies and focus on pollution and incident prevention.

Governance Matters

Our governance was strengthened in recent years with the installation of the sustainability, finance, and people and compensation committees, which, together with our audit committee, advise our board of directors.

We have a corporate governance structure based upon the Code of Best Corporate Governance Practices, published by the Brazilian Institute of Corporate Governance (IBGC), and in compliance with the principles of the *Novo Mercado* segment of the B3, upon which it has been listed since November 2020, and which demands the highest standards of governance for companies listed on the B3 (the Brazilian stock exchange). Also, approximately 30% of our employees are women, as compared to a rate of approximately 17% at our main competitors, based on data disclosed on their sustainability reports.

Our corporate governance structure, approved by our board of directors, aims to improve our performance and decision-making process. Our corporate governance structure includes the General Assembly of Shareholders, the board of directors, the executive board and the supervisory board, as well as the audit committee and the other board of directors' advisory committees. In addition to these committees, we have an ethics and integrity commission, which reports to the executive board and the board of directors, through the audit committee.

We are a company committed to ethics and transparency, as well as compliance with all applicable regulations in the performance of our activities. In addition to compliance with the law and the payment of taxes, we advocate respect for our employees, society and stakeholders, whilst we also assess the aspects and impacts related to the environment. In order to reaffirm and disseminate our commitment to ethics and compliance, we have implemented our Integrity Program, which covers policies, procedures and mechanisms with the aim of promoting ethics and best ESG practices for the employees and third parties.

Since December 2022, we have been committed to the Business Pact for Integrity and Against Corruption, an initiative led by Ethos Institute, and, as a result, received the Clean Company Seal. Confirming this commitment, in November 2023, our Integrity Program was recognized by the Comptroller General of Brazil (*Controladoria Geral da* União), or CGU, in the 2022-2023 *Empresas Pró-Ética* Program.

With respect to our suppliers, we published at the end of 2021, the Manual of Ethics and Conduct for Suppliers which establishes regulations and principles on the ethical standards to be adopted by all the suppliers contracted during the execution of services and the provision of goods. It establishes the need to comply with the applicable laws and regulations, including, without limitation, those regarding bribery, corruption, fraud and any other prohibited commercial practice or activity that could violate the laws of anti-corruption.

We provide an independent compliance hotline that is managed by an external company. It is available to all our internal and external public 24 hours a day, seven days a week. The channel can be used whenever there is any doubt, violation or suspicion of violation of our code of ethics and conduct, or the applicable policies or legislation, whilst the accusations may be made anonymously, by both internal and external public. The code prohibits any form of retaliation against the whistleblower who make accusations in good faith and ensures the confidentiality in the investigation of the facts. By encouraging and supporting accusations being made by means of this channel, we stress that the reports will be used for the constant improvement of internal practices on behalf of the culture of integrity.

Anti-Corruption Policy

We have a formal anticorruption policy since 2020, which is aimed at preventing potential violations of the applicable laws, especially Anticorruption Laws, and allows a response to suspected misconducts. The policy was implemented in the context of our integrity program, which efficiency was recognized by the CGU in the 2022-2023 *Empresas Pró-Ética* Program. On January 25, 2023, our board of directors approved a revised version of our anticorruption policy. All our directors, executive officers, employees, interns, trainees and personnel, regardless of the position they hold, cannot give, promise or offer any undue advantage, directly or indirectly, to any Brazilian or foreign government agent or another third party to obtain or retain any undue advantage.

An undue advantage is an advantage that is not authorized by law, including benefits or interests sought to be obtained through illegal conduct. Undue advantages may be obtained through: (i) cash; (ii) gifts; (iii) debt forgiveness; (iv) loans; (v) personal favors; (vi) entertainment, meals and trips; (vii) donations in exchange for consideration; (viii) business opportunities; and (ix) medical care, among others.

Furthermore, we interact with the government, in particular the ANP. As a result, our anticorruption policy sets forth rules on behavior that must be strictly observed, in addition to rules regarding any form of corporate gifts, donations, sponsorships and relationships with third parties.

Our anticorruption policy also sets forth rules regarding economic penalties imposed by international organizations or governments to (i) punish illegal conduct, or (ii) require that the involved individual, entity or country change its current conduct.

Intellectual Property

We rely on a combination of intellectual property assets, such as trademarks, domain names and software licensed by third parties to conduct our business.

Trademarks

In Brazil, Federal Law No. 9,279/1996 (the Brazilian Industrial Property Law or BIPL) regulates industrial property rights, and the Brazilian Patent and Trademark Office (*Instituto Nacional da Propriedade Industrial*, or INPI), is the governmental authority responsible for registration/protection of such rights and for stimulating and promoting competitiveness and technology and economic development in the country. By means of registration with the INPI, one becomes a proprietor of the industrial property, such as trademarks, geographical indications, patents (patent inventions or utility models) and industrial designs, among others.

In addition, in Brazil, trademarks are visually perceptible distinctive signs that identify and distinguish products and/or services and, therefore, sound, taste and/or olfactory signs cannot be registered with the INPI as trademarks. Regarding trademark application for registration, it is important to highlight that, during INPI's examination process, the registration is pending and the applicant has only an expectation of rights over the trademark.

The ownership of a trademark is acquired through a registration granted by INPI. The owner of a registered trademark has the exclusive right to use the trademark to identify its products or services in Brazil, for a term of ten years, which may be periodically renewed, upon payment of a fee to the INPI. However, even without the registration (that is, the property) of the trademark, the applicant with a pending registration enjoys the right to: (i) assign their registration or application for registration; and (ii) license its use and ensure its material integrity or reputation through administrative, extrajudicial and judicial measures.

As mentioned above, during the registration process, the applicant has only the expectation of ownership rights related to the trademark applied for. This expectation may not become a full-fledged right in the event of: (i) failure to pay the fees due within the legal deadlines; (ii) INPI's rejection of the application; and (iii) absence of an appeal or non-compliance with an official action issued by the INPI.

The registration of a certain trademark terminates due to: (i) the expiration of the validity term, if the registration is not renewed within the adequate period; (ii) withdrawal by the trademark holder; (iii) lack of evidence of use of the trademark, when challenged by a cancellation action *ex officio* or by a legitimate third party; (iv) administrative or judicial declaration of nullity; or (v) non-compliance with Article 217 of the Brazilian Industrial Property Law, providing for the requirement applicable to individuals domiciled abroad to have an attorney-in-fact in Brazil and to maintain the continuous use of the trademark, in accordance with the registration applicable filed with INPI.

We own valid trademark registrations for "YXC", in International Class NCL (9) 42, "OURO PRETO ÓLEO E GÁS", in International Classes NCL (10) 35, 36, 37, 39, 40, 42, "3R PETROLEUM", in International Classes NCL (11) 35, 36, 37, and "3R", in International Class NCL (10) 35, NCL (11) 42. Further, as of the date of this Offering Memorandum, we have filed other applications for the trademarks "3R PETROLEUM" and "OURO PRETO ÓLEO E GÁS", which are under INPI's analysis. It is worth mentioning that the applications for the trademark "3R PETROLEUM" have been initially rejected in International Classes NCL (11)04, 39, 40 and 42, based on senior registrations, and our appeals are pending analysis by the INPI. Additionally, there is a specific trademark application for "3R PETROLEUM" in International Class NCL (11) 42 that has been definitely denied by the INPI based on a senior registration, and we have started a judicial procedure in order to seek to annul INPI's administrative act that rejected our trademark application. The application for the trademark "OURO PRETO ÓLEO E GÁS" has been initially rejected in International Classes NCL (10) 04, based on senior registration, and our appeal is also pending analysis by the INPI. All these trademarks, registered or not, are relevant for our activities.

Software

We rely on computer software licensed from third parties to provide our solutions and run our business. Third-party software may not continue to be available on commercially reasonable terms, or at all. Any loss of the right to use or any failures of third-party software could result in delays in our ability to provide our solutions or run our business until equivalent software are identified, obtained, and integrated, which could be costly and time-consuming and may not result in an equivalent solution, any of which could cause an adverse effect on our business and operating results.

IP Overview

In addition, we are not aware of any judicial and administrative dispute involving our intellectual property assets and we take reasonable steps to monitor such assets to guarantee its validity in accordance with our business strategy. However, we cannot assure you that competitors will not infringe our intellectual property assets or that we will have adequate resources to enforce our intellectual property assets. Failures to protect our intellectual property assets may subject us to disputes and losses.

We may be subject to costly and time-consuming litigation if our intellectual property assets violate a third party's right. Third parties could make a claim of infringement against us, which may result in (i) a limitation on our ability to use the intellectual property assets subject to these claims, (ii) preventing us from obtaining registration/protection and (iii) payment of damages.

Domain Names

A domain name is an identification of autonomy, authority or control on the internet. Domain names follow the rules and procedures of the Domain Name System, or DNS, and the rules and the procedures of the entity responsible for registering the domain names.

In Brazil, the entity responsible for the registration of domain names, management and publication of DNS for domain names ending with ".br," distribution of website addresses and maintenance services is Registro.br.

We own registered domain names, in particular <3rpetroleum.com.br>, <3roperacoesmaritimas.com.br>; <3rinterativa.com.br>; and <3rservices.com.br>, duly registered and/or in the process of registration renewal with Registro.br.

Information Technology Systems and Cybersecurity Policies and Standards

As of the date of this Offering Memorandum, we have implemented policies and standards to safeguard our information technology systems, which applies to all internal employees, including: (i) Information Security, which defines the mandatory minimum information security requirements and act as an umbrella document to all other associated standards and defines responsibilities; (ii) Acceptable Use of Information Technology Resources, which defines the appropriate organizational use of information technology resources; (iii) Wireless Networks Security, which establishes controls for wireless networks in order to minimize risks to the confidentiality, integrity and availability of information; (iv) Account Management and Access Control, which establishes the rules and processes for creating, maintaining, and controlling the access of a digital identity; (v) Authentication Tokens, which defines the appropriate authentication tokens that can be used with systems developed or operated that require authenticated access; (vi) Encryption, which establishes the appropriate encryption for data in transit, rest and key management; (vii) Mobile Device Security, which defines the additional protection for mobile devices; (viii) Patch Management, which establishes a practice to proactively prevent the exploitation of technology vulnerabilities by applying security related software or firmware updates ("Patches) to applicable IT systems; (ix) Remote Access, which establishes authorized methods for remotely accessing resources and services securely; (x) Secure Coding, which best practices to avoid the occurrence of the most common coding errors which creates vulnerabilities in software; (xi) Secure Configuration, which establishes baseline configuration for information systems to maximize security and minimize the potential risk of unauthorized access to information and technology; (xii) Secure System Development Life Cycle, which defines security requirements to computer systems and applications; (xiii) Security Logging, which defines requirements for security log generation, management, storage, disposal, access, and use; (xiv) Vulnerability Scanning, which establishes a vulnerability management process to reduce the potential that these vulnerabilities are exploited and thereby reduce risk of compromise to the confidentiality, integrity and availability of information assets; and (xv) Cyber Incident Response, which general steps to computer security incidents.

Employees

As of September 30, 2023 and December 31, 2022, 2021 and 2020, we had a total of 711, 506, 272, and 65 employees, respectively, including our management and technical personnel at all our facilities.

The following table sets forth information relating to our turnover rate as of the dates indicated:

As of September 30,	As of December 31,		
2023	**2022**	**2021**	**2020**
23.8%	34.6%	43.4%	43.1%

We outsource our financial administrative, legal and certain operational and technical personnel. As of September 30, 2023 and December 31, 2022, 2021 and 2020, we had 5,599, 2,394, 828 and 136 outsourced employees, respectively. The increase in the number of outsourced employees over the years is connected with our portfolio growth.

Compensation Policy and Benefits

Our human resources policy is an integral part of our business strategy, aiming at ensuring: (i) compensation in line with market practices; (ii) conditions to attract and retain professionals; (iii) a title and salary structure that is adequate for our organizational processes; and (iv) a conduct structure that allows our employees to know their duties and responsibilities.

We do not have a benefits policy. We adopt regional or local policies, pursuant to applicable law. We have a compensation policy for the members of our management. For more information, see "*Management—Compensation*."

For more information on our stock option plans, see "*Management—Compensation—Stock Option Plans*."

Labor Unions and Collective Bargaining Agreements

We have collective bargaining agreements negotiated with the oil workers' union ("SINDIPETRO") for the 2023-2024 period for the states of Bahia, Rio Grande do Norte, Ceará, Espírito Santo and Rio de Janeiro.

In the last three years, we did not have any work stoppage or strike.

Legal Proceedings

We are party to civil, tax. environmental, and labor legal and administrative proceedings arising from the ordinary course of our business. We record provisions for proceedings in which our risk of loss is probable, based on the opinion of our management and taking into consideration the information provided by our external legal advisors.

The following table summarizes the provisions we recorded on a consolidated basis for the proceedings to which we were party as of September 30, 2023:

	As of September 30, 2023
	(in millions of R$)
Labor	3.7
Total	**3.7**

We are also party to legal and administrative proceedings in which our risk of loss is possible based on the judgment of our management and external legal advisors, involving an amount of R$2.7 billion as of September 30, 2023. Below is a description of the material legal and administrative proceedings to which we were party as of September 30, 2023.

Civil Proceedings

As of September 30, 2023, we were party to 14 civil proceedings, involving the total estimated amount of R$2.8 billion, including legal fees, for which we had not provisioned any amount. Among those civil proceedings, we consider the following six to be relevant:

3R Macau (now 3R RNCE) is a party to a lawsuit filed by the municipality of Macau discussing the title to certain real estate located in Terras de Conceição, known as Maxixe and Canto do Papagaio. Accordingly, if such title is confirmed, the municipality of Macau is requesting the payment of co-participation in the production of oil and gas of the Macau Cluster since the commencement of the drilling activities in the wells located on such properties, which allegedly occurred on July 31, 1987. On December 9, 2020, the court issued a decision denying the plaintiff's preliminary injunction request and determining our replacement as a defendant by 3R Macau. As of

September 30, 2023, the amount involved in this proceeding was R$63.5 million. However, since Petrobras recognized that it is responsible for the amounts eventually due prior to 2018, pursuant to our legal advisors, our risk of loss is remote for any amounts relating to periods prior to 2018 and possible for amounts relating to periods after 2018, which is estimated to total R$1.4 million as of September 30, 2023.

3R is a party to three civil actions based on Federal Law No. 4,717/65 by two Brazilian citizens against Petrobras, ANP, Roberto da Cunha Castello Branco (the chairman of our board of directors) and 3R. Such proceedings have injunction requests to immediately suspend the sale of the Recôncavo Cluster, the Potiguar Cluster and the Rio Ventura Cluster. On September 15, 2022, 3R submitted its defense and the trial court denied the injunction requests based on precedents of the Brazilian Federal Court of Audits (TCU) and the Brazilian Federal Supreme Court (STF) allowing the sale of assets and shareholding interest under the Petrobras Divestment Plan.

3R Offshore is a party to a civil action filed by the National Confederation of Fishers and Aquaculturists against us, seeking indemnity for losses incurred by fishers due to a fishing exclusion zone created by environmental authorities as a result of our concession rights to the Papa-Terra Cluster. We submitted our defense and as of the date of this Offering Memorandum, the proceeding is pending judgment by the trial court. Based on the opinion of our management and external legal advisors, the risk of loss in this proceeding is possible. As of September 30, 2023, the amount involved in this proceeding was R$1.3 billion.

3R Offshore is a party to a civil action filed by the National Confederation of Fishers and Aquaculturists against us, seeking indemnity for losses incurred by fishers due to a fishing exclusion zone created by environmental authorities as a result of our concession rights to the Peroá Cluster. 3R Offshore submitted its defense and as of the date of this Offering Memorandum, the proceeding is pending judgment of the trial court. Based on the opinion of our management and external legal advisors, the risk of loss in this proceeding is possible. As of September 30, 2023, the amount involved in this proceeding was R$1.4 billion.

Tax Proceedings

As of September 30, 2023, we were party to 25 tax legal and administrative proceedings, involving the total estimated amount of R$9.0 million, including legal fees.

3R filed a lawsuit against the National Treasury (*Fazenda Nacional*) to have our stock option plans recognized as commercial agreements rather than compensation plans, seeking to prevent the tax authorities from collecting social security contributions, income tax and related fines as a result of the sale of any shares acquired through our stock option plans. The trial court granted a preliminary injunction to us. The trial court's decision was appealed by the National Treasury (*Fazenda Nacional*). As of the date of this Offering Memorandum, the proceeding is pending judgment of the appellate court. Based on the opinion of our management and external legal advisors, the risk of loss in this proceeding is possible. The total amount involved in this claim was R$6.0 million, of which 3R has already deposited in the court the amount of R$3.3 million. As of September 30, 2023, the residual amount involved in this proceeding was R$2.7 million.

In 2016, 3R Offshore filed a lawsuit to cancel social security charges formalized by the Brazilian Federal Revenue Office (*Receita Federal do Brasil*), after which such public agency promptly initiated tax execution proceedings demanding payment of the questioned amounts.

In September 2023, the judicial dispute was concluded, with a favorable outcome for the Brazilian Federal Revenue Office, leading 3R Offshore to proceed with the payment of the taxes, which amounted to R$4.2 million. As of the date of this Offering Memorandum, both the lawsuit filed by 3R Offshore and the tax execution have been concluded, and the tax execution process has been permanently resolved.

Labor Claims

As of September 30, 2023, we were party to 208 labor claims and administrative proceedings, involving a total estimated amount of R$18.5 million, including legal fees, for which we had provisioned R$3.7 million.

We were party to 182 labor claims that were initially brought against Stratageo Soluções Tecnológicas Ltda. (or "Stratageo"), which, as of September 30, 2023, involved a total estimated amount of R$10.6 million, of which R$6.9 million had a risk of loss classified as possible. We became party to them in their enforcement phase, on the grounds that we and Stratageo would be part of a single economic group, which would make us jointly and severally liable for Strategeo's labor contingencies. We sustain our answer on the basis that we are an independent company and that we do not exercise any influence over the management of Stratageo, their employees or agents, and, therefore, we would not be liable for such labor contingencies. Despite the terms of our defense, we recognize the risk of loss in these labor claims if the court holds us jointly and severally liable as a result of an eventual evidence of a business succession or formation of an economic group.

We consider only three of these 208 labor claims and administrative proceedings to be individually material. The first is the one filed on August 25, 2016, initially against Georadar, which led to the lower labor court recognizing 3R as having formed an economic group with Georadar, and thus holding us jointly and severally liable for the claim.

In the second, filed on October 10, 2022, the plaintiff demands us to pay customary labor allowances. As of September 30, 2023, the claim involved a total estimated amount of R$1.8 million, and the risk of loss was classified as possible. The lower labor court rendered a decision denying the claim, but the plaintiff filed an appeal and, as of the date of this Offering Memorandum, the proceeding is pending judgment of the appellate labor court.

The third labor claim we consider material was filed on July 13, 2021, initially against RN Comércio Varejista S.A., and other companies within its economic group. On July 5, 2023, the lower labor court determined that 3R and RN Comércio Varejista S.A. were part of the same economic group. 3R filed an appeal and requested the suspension of the decision by means of a preliminary injunction. As of the date of this Offering Memorandum, the suspensive effect had been granted and we are awaiting judgment by the appellate labor court. As of September 30, 2023, this labor claim involved a total estimated amount of R$2.6 million, and the risk of loss was classified as possible.

Certain Discussions and Legal Proceedings Involving Petrobras

The Petrobras Divestment Plan is provided for under (i) Law No. 13,303/2016, or the Government-Owned Company Law (*Lei das Estatais*), (ii) Decree No. 9,188/2017, which establishes governance, transparency and best market practice rules in adopting the special regime for the divestment of assets by federal government-owned companies, (iii) Decree No. 9,355/2018, which provides for the assignment of oil and gas exploration, development and production rights by Petrobras; and (iv) the decision of the Brazilian Federal Supreme Court ("STF") stating that the sale of government-owned parent companies can only take place with the authorization of the Brazilian Congress and must be preceded by a public bidding process. These requirements are waived for the sale of a control stake in subsidiaries and affiliates of government-owned companies. The Brazilian Congress, in turn, states that the incorporation of subsidiaries through spin-offs of the parent company if and when not based on new market opportunities, but instead on an opportunity to sell the asset, shall be regarded as misuse and is a prohibited and unconstitutional practice. The constitutionality of Decree No. 9,355/2018 was challenged before the STF, which declared its constitutionality in October 2020.

We are aware of certain environmental proceedings brought against Petrobras in connection with its activities as the former operator of the Macau Cluster, Areia Branca Cluster, Fazenda Belém Cluster, Papa-Terra Cluster, Recôncavo Cluster, and the Rio Ventura Cluster. As of the date of this Offering Memorandum, we are not party to these legal proceedings. However, we may be held liable for indemnity and environmental reparatory obligations, as a successor to Petrobras as operator of the Macau and Rio Ventura Clusters. With regard to some of these legal proceedings, we have a contractual recourse against Petrobras up to a certain amount.

We are also aware of one class actions (*ações populares*) filed by the oil workers' union, SINDIPETRO, of the Brazilian states of Alagoas and Sergipe, challenging the constitutionality of the decrees that authorized certain divestments by Petrobras, which could adversely affect our title to the concession rights related to the Pescada Cluster. This civil action alleged that sales under the Petrobras Divestment Plan should have been authorized by specific laws enacted by the Brazilian Congress. As of the date of this Offering Memorandum, we are not party to these legal proceedings and we were not informed of any adverse effect relating to our acquisition of the Pescada Cluster.

MANAGEMENT

3R is managed by a board of directors and a board of executive officers, in accordance with its bylaws and the Law 6.404/76 (the "Brazilian Corporate Law"). 3R also has an audit committee, a finance committee, a people and compensation committee and a sustainability committee. In addition, 3R's bylaws provide for a non-permanent fiscal council, to be established at the request of our shareholders. Our fiscal council was installed by a shareholders' meeting held on April 28, 2023.

Board of Directors

3R's board of directors is responsible for establishing our general business policies and monitoring our board of executive officers, among other responsibilities. According to our bylaws and Brazilian Corporate Law, our board of directors has strategic, monitoring and supervisory responsibilities and does not have executive activities.

Pursuant to our bylaws, our board of directors comprises a minimum of five members and a maximum of eleven members, elected at our shareholders' meeting for two-year terms, and re-election is permitted. The *Novo Mercado* regulations require that at least 20% or two members, whichever is higher, of our directors be independent. The terms of office of all members of our board of directors will expire at the annual shareholders' meeting, expected to occur on or before April 30, 2024, which approves our financial statements for the fiscal year ending on December 31, 2023.

The following table sets forth the composition of 3R's board of directors:

Name	Title	Date of Most Recent Election
Roberto da Cunha Castello Branco	Chairman	September 5, 2022
Richard Chagas Gerdau Johannpeter	Independent Member	September 5, 2022
André de Camargo Bartelle	Independent Member	September 5, 2023
Guilherme Affonso Ferreira	Independent Member	September 5, 2022
Carlos Alberto Pereira de Oliveira	Independent Member	April 28, 2023
Paula Kovarsky Rotta	Independent member	September 5, 2023
Harley Lorentz Scardoelli	Independent member	September 5, 2023

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current members of 3R's board of directors.

Roberto da Cunha Castello Branco. Throughout his professional career, Mr. Castello Branco served at several executive positions, including: president and member of the board of directors of Petrobras, officer of the Central Bank of Brazil, officer of the Center for Studies in Economic Growth and Development at FGV, member of the board of directors of Invepar S.A., member of the board of directors of GRU Airport, member of the CEO Steering Committee of the Oil and Gas Climate Initiative (OGCI) and of the US Brazil CEO Forum. Currently, Mr. Castello Branco is (i) an independent member of the board of directors, independent member of the financial committee, independent coordinator of the innovation committee and independent member of the nomination committee of Vale S.A., where he has held the position of executive officer from 2003 to 2014 and (ii) vice-chairman of the board of directors of Omega Energia S.A. Mr. Castello Branco holds a degree in economics from the Faculty of Economics and Finance of Rio de Janeiro and a master's degree in economics from the Getúlio Vargas Foundation (*Fundação Getúlio Vargas)* (FGV), a PhD in economics from FGV and a post-doctoral fellow degree from the University of Chicago.

Richard Chagas Gerdau Johannpeter. Mr. Johannpeter has over 25 years of experience at the Gerdau Group, where he worked on different business fronts and held different positions on strategy and production areas at Gerdau S.A. In 2007, he took over the position of investment management of Gerval Investimentos (family office of the Gerdau family), where he became investment director, from 2010 to 2019. Additionally, Mr. Johannpeter was a member of the board of directors and a member of the governance and strategy committees of Gerdau S.A., from 2015 to 2020, and a member of the board of directors of Metalúrgica Gerdau S.A., from 2018 to 2020. Currently, Mr.

Johannpeter is an effective member of Gerdau S.A.'s finance committee. Mr. Johannpeter holds a degree in legal and social sciences from the Federal University of Rio Grande do Sul and an MBA from the Stanford Graduate School of Business.

André de Camargo Bartelle. Mr. Bartelle started his career in the credit area of Banco BTG Pactual and since 2011 has worked at Vulcabras S.A, in the financial and new projects areas. Mr. Bartelle is the first vice-president of the board of directors of Vulcabras S.A. Since 2017, he has been an effective member of the investment committee of Grendene S.A. and a member of the controlling block of Grendene S.A. Mr. Bartelle holds a degree in production engineering from the University of São Paulo.

Guilherme Affonso Ferreira. Mr. Ferreira is the managing partner at Teorema Capital, where he has been working since its incorporation in 2003. Mr. Ferreira serves as director in a number of companies listed on the B3. He is also a member of the board of Instituto de Cidadania Empresarial, a charity institution. In the last years, he served as member of the boards of directors of Petrobras, Unibanco, B2W/Submarino, Gafisa, SulAmérica and Banco Indusval, among others. Mr. Ferreira holds a bachelor's degree in production engineering from the University of São Paulo and completed a course in economics and politics at Macalester College, St Paul/Minno.

Carlos Alberto Pereira de Oliveira. Mr. Oliveira serves as the chairman of 3R Offshore. Prior to joining our company, he worked at Petrobras from 1981 to 2019, where he served in several executive roles, such as officer of exploration and production at Petrobras in 2019, general manager of integrated management of exploration and production assets between 2016 and 2019, executive manager of strategy and organization in 2016, executive manager of E&P for production development projects between 2013 and 2016, executive manager of E&P for investment management programs in the probes and production units in Brazil between 2012 and 2013. Mr. Oliveira holds a degree in mechanical engineering from the Military Institute of Engineering of Rio de Janeiro (*Instituto Militar de Engenharia*) and a business administration degree from UFRJ. He also holds a specialization degree in petroleum engineering from Petrobras, a masters in finance and investments from the Pontifical Catholic University of Rio de Janeiro (*Pontifícia Universidade Católica do Rio de Janeiro*) and completed a finance and accounting program at the University of Texas.

Paula Kovarsky Rotta. Mrs. Rotta has worked from 1996 to 2006 at Shell Southern Gas&Power. From 2006 to 2015, she was the first woman serving as executive officer at Itaú BBA S.A., where she also worked in the oil and gas sector. From 2015 to 2021, Mrs. Rotta serves as executive officer at Cosan Holding, leading Investor Relations and ESG scopes. Currently, Mrs. Rotta serves as a VP of Strategy and Sustainability at Raízen. Mrs. Rotta holds a bachelor's degree in engineering from Pontifical Catholic University of Rio de Janeiro (*Pontifícia Universidade Católica do Rio de Janeiro*).

Harley Lorentz Scardoelli. Mr. Harley began his career at the Gerdau Group in 1988, where he worked for 33 years, being responsible for acquisitions, start-up and implementation of the Gerdau culture in operations in Canada, the United States, Spain and Brazil. Throughout his career, he has held executive positions in companies of the Gerdau Group, including the positions of chief executive officer and investor relations officer from July 2015 to December 2021, as well as being a member of the finance committee, of the strategy committee of Gerdau S.A. and the board of directors of Seiva S.A. Mr. Scardoelli holds a bachelor's degree in civil engineering from the Federal University of Rio Grande do Sul and in business administration from the Pontifical Catholic University of Rio Grande do Sul (*Pontifícia Universidade Católica do Rio Grande do Sul)*, in addition to having the title of Chartered Financial Analyst (CFA).

Board of Executive Officers

3R's board of executive officers is responsible for the permanent management of 3R's business and the implementation of the resolutions of 3R's board of directors.

3R's board of executive officers comprises a minimum of three members and a maximum of seven members elected by the board of directors for two-year terms, and reelection is permitted. The terms of office of all members of our board of executive officers will expire at the annual shareholders' meeting expected to occur on or prior April 30, 2024, which approves our financial statements for the fiscal year ending on December 31, 2023.

The following table sets forth the composition of 3R's board of executive officers:

Name	Title	Date of Most Recent Election
Matheus Dias	Chief executive officer	January 3, 2023
Rodrigo Pizarro Lavalle da Silva	Chief financial and investor relations officer	September 8, 2022
Mauricio Diniz	Executive officer	January 3, 2023

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current members of 3R's board of executive officers.

Matheus Dias. Mr. Dias held management positions at Promon Engineering in areas such as supplies, logistics, engineering and management of oil and gas and infrastructure. While at Promon Engineering, he was the supply and contract manager for Hidrovias do Brasil (a partnership between the Promon Group and Pátria Investimentos, former managers of the P2 Brazil Fund). In 2020, Mr. Dias joined Starboard Asset as an executive officer of its private equity area, having overseen the acquisition of Ouro Preto. After our IPO, Mr. Dias went on to lead our commercial and new business areas as an officer of our subsidiaries, being responsible for negotiations regarding the acquisition of oil and gas production assets, strategic partnerships and relevant contracts. In 2022, Mr. Dias became the head of our procurement, information technology, legal and regulatory areas, as well as our mid- and downstream areas. Mr. Dias holds a production engineering degree from the University of São Paulo (USP), a specialization degree from the Technical University of Darmstadt in Germany (*Technische Universität Darmstadt*) and an MBA degree from FIA Business School.

Rodrigo Pizarro Lavalle da Silva. Mr. Silva serves as our chief financial officer and investor relation officer. During his career, with 12 years of experience, he served as executive director, principal and associate director at Starboard Partners. He also served as chief financial officer during the restructuring process of the Ecovix shipyard at Engevix Construções Oceânicas and worked at Banco Plural and Promon Engenharia. Mr. Silva holds a bachelor's degree in mechanical engineering from UFRJ, having attended a sandwich undergraduate program (CAPES/BRAFITEC) at Polytech Marseille, in France, including subjects taught in the mechanical energy engineering department. Mr. Silva holds a master's degree in oil and energy engineering from PUC Rio and a master's degree in oceanic engineering from UFRJ (COPPE).

Mauricio Diniz. Mr. Diniz worked at Petrobras for several years, where he served as manager of logistics, maintenance and operations support, general manager of subsea deployment and operations, production asset manager, among other leadership roles in the areas of production planning and operations. In 2021, Mr. Diniz joined the 3R Group, having been initially responsible for the offshore operations departments. He currently serves as our officer of oil and gas exploration and production. Mr. Diniz holds a degree in mechanical engineering from the Federal University of Minas Gerais (UFMG), a petroleum engineering degree from Petrobras University and an MBA degree from COPPEAD (UFRJ). He also completed the Executive Development Program at Columbia Business School and the Advanced Management Program at INSEAD.

Audit Committee

On August 31, 2020, 3R's board of directors established our audit committee as an advisory body of our board of directors with operational autonomy and its own budget approved by the board of directors, comprising at least three members elected by our board of directors. 3R's executive officers and the executive officers of our subsidiaries cannot be members of our audit committee. Our audit committee assists our board of directors in resolutions related to compliance with laws and regulations, best corporate governance practices, the reliability of our financial statement, the assessment and monitoring of our risk exposures, actions intended to reduce risks and threats and the receipt and monitoring of the relevant complaints, through our whistleblower's channel.

The following table sets forth the composition of 3R's audit committee:

Name	Title	Term of Office
Harley Lorentz Scardoelli	Coordinator	August 2024
Ricardo Fraga Lima	Member	August 2024
Carlos Alberto Pereira de Oliveira	Member	August 2024

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current members of 3R's audit committee.

Harley Lorentz Scardoelli. See *"—Board of Directors*."

Ricardo Fraga Lima. Mr. Lima has eight years of experience as an external auditor in Brazil and abroad, in insurance, reinsurance, civil construction, retail, services, information technology and oil and gas, in addition to five years of experience in the reporting and management of information at Enauta Energia S.A. and as a manager at Rio Energy. Additionally, he has acted as Deloitte Bermudas auditor for SEC-registered clients, with experience in U.S. GAAP, IFRS and Brazilian GAAP standards, in addition to knowledge of internal controls (Sarbanes-Oxley). Mr. Lima holds a degree in Accounting Sciences from UERJ, an MBA in Business Management from Instituto Brasileiro de Mercado de Capitais, a Masters' degree in Economics and Business Management from Universidade Cândido Mendes UCAM and a PhD in Accounting from UFRJ.

Carlos Alberto Pereira de Oliveira. See *"—Board of Directors*."

Finance Committee

On January 27, 2022, 3R's board of directors established our finance committee, whose function is to advise the board on the analysis of indebtedness, external fundraising, derivative instruments, as well as other operations and/or financial instruments that may be analyzed and/or contracted by us, including the preparation of internal policies and procedures related to our financial management.

The following table sets forth the composition of 3R's finance committee:

Name	Title	Term of Office
Harley Lorentz Scardoelli	Coordinator	September 2024
André de Camargo Bartelle	Member	September 2024
Paula Kovarsky Rotta	Member	September 2024
Richard Chagas Gerdau Johannpeter	Member	September 2024

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current members of 3R's finance committee.

Harley Lorentz Scardoelli. See *"—Board of Directors*."

André de Camargo Bartelle. See *"—Board of Directors*."

Paula Kovarsky Rotta. See *"—Board of Directors*."

Richard Chagas Gerdau Johannpeter. See *"—Board of Directors*."

People and Compensation Committee

On January 27, 2022, 3R's board of directors established our people and compensation committee, whose function is to advise the board in assessing the alignment of the remuneration strategy, structure and practices with

our strategies; assessing whether the remuneration mechanisms are aligned with the generation of value for our shareholders; reviewing and making recommendations on aspects related to people management and remuneration included in the our annual report and promoting the integration and interface between our shareholders and our management, related to people management.

The following table sets forth the composition of 3R's people and compensation committee:

Name	Title	Term of Office
André de Camargo Bartelle	Member	September 2024
Carlos Alberto Pereira de Oliveira	Member	September 2024
Guilherme Affonso Ferreira	Member	September 2024
Roberto Castello Branco	Member	September 2024

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current members of 3R's people and compensation committee.

André de Camargo Bartelle. See *"—Board of Directors*."

Carlos Alberto Pereira de Oliveira. See *"—Board of Directors*."

Guilherme Affonso Ferreira. See *"—Board of Directors*."

Roberto Castello Branco. Mr. Castello Branco has held various executive positions, including: Chairman and Member of the Board of Directors of Petrobras, Director of the Central Bank of Brazil, Director of the Center for Studies in Economic Growth and Development at the Getúlio Vargas Foundation (FGV), Member of the Board of Directors of Invepar S.A., Member of the Board of Directors of GRU Airport, Member of the CEO Steering Committee of the Oil and Gas Climate Initiative (OGCI) and of the US Brazil CEO Forum. Mr. Castello Branco holds a degree in Economics from the Rio de Janeiro School of Economics and Finance and a master's degree in economics from the Graduate School of Economics (EPGE) of FGV, a PhD in Economics from FGV's EPGE and a Post Doctoral Fellow at the University of Chicago.

Sustainability Committee

On May 25, 2023, 3R's board of directors established our sustainability committee, whose function is to advise the board on issues related to sustainability, governance and social and environmental responsibility for the 3R Group.

The following table sets forth the composition of 3R's sustainability committee:

Name	Title	Term of Office
Paula Kovarsky Rotta	Member	April 2024
Guilherme Affonso Ferreira	Member	April 2024
Mauricio Antonio Costa Diniz	Member	April 2024

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current members of 3R's sustainability committee.

Paula Kovarsky Rotta. See *"—Board of Directors*."

Guilherme Affonso Ferreira. See *"—Board of Directors*."

Mauricio Antonio Costa Diniz. Mr. Diniz has extensive experience in the oil and gas sector. Mr. Diniz was a career employee at Petrobras, where he held the positions of Executive Manager of Health, Safety and Environment (HSE), Executive Manager of Logistics, Maintenance and Operations Support, General Manager of Subsea Deployment and Operations, Production Asset Manager, among other leadership roles in the areas of Production Planning and Operations. Since 2021, Mr. Diniz has been working at the 3R Group, initially in charge of the Offshore Operations Department and currently Exploration and Production Director at 3R Petroleum Óleo e Gás S.A. Mr. Diniz holds a degree in Mechanical Engineering from the Federal University of Minas Gerais (UFMG), a degree in Petroleum Engineering from Petrobras University and an MBA in Business Management from COPPEAD (UFRJ), as well as having completed the Executive Development Program at Columbia Business School and the Advanced Management Program at INSEAD.

Fiscal Council

3R's bylaws provide for a non-permanent fiscal council, comprising three members and three alternates, elected by our shareholders' meeting for a one-year term. Brazilian Corporate Law provides for the composition, installation and compensation of the fiscal council. 3R's fiscal council was installed by a shareholders' meeting held on April 28, 2023. The terms of office of all members of our fiscal council will expire at the annual shareholders' meeting which approves our financial statements for the fiscal year ending on December 31, 2023.

The following table sets forth the composition of 3R's fiscal council:

Name	Title	Date of Appointment
Rogério Gonçalves Mattos	Effective member	April 28, 2023
Rogério Tostes Lima	Effective member	April 28, 2023
Fabio Antunes Lopes	Effective member	April 28, 2023
João Ricardo Pereira da Costa	Alternate member	April 28, 2023
Gustavo Baptista Alves	Alternate member	April 28, 2023
Marcelo Joaquim Pacheco	Alternate member	April 28, 2023

Biographical Information

Set forth below is a summary of the professional experience and biographical information of the current effective members of 3R's fiscal council.

Rogério Gonçalves Mattos. Mr. Mattos has a vast professional experience in the oil and gas area at Petrobras, including 23 years of managerial experience. He served as, among others, superintendent officer of Transportadora Associada de Gás S.A. – TAG, chief executive officer of Nova Transportadora do Sudeste S.A. – NTS, chief executive officer of Nova Transportadora do Nordeste S.A. – NTN, superintendent officer of Transportadora Brasileira Gasoduto Bolívia Brasil S.A. – TBG and new business executive manager of Petrobras. Mr. Mattos holds a bachelor's degree in chemical engineering from UFRJ and in economic sciences from UERJ.

Rogério Tostes Lima. Mr. Lima has been a C-level executive with more than 20 years of experience, having served as investor relations officer and equity research analyst. In recent years, Mr. Lima contributed to the preparation of investor relations programs for companies operating in the telecommunications and education sectors, with shares listed in Brazil and in the United States. He also participated in the growth processes of companies through M&A cycles and activities in the capital market. Mr. Lima holds a bachelor's degree in business administration from FUMEC-BH, a post-graduate degree in finance from FGV, and an MBA from Ohio University.

Fabio Antunes Lopes. Currently, Mr. Lopes is a partner, member of the board of directors and executive-superintendent of Banco Modal S.A. In his career, Mr. Lopes worked as finance analyst at Banco BBM S.A., and participated in the creation and development of the first real estate funds in Brazil focused on real estate development. He is also the founder and was a partner and chief executive officer of MDL Realty S.A. He was the founder of Yacaman Consultoria e Participações Ltda., a company specialized in corporate and real estate management consulting services. Mr. Lopes holds a bachelor's degree in economics from PUC-RJ and a post-graduate degree in finance from FGV.

João Ricardo Pereira da Costa. Mr. Costa has more than 35 years of experience in audit at Ernst & Young, 20 years of which he served as the partner responsible for the audit of financial statements and issuance of securities and bonds in Brazil and abroad. Currently, Mr. Costa is an Ernst & Young retired partner, with experience in the telecommunications, mining, metallurgy, entertainment, real estate and insurance sectors. He also worked with foreign customers, foreign private issuers, matters involving the Sarbanes-Oxley Act and reports in accordance with IFRS and U.S. GAAP. Mr. Costa holds a bachelor's degree in economics from UERJ and in accounting sciences from Universidade Santa Úrsula.

Gustavo Baptista Alves. Mr. Alves has a vast experience in the finance area of Brazilian and multinational companies in a number of sectors, including telecommunications and oil and gas. Currently, Mr. Alves serves as chief administrative and tax officer at TIM S.A. and is a member of the fiscal council of a number of institutions. Mr. Alves holds a bachelor's degree in accounting from UFRJ, an MBA in finance from IBMEC and a law degree from *Universidade Cândido Mendes*. He also attended the Leadership Program at the Harvard Business School.

Marcelo Joaquim Pacheco. Mr. Pacheco has extensive experience in the management of companies of various sectors, having been a law firm partner and served as officer of a number of companies. Currently, Mr. Pacheco is a member of the audit committee of Companhia Energética de Brasília – CEB, Banco do Estado do Sergipe and Guararape Confecções S.A. He is also a director of Rossi Residencial, CEB Lajeado and CEB, and a member of the fiscal council of Profarma, Center of Diagnostic Image, Têxtil Renauxview and Transmissora Aliança de Energia Elétrica. Mr. Pacheco holds law degree from the Universidade São Francisco, a specialization degree in corporate law and compliance from Centro Universitário Unidombosco and Escola Paulista de Direito, as well as a specialization degree in controllership, financial management and corporate law from Fundação Getúlio Vargas.

Compensation

On August 31, 2020, 3R's board of directors approved 3R's compensation policy.

The main purpose of 3R's compensation policy is to: (i) attract, reward, retain and encourage executives to conduct business in a sustainable manner, subject to adequate risk limits and in line with the interests of our shareholders; (ii) pay compensation based on criteria-reward performance and promote the recognition and appreciation of individual performance; and (iii) ensure the maintenance of standards that are compatible with the responsibilities of each title and competitive in the reference work market, setting forth guidelines for the establishment of any compensation and benefits granted to our executives.

3R's shareholders' meeting determines the maximum global amount to be paid as compensation to the members of our board of directors, board of executive officers and fiscal council, if installed. The maximum global compensation amount is subject to the limits set forth in Brazilian Corporate Law. 3R's board of directors determines the individual compensation amount of the members of our board of directors, board of executive officers, fiscal council, if installed, and audit committee.

In 2022, 2021 and 2020, we paid R$36.0 million, R$4.6 million and R$2.0 million, respectively, in total compensation to our directors and executive officers. In addition, in 2023 we expect to pay up to R$31.5 million in total compensation to our directors and executive officers, of which R$7.4 million is expected to be paid to our directors and R$24.1 million is expected to be paid to our executive officers.

On April 28, 2023, our shareholders at our annual and extraordinary shareholders' meeting approved a global compensation amount of up to R$31.5 million, not including social charges payable by us. Additionally, our board of directors approved a maximum compensation to fiscal council up to R$1.0 million. A portion of the compensation of our directors and executive officers may be recognized in the result of our subsidiaries. Accordingly, the compensation expected to be paid to our management in 2023 may differ from the aforementioned global amount approved by our shareholders' meeting.

Board of Directors

The members of 3R's board of directors receive a fixed monthly compensation, based on their responsibilities and the time dedicated to their duties. We review the compensation of the members of 3R's board of directors at least once every two years, taking into account any changes in their activities or market compensation practices.

The members of 3R's board of directors are eligible to participate in our stock option plan. 3R reimburses directors for expenses, including expenses related to travel, lodging and boarding and/or other expenses related to the attendance at meetings of board of directors, upon presentation of the relevant receipts.

3R's board of directors annually adjusts the compensation paid to the members of our other management bodies, based on meritocracy and changes in salaries, according to market research annually conducted by an independent and expert consulting company with companies with similar compensation practices and market research by other human resources expert companies.

Board of Executive Officers

3R's executive officers receive a fixed monthly compensation, based on individual negotiations with each executive officer, according to salary research conducted by an independent and expert consulting company, mainly with companies of similar sectors.

3R's executive officers are entitled to a bonus, in accordance with our compensation policy, and are eligible to participate in our stock option plan.

3R's executive officers may also be eligible to receive the following benefits: (i) health care plan; (ii) dental plan; (iii) meal and food vouchers; (iv) life insurance; (v) parking; and (vi) periodic trainings and courses.

Audit Committee

The members of 3R's audit committee may receive a fixed monthly compensation or compensation for attendance to meetings, to be determined by 3R's board of directors.

The members of 3R's audit committee who are also members of 3R's board of directors do not receive additional compensation.

Fiscal Council

The members of 3R's fiscal council, if installed, receive compensation pursuant to applicable law, within the maximum global amount approved at 3R's shareholders' meeting.

Stock Option Plans

As of the date of this Offering Memorandum, 3R's has two stock option plans in place.

First Stock Option Plan

On August 31, 2020, our extraordinary shareholders' meeting approved our first stock option plan (the "First SOP"). On April 26, 2021, our annual and extraordinary shareholders' meeting amended our stock option plan. On December 8, 2021, the individual agreements were executed granting the right to opt for the acquisition of a certain number of shares to the management of the Company and some of its employees.

The main purpose of our First SOP is to increase the engagement and sense of belonging of members of management and our employees, subject to certain conditions, to: (i) encourage the expansion, success and achievement of our corporate purposes and the interests of our shareholders, thus encouraging the integration of these executives and employees into us; and (ii) allow us to effectively attract and retain members of management and employees.

Our First SOP is managed by our board of directors, which may delegate this function, in whole or in part, to a specific or other committee to be created or appointed to advise our board of directors in the management of our First SOP. Pursuant to applicable law and our bylaws, our board of directors and/or the committee, as applicable, have ample powers to take the measures required to manage our stock option plan, including: (i) review exceptional cases resulting from or related to our First SOP; (ii) accelerate any vesting periods under our First SOP or any of the programs, including in the event of termination of the employment relationship of plan participants with us; (iii) set forth the qualitative and/or quantitative eligibility criteria for plan participants and granting of stock options; (iv) approve the issuance of new shares, within the authorized limit of our capital stock, or sale of treasury shares in view of the exercise of participants' rights to receive shares under our First SOP; and (v) set forth and amend the provisions of the stock option agreement to be executed by us and each of the participants.

Each stock option entitles its holder to the right to subscribe for or purchase one common share issued by us. Upon the launching of each program, our board of directors will set forth the terms and conditions of the stock options, which will be included in the stock option agreement to be executed by us and each of the participants, in accordance with our First SOP and the relevant program.

Participants will vest the right to purchase common shares issued by us within a certain vesting period, along four years from the date of hiring and/or election of each participant. At each vesting period, the participant will be entitled to: (i) purchase a certain number of common shares from the annual lot; and (ii) exercise the right to purchase a certain number of common shares from annual lots that have been merged but not yet exercised, as described in the table below and subject to the relevant stock option agreements.

With respect to the first and second programs, which refer to the call option related to the initial public offering of our common shares, the vesting period shall be counted as of the anniversary of the date of hiring or election of each participant, as set forth in the table below:

	Vesting Period			
Shares that may be purchased by participants	**First anniversary of the date of hiring and/or election of each participant**	**Second anniversary of the date of hiring and/or election of each participant**	**Third anniversary of the date of hiring and/or election of each participant**	**Fourth anniversary of the date of hiring and/or election of each participant**
Percentage of "merged" shares that may be purchased.....	-	50%	+25%	+25%
Total percentage of shares.....	**-**	**50%**	**75%**	**100%**

* The first anniversary, second anniversary, third anniversary and fourth anniversary occur: (i) 12 months after the date of hiring and/or election; (ii) 24 months after the date of hiring and/or election; (iii) 36 months after the date of hiring and/or election; and (iv) 48 months after the date of hiring and/or election, respectively.

With respect to the third and fourth programs, which refer to the call option related to the follow-on, the vesting period shall be counted as of the execution date of the follow-on, March 30, 2021, as set forth in the table below:

	Vesting Period			
Shares that may be purchased by participants	**March 30, 2022**	**March 30, 2023**	**March 30, 2024**	**March 30, 2025**
Percentage of "merged" shares that may be purchased.....	-	50%	+25%	+25%
Total percentage of shares.....	**-**	**50%**	**75%**	**100%**

With respect to the fifth program, the vesting period shall be counted as of January 1, 2023, as set forth in the table below:

Shares that may be purchased by participants	Vesting Period			
	January 1, 2024	**January 1, 2025**	**January 1, 2026**	**January 1, 2027**
Percentage of "merged" shares that may be purchased.....	-	50%	+25%	+25%
Total percentage of shares.....	**-**	**50%**	**75%**	**100%**

We may grant stock options representing up to 2.5% of the common shares of our capital stock. If the number of existing common shares increases or decreases as a result of share bonuses, reverse stock splits or stock splits, we will make the applicable adjustments to the number of common shares under the programs and stock option agreements that have not been transferred to participants.

For purposes of the calculation of the aforementioned number of common shares, we will take into account all shares representing our capital stock, including those that may be issued after the approval of our First SOP.

Our board of directors will determine the strike price of the stock options at the time of the launching of the applicable program, based on, for the first program, the amount in *reais* between (i) the initial price per share of the follow-on offering for our common shares that was completed in November 2021 and (ii) this amount discounted by 25%.

In the event of a follow-on offering of our common shares, our board of directors, at the time of launching of the applicable program, must use the price per share issued in the follow-on offering to calculate the strike price, in *reais*.

Participants may fully or partially exercise merged stock options within five years from the date of execution of their stock option agreements.

The first, second, third, fourth and fifth programs approved by our board of directors impose restrictions on the transfer of shares for a period of three months from the date of acquisition of these shares upon exercise of the stock options, applicable to 60% of the acquired shares, and the remaining 40% of the acquired shares will be free for trading, not subject to any transfer restrictions.

Our board of directors or committee, as applicable, will set forth, for each program, the rules applicable in the event of termination of employment of participants, due to termination of the employment contract, expiration of term of office, dismissal or resignation from executive positions, retirement, permanent disability or death of participants.

Subject to the approval of our board of directors, in the event of: (i) termination of employment by request of the participants; (ii) removal from office without cause, as defined in the applicable labor law; (iii) dismissal; (iv) non-reelection after the end of the term of office, as applicable; (v) retirement; (vi) permanent disability; or (vii) death, the vesting period may be accelerated, and participants or their successors may acquire the shares upon exercise of the stock options in proportion to their period of employment, taking into account the number of days effectively worked from the date of hiring and/or election and a total base period of 1,440 days, equivalent to 48 months.

In the event of termination of employment due to removal from office without cause and non-reelection after the end of the term of office, our board of directors may, at its sole discretion, accelerate the vesting period, allowing participants who exercise their stock options to acquire a number of shares equivalent to vested and unvested annual lots, under the relevant stock option agreements.

In the event of: (i) retirement; (ii) permanent disability; (iii) death; or (iv) resignation due to conflict or impediment, participants who are directors will be subject to the acceleration of the vesting period, on a proportional basis, allowing them to acquire shares upon exercise of the stock options in proportion to the period they remained in office, taking into account the number of days effectively worked from the date of election and a total base period of 1,440 days, equivalent to 48 months.

In the event of: (i) removal from office without cause, as defined in the applicable labor law; or (ii) non-reelection as member of our board of directors at the end of the term of office, participants who are directors will be subject to the acceleration of the vesting period, allowing them to acquire shares upon exercise of the stock options in a number of shares equivalent to vested and unvested annual lots, under the relevant stock option agreements.

As of the date of this Offering Memorandum, we have granted 2,885,531 and 2,191,430 stock options under our First SOP to the members of our management and to our employees, respectively.

On November 18, 2022 and July 7, 2023, the members of our management and our employees have exercised 494,554 and 87,480 stock options, respectively.

First SOP Pricing

We estimate the fair value of the stock option based on the Black-Scholes model, which is widely used globally to determine the price of stock derivatives in the financial market.

The main variables used to calculate the fair value are:

(i) spot price: R$30.40 (first, second, third and fourth programs) or R$31.67 (fifth program), per share;

(ii) strike price: R$15.75 (first and second programs), R$36.00 (third and fourth programs) or R$33.00 (fifth program), per share;

(iii) volatility is estimated as the average daily returns of series of shares of five Brazilian companies that operate in the same industry as us, for an exercise period of four years; and

(iv) exercise and the vesting period are four years each. The option vests as follows: 50% on the second anniversary, 25% on the third anniversary and 25% on the fourth anniversary. Early exercise is limited to the event of termination of the employment relationship and is subject to our board of directors' approval.

Our board of directors has approved five first stock option programs under our First SOP:

(i) *First Stock Option Program*. On December 8, 2020, our board of directors approved our first stock option program, under our First SOP, indicating the participants and establishing the main terms and conditions. The eligible executive officers may enter into individual stock option agreements, pursuant to our first stock option program.

(ii) *Second Stock Option Program*. On March 17, 2021, our board of directors approved our second stock option program, indicating the participants and establishing the main terms and conditions. Our board of executive officers may enter into individual stock option agreements with each eligible participant, under our second stock option program.

(iii) *Third Stock Option Program*. On June 30, 2021, our board of directors approved our third stock option program, indicating the participants and establishing the main terms and conditions. Our board of executive officers may enter into individual stock option agreements with each eligible participant, under our third stock option program.

(iv) *Fourth Stock Option Program*. On December 7, 2021, our board of directors approved certain changes to our second stock-option program and the creation of our fourth stock-option program, indicating the participants and establishing its main terms and conditions. Our board of executive officers may enter into individual stock option agreements with each eligible participant, under our fourth stock-option program.

(v) *Fifth Stock Option Program.* On January 25, 2023, and April 28, 2023, respectively, our board of directors established and amended, the fifth stock-option program, indicating the participants and establishing its main terms and conditions. Our board of executive officers may enter into individual stock option agreements with each eligible participant, under our fifth stock-option program.

On December 8, 2021, the individual stock-option agreements in relation to the first four stock-option programs under the First SOP were executed with our executive officers and employees. On May 1, 2023, the individual stock-option agreements in relation to the fifth stock-option programs were executed with our executive officers and employees.

Second Stock Option Plan

On April 29, 2022, our annual and extraordinary shareholders' meeting approved our second stock option plan (the "Second SOP"). The Second SOP is managed by our board of directors, which may delegate this function, in whole or in part, to our personnel and compensation committee. Pursuant to applicable law and our bylaws, our board of directors and/or personnel and compensation committee, as applicable, have ample powers to take the measures required to manage our stock option plan, including: (i) the creation and applicability of general terms related to the granting of stock options in accordance with the terms of the Second SOP, and the resolution of any interpretation queries regarding the Second SOP; (ii) the election of the participants and the authorization to grant stock options in their favor, establishing all conditions of the stock options to be granted; (iii) the definition of the rules of dismissal applicable to the participants; (iv) the issuance of new shares within the limit of the authorized capital stock or the authorization for the sale of treasury shares in order to fulfill the exercise of the stock options granted, in accordance with the Second SOP and the applicable CVM rules; (v) the proposal of changes to the Second SOP to be submitted to shareholders' approval; (vi) the creation, changes and/or cancellation of the programs and the definition of the number of shares applicable to each program; and (vii) the imposition of restrictions to the acquired shares as a result of the exercise of the stock options, including lock-up periods, buyback options in our favor and/or preferred rights in the event of sale of shares by the participant.

The main purpose of the Second SOP, under the process of improvement of our incentives structure, is to: (i) attract and retain key employees; and (ii) align the interests of our shareholders with those of the participants of the Second SOP.

We may grant stock options representing up to 2.5% of the common shares of our capital stock on the grant date, on a fully diluted basis, *i.e.*, considering the total number of common shares issued or that may be issued under the Second SOP. If any stock option is cancelled before being fully exercised, the related common shares will become available for future grants under the Second SOP.

The total number of common shares related to the stock options that may be granted under the First and the Second SOPs cannot exceed 5% of the common shares of our capital stock.

Each stock option entitles its holder to the right to subscribe for or purchase one common share issued by us, subject to the terms and conditions set forth in the relevant stock option agreement.

Our board of directors will grant stock options upon the approval of the relevant programs, electing the participants who may receive stock options under the Second SOP, and determining the exercise price, vesting period and exercise conditions, as well as any other conditions related to the stock options, which will be included in the stock option agreement to be executed by us and each of the participants, in accordance with the relevant program.

On January 25, 2023, and April 28, 2023, respectively, our board of directors approved and amended our first stock option program under the Second SOP, indicating the participants and establishing the main terms and conditions. Our board of executive officers may enter into individual stock option agreements with each eligible participant, under our first stock option program.

The rights to purchase common shares issued by us had a vesting period of at least six months, beginning in January 1, 2022. If the stock option program is intended for participants who are members of our board of directors, the vesting period will be two years, coinciding with their term of office.

Stock options may only be exercised in the periods set forth in the relevant program and/or stock option agreement, as determined by our board of directors or personnel and compensation committee, subject to a maximum period of six months from the final date of the vesting period.

With respect to the first program, the vesting period shall be counted as of January 1, 2023, as set forth in the table below:

	Vesting Period	
Shares that may be purchased by participants	**January 1, 2024**	**January 1, 2025**
Percentage of "merged" shares that may be purchased.....	50%	50%
Total percentage of shares.....	**50%**	**100%**

The strike price will amount to at least R$1.00 per stock option and a maximum of 70% of the market value of our common shares, *i.e.*, the average closing trading price of our common shares on the B3, in the trading sessions of the last quarter of the year prior to the grant. For the first program, our board of directors determined that the strike price will be equal to 20% of the market value of our common shares.

Our board of directors may determine that common shares acquired by participants as a result of the exercise of stock options and those that may be acquired by them as a result of bonuses, stock splits, subscriptions or any other form of acquisition, as well as subscription rights regarding shares subscribed for or acquired by participants as a result of the exercise of stock options, may only be traded, sold, assigned or transferred by them, in whole or in part, after a certain lock-up period. If we increase our capital stock upon the issuance of new common shares, the number of shares subject to stock options will not change.

For purposes of exercise of the stock options granted under the Second SOP, we may, at the discretion of our board of directors, issue new common shares within the limit of our authorized capital or sell treasury shares in a private transaction, pursuant to CVM Resolution No. 77, dated March 29, 2022, as amended.

Our shareholders will not have preemptive rights in the grant or exercise of stock options, pursuant to Brazilian Corporate Law.

The Second SOP will remain in effect for an indefinite period and may be terminated at any time by resolution of our shareholders' meeting. The termination of the Second SOP will not affect stock options granted under the Second SOP and still in effect.

In the event of: (i) resignation; (ii) dismissal as member management with cause; (iii) dismissal as member management without cause; (iv) non-reelection at the end of the term of office, as applicable; (vi) resignation due to conflict or impediment; (vii) voluntary resignation; (viii) dismissal with or without cause; (ix) dismissal without cause and termination of the service agreement; (x) retirement; (xi) permanent disability; or (xii) death, before the end of the vesting period, the right to exercise the stock options under the Second SOP may be: (a) terminated; (b) changed to grant stock option in proportion to the period that the participant worked for us; or (c) changed to fully grant the stock options, as set forth by our board of directors in the relevant stock option programs and stock option agreements.

Under the Second SOP, if participants resign as members of management or as our employees and are elected as members of management or engaged as our employees in different positions, they continue to be participants of the Second SOP.

As of the date of this Offering Memorandum, we have granted 115,655 stock options under our Second SOP to our board of executive officers.

In 2021, 2020 and 2019, no stock options were exercised and no common shares were delivered in regard to our stock options.

Second SOP Pricing

We estimate the fair value of the stock option based on the Black-Scholes model, which is widely used globally to determine the price of stock derivatives in the financial market. The main variables used to calculate the fair value are:

(i) spot price: R$31.67 per share (first program);

(ii) strike price: R$7.90 per share (first program);

(iii) volatility: for the first program, it was estimated as the average daily returns of series of shares of five Brazilian companies that operate in the same industry as us for an exercise period of two years; and

(iv) the exercise and vesting periods are two years each for the first program. The option vests as follows: 50% on the first anniversary and 50% on the second anniversary. Early exercise is limited to the event of termination of the employment relationship and is subject to our board of directors' approval.

Phantom Shares

In March 2023, pursuant to our bylaws and the maximum global amount to be paid as compensation approved by 3R's shareholders, our board of directors approved a phantom share program exclusively for 2023.

Instead of receiving actual shares, our board of directors may be awarded "phantom shares", which are essentially units tied to the price of the company's stock. These units don't give actual ownership rights, but they track the price of real shares.

When it comes time for payout after a vesting period, they will receive a cash payment based on the average closing trading price of our common shares on the B3, in the trading sessions of the last month prior to the payment.

D&O Insurance

We contracted a civil liability insurance, or D&O insurance, with Fairfax Brasil Seguros Corporativos S/A, or Fairfax, effective until October 31, 2024, providing for insurance coverage up to R$60.0 million. The purpose of the D&O insurance is to protect the interests of our executive officers, members of management and employees in the exercise of their management functions, protecting their equity in the event of claims, including judicial and administrative proceedings. The D&O insurance policy covers: (i) payments we may be required to make to our directors and officers or third parties for losses resulting from insured claims; (ii) reimbursement to us for payments made on behalf of our directors and officers as a result of losses resulting from insured claims; and (iii) payments to us for indemnifiable losses resulting from judicial and/or administrative proceedings claiming (a) violation of laws applicable to the capital markets and (b) losses caused by us resulting from securities transactions. Indemnifiable amounts include cost of defense and indemnifications for which our directors and officers are held liable under final and unappealable decisions, arbitration awards or written agreements by any means, as previously approved by the insurance company.

We also contracted D&O insurance with Liberty Seguros S/A, effective until October 31, 2024, providing for insurance coverage up to R$60.0 million. The purpose of this D&O insurance is to ensure the payment of any losses resulting from covered claims exceeding the maximum insurance limit contracted with Fairfax.

On June 4, 2021, our board of directors approved the execution of indemnity agreements with our directors and executive officers. We decided to enter into indemnity agreements with the members of our management, as we believe that they are more comprehensive than D&O insurance policies available in the market, attracting and retaining qualified professionals as members of management, and ensuring legal and equity protection to them, within legal, regulatory and ethical limits. Our indemnity agreements do not provide for a specific limit for indemnification amounts.

Pursuant to these indemnity agreements, our directors and executive officers will be reimbursed for any expenses incurred by them, including principal, adjustment for inflation, interest and charges, as a result of any: (i) judicial, administrative and/or arbitration proceedings filed against them; (ii) direct or indirect liability, losses and damages related to commercial, tax, social security and environmental matters, among others; (iii) fines, including regulatory fines imposed by ANP, the CVM, IBAMA and other government agencies, as well as interest for late payment, fees, penalties, expenses, court costs and fees, attorney's fees, expert fees, expenses related to legal opinions and other reasonable expenses required for the defense of our directors and executive officers; and/or (iv) amounts payable or incurred by our directors and executive officers as damages, interest and pecuniary penalties, as well as costs and expenses resulting from bonds posted in court, blocking of personal assets, registration in overdue tax liability records and other penalties that may affect our directors and executive officers due to exercise of their functions during their terms of office.

Our indemnity agreements do not cover losses directly or indirectly related to acts, facts and omissions: (i) involving intent, fraud, severe fault and/or bad faith, confirmed by final and unappealable decision rendered by judicial, administrative or arbitration courts; (ii) unrelated to the exercise of their functions as members of our management; (iii) committed in their own interest or in the interest of third parties, to the detriment of our corporate interest; (iv) in violation of the service agreement entered into with us, our bylaws and Brazilian laws; and/or (v) related to any lawsuit filed by a director or executive officer against us, except in regard to the performance of the service agreement and/or indemnity agreement entered into with us. We reserve the right to be reimbursed by the director or executive officer for any amounts paid on their behalf upon the occurrence of any of the aforementioned events.

Subject to the limitations in the immediately preceding paragraph, our indemnity agreements cover all acts performed by the members of our management in the exercise of their functions, including any judicial, administrative or arbitration proceedings pending during their terms of office or filed after the end of their terms, related to acts they performed as members of management.

Management of the Issuer

Pursuant to the corporate object of 3R Lux set forth in article 3 of its Articles of Incorporation, 3R Lux has as its business purpose the acquisition of participations, in Luxembourg or abroad, in any companies or enterprises in any form whatsoever, and the management of those participations. Although 3R Lux may also carry out any commercial, trading, financial or industrial operations and any transaction with respect to gas, oil or, more generally, energy assets which, directly or indirectly, favors or relates to its corporate object, it currently has no operations.

The managers of 3R Lux are as follows:

<table>
<tr><th>Name</th><th>Title</th><th>Appointment Date</th><th>Business Address</th></tr>
<tr><td>Michaël Bruno Goosse</td><td rowspan="2">Class A Manager</td><td rowspan="2">13 June 2022</td><td rowspan="2">6, rue Eugène Ruppert, L-2453 Luxembourg, Grand Duchy of Luxembourg</td></tr>
<tr><td>Jacques Glascott de Patoul</td></tr>
<tr><td>Rodrigo Pizarro Lavalle da Silva</td><td rowspan="2">Class B Manager</td><td></td><td rowspan="2">Praia de Botafogo, No. 186, salas 1401 and 1501, Botafogo, Rio de Janeiro, RJ, Brazil</td></tr>
<tr><td>Matheus Dias de Siqueira</td><td>4 January 2023</td></tr>
</table>

The Managers were appointed for an indefinite period and are responsible for the management and administration of 3R Lux. 3R Lux shall be managed by one or more managers appointed by a resolution of the shareholder(s), which sets the term of their office. The managers need not be shareholder(s) themselves. The managers may be removed at any time, with or without cause, by a resolution of the shareholder(s). The shareholder(s) shall determine the number of managers and the duration of their mandate.

The board of managers shall meet at the request of any managers, at the place indicated in the convening notice, which should in principle be in Luxembourg. Any manager may participate in any meeting of the board of managers

by telephone or video conference, or by any other means of communication which allows all those taking part in the meeting to identify, hear and speak to each other. Participation by such means is deemed equivalent to participation in person at a duly convened and held meeting and shall be considered as taken at the registered office of 3R Lux. Circular resolutions signed by all the managers shall be valid and binding as if passed at a duly convened and held board meeting and shall bear the date of the last signature and shall be considered as taken at the registered office of 3R Lux.

All powers not expressly reserved to the shareholder(s) by the Luxembourg law of August 10, 1915 on commercial companies, as amended or the articles of association fall within the competence of the board of managers, which have full power to carry out and approve all acts and operations consistent with the 3R Lux's corporate object. The board of managers is authorized to delegate the day-to-day management, and the power to represent 3R Lux in this respect, to one or more directors, officers, managers or other agents, whether shareholder(s) or not, acting either individually or jointly. The board of managers may delegate special or limited powers to one or more agents for specific matters.

An annual general meeting must be held annually once 3R Lux has more than 60 shareholders, according with Luxembourg law and the articles of association, in Luxembourg at the registered address of the registered office of the 3R Lux, or at such other place in the municipality of the registered office as may be specified in the convening notice of the meeting. This general meeting will be held within six months of the end of the preceding financial year.

The financial year of 3R Lux ends on December 31 each year and it shall publish annual financial statements within five months of each such year end, unless this period is extended by the general meeting by not more than six months due to special circumstances.

The financial statements of 3R Lux are prepared in accordance with accounting principles generally accepted in Luxembourg.

PRINCIPAL SHAREHOLDERS

As of the date of this Offering Memorandum, our capital stock was R$5,062.1 million, divided into 240,383,650 common shares with no par value.

The following table sets forth our outstanding capital stock and principal shareholders that beneficially own five percent or more of our common shares as of the date of this Offering Memorandum.

	As of the date of this Offering Memorandum	
Shareholders	**Number of Common Shares Directly Held**	**% of Common Shares Directly Held**
Gerval Investimentos Ltda.	20,165,245	8.4%
Banco BTG Pactual S.A	13,999,162	5.8%
Coronation Fund Managers Ltd.	12,049,887	5.0%
Management	4,319,361	1.8%
Others[(1)]	189,849,995	79.0%
Total	**240,383,650**	**100.0%**

(1) Shareholders holding less than 5% of our common shares.

RELATED-PARTY TRANSACTIONS

From time to time, we engage in transactions with companies that are owned or controlled, directly or indirectly, by us and with our shareholders or companies that are controlled by them. In the ordinary course of business, we enter into related party transactions on an arm's length basis and on market terms in accordance with the best corporate governance practices, including disclosure according to accounting standards.

Our management monitors related-party transactions through controls that help ensure that such transactions meet the requirements of accounting rules and policies. On August 28, 2020, our board of directors approved our related-party transactions policy, which was amended on October 13, 2020.

Related-party transactions must be informed to our legal department and are subject to (i) the approval of our executive officers in the event of transactions with related parties not exceeding R$10.0 million in one year; and (ii) the approval of our board of directors in the event of transactions with related parties in excess of R$10.0 million.

The following related-party transactions are prohibited under our related-party transactions policy:

(i) transactions carried out under conditions other than market conditions; and

(ii) loans or guarantees in favor of:

  (a) the members of our management and fiscal council, our board of directors or advisory committees and their respective alternates, as well as their respective spouses, partners, descendants or descendants of their respective spouses or partners;

  (b) relatives, up to the second degree, of the persons listed above; and

  (c) our shareholders or legal entities in which our management and their respective alternates, as well as their spouses, partners, descendants or descendants of their respective spouses or partners and their relatives up to the second degree, hold more than 5% of the capital stock.

Our management and employees are also prohibited from privately engaging in any business that may interfere or be conflicting with our interests or that results from the use of confidential information they acquire due to their position with us.

On October 3, 2022, 3R Rio Ventura (merged into 3R Bahia) issued its first privately placed debentures, in favor of 3R in the amount of R$300.0 million.

On October 13, 2022, 3R Potiguar issued its first privately placed debentures, in favor of 3R, in the amount of R$40.0 million; and, on November 21, 2022, 3R Potiguar issued its second privately placed debentures, in favor of 3R, in the amount of R$30.0 million.

On October 27, 2022, 3R Offshore issued its first privately placed debentures, in favor of 3R, in the amount of R$250.0 million.

On February 14, 2023, 3R Potiguar issued its third privately placed debentures, not convertible into shares, in favor of 3R, in the amount of R$30.0 million.

All issuances mentioned above will mature on August 14, 2025, and are remunerated with investment corresponding to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days *plus* a spread of 3.8% per annum based on 252 business days and are not convertible into shares.

On May 31, 2023, 3R Potiguar issued its sixth privately placed of debentures, not convertible into shares, in favor of 3R, in the amount of R$110.0 million, with maturity on April 11, 2025 and are remunerated with investment corresponding to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days *plus* a spread of 2.2% per year based on 252 business days.

On July 19, 2023, 3R Offshore issued its second privately placed debentures, non-convertible into shares, in favor of Maha Energy Holding Brasil (“Maha”), in the amount of R$37.5 million, maturing on August, 14 2025. The remuneration applied corresponds to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days *plus* a spread of 3.8% per year based on 252 business days.

In the ordinary course of our business, we provide guarantees among the 3R Group with respect to decommissioning obligations before the ANP, and shared costs are normally paid by 3R and reimbursed by its subsidiaries.

For additional information on our related-party transactions, see note 20 to our unaudited interim financial information included elsewhere in this Offering Memorandum.

DESCRIPTION OF NOTES

The following summary describes certain provisions of the Notes and the Indenture. This summary does not purport to be complete and is subject to and qualified in its entirety by reference to the provisions of the Indenture and the Notes. You should read the Indenture, the Note Guarantees and the Security Documents in their entirety. Copies of the proposed form of the Indenture are available as described under "Listing and General Information" in this Offering Memorandum. The holders of the Notes are entitled to the benefits of, are bound by, and are deemed to have notice of, all the provisions of the Indenture. Certain terms used in this description are defined under the subheading "—Certain Definitions."

In this Description of Notes, "**Issuer**" refers only to 3R Lux, a wholly-owned subsidiary of 3R Petroleum Óleo e Gás S.A. (the "**Company**"), and any successor obligor thereof on the Notes, and not to any of its Subsidiaries.

The Notes will be issued under a New York law governed Indenture (the "**Indenture**") to be dated as of February 5, 2024 among the Issuer, the Company and the following subsidiaries of the Company: 3R Potiguar S.A., 3R RNCE S.A. and 3R Bahia S.A. (the "**Subsidiary Guarantors**" and, together with the Company, the "**Guarantors**"), UMB Bank, N.A., in its capacity as trustee, registrar, transfer agent, paying agent (in such capacity, the "**Trustee**"), TMF Brasil Administração e Gestão de Ativos Ltda. in its capacity as collateral agent in Brazil (in such capacity, the "**Brazilian Collateral Agent**") and TMF Luxembourg S.A., in its capacity as collateral agent in Luxembourg (in such capacity, the "**Luxembourg Collateral Agent**"). The terms of the Notes include those stated in the Indenture.

The proceeds of the offering of the Notes will be used to permanently and entirely repay the Term Loan Facility (as defined below) as set forth in this Offering Memorandum under the caption "*Use of Proceeds*."

The Collateral (as defined below), after giving effect to the issuance of the Notes and application of the proceeds as set forth in "*Use of Proceeds*," will secure (i) the obligations of the Issuer and the Guarantors under the Notes and the Note Guarantees, (ii) the obligations of the Guarantors under certain convertible debentures issued on March 27, 2023 by 3R Potiguar, in an aggregate principal amount of U.S.$500,000,000 (the "**Debentures**"), governed by a certain debentures indenture dated March 27, 2023 (as amended, supplemented, restated, modified, replaced or refinanced (the "**Debentures Indenture**"), underwritten by certain holders (the "**Debenture Holders**"), (iii) if applicable, the Oil Hedge Obligations (as defined below) and (iv) if, applicable the Additional Debt (as defined below) (the Notes, the Debentures, the Oil Hedge Obligations and the Additional Debt, the "**Intercreditor Secured Debt**"). The Intercreditor Secured Debt will be subject to the Intercreditor and Collateral Agency Agreement. Pursuant to the Intercreditor and Collateral Agency Agreement, proceeds from enforcement of the Collateral will be shared initially up to US$500.0 million aggregate principal amount of the Notes and up to US$500.0 million aggregate principal amount of the Debentures, and then *pari passu* among the Secured Debt Providers (as defined in "*—General*"). For further information, see "*—Collateral—Intercreditor and Collateral Agency Agreement*."

Basic Terms of the Notes

The Notes will:

- be senior obligations of the Issuer, secured by a first-priority lien on the Collateral, upon completion of customary registration and perfection requirements in accordance with and as required by the Security Documents, as provided herein described under *"—Collateral*;"
- rank *pari passu* with the Intercreditor Secured Debt and rank effectively senior to all other unsecured Debt of the Issuer to the extent of the value of the Collateral;
- any outstanding amounts due under the Notes after the foreclosure of the above referred Collateral will rank equally in right of payment with all senior existing and future obligations of the Issuer;
- rank senior in right of payment to all existing and future subordinated indebtedness of the Issuer;

- rank effectively junior to any future secured obligations of the Company, the other Guarantors and any of their subsidiaries with a security interest on assets not constituting Collateral, in each case, to the extent of the value of the collateral securing such obligations;

- after the foreclosure of the Collateral, be structurally subordinated to any existing or future Debt or other obligations of any subsidiary of the Company that is not the Issuer or does not guarantee the Notes;

- be issued in an original aggregate principal amount of U.S.$500.0 million;

- mature on February 5, 2031, unless earlier redeemed in accordance with the terms of the Notes (see "*—Optional Redemption*" below);

- bear interest commencing on the date of issue at the rate set forth on the cover of this Offering Memorandum (the "**Initial Interest Rate**"), payable semiannually in arrears on each February 5 and August 5, commencing on August 5, 2024, to holders of record on the February 3 or August 3 immediately preceding the Interest Payment Date;

- bear interest on overdue principal and overdue interest, at 1% per annum higher than the rate otherwise applicable to the Notes; and

- be guaranteed by the Company and the other Guarantors as described under *"—Note Guarantees*," and secured by a first-priority lien on the Collateral, upon completion of customary registration and perfection requirements in accordance with and as required by the Security Documents, as provided herein.

Interest on the Notes will accrue from the most recent date to which interest has been paid or, if no interest has been paid, from and including the Issue Date. Interest will be computed on the basis of a 360-day year of twelve 30-day months.

The Issuer will maintain a paying agent and a registrar, each with an office in the Borough of Manhattan, New York City. Initially, the Trustee will act as registrar, transfer agent and paying agent for the Notes. The Issuer may change the registrar, transfer agent and paying agent, without notice to holders. All payments on the Notes will be made to the Paying Agent. Subject to the terms of the Indenture, the Paying Agent will remit the funds to DTC in accordance with DTC procedures.

The Issuer and the Company will apply to the Singapore Exchange Securities Trading Limited (the "**Singapore Stock Exchange**") for the Notes to be admitted to the Official List of the Singapore Stock Exchange. See *"—Listing*" below. For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, the Issuer will appoint and maintain a paying agent in Singapore, where the Notes may be presented or surrendered for payment or redemption, in the event that a global security is exchanged for definitive Notes. In addition, in the event that a global security is exchanged for definitive Notes, an announcement of such exchange will be made by the Issuer or on its behalf through the SGX-ST and such announcement will include all material information with respect to the delivery of the definitive Notes, including details of the paying agent in Singapore.

Additional Notes

Subject to the covenants described below, the Issuer may issue additional notes ("**Additional Notes**") under the Indenture having the same terms in all respects as the Notes, or in all respects except with respect to the initial issuance price, initial interest accrual date, initial Interest Payment Date, and interest paid or payable on or prior to the first Interest Payment Date after the issuance of such Additional Notes, *provided* that if the Additional Notes are not fungible with the Notes for United States federal income tax purposes, the Additional Notes will have a separate CUSIP numbers, ISINs and Common Codes (as applicable) from those of the Notes. The Notes offered hereby and any Additional Notes will be treated as a single class for all purposes under the Indenture (other than for tax purposes) and will vote together as one class on all matters with respect to the Notes. Holders of Additional Notes issued in the future will benefit from any Note Guarantee and share equally and ratably with all other outstanding Notes in the Collateral.

Ranking

Upon completion of customary registration and perfection requirements in accordance with and as required by the Security Agreements, the Notes will have the benefit of a first-priority perfected security interest on the Collateral as described under "*—Collateral*," and as such, will be senior secured obligations of the Issuer to the extent of the value of such Collateral. The Note Guarantees will be senior secured obligations of each of the Guarantors to the extent of the value of such Collateral. After the creation and perfection of the Collateral, the Notes will be secured by such Collateral pursuant to the terms of the Security Documents. Any outstanding amounts due under the Notes after foreclosure on such Collateral will rank equally in right of payment with all other existing and future senior unsecured and unsubordinated Debt and other liabilities of the Issuer and the Guarantors (except for those obligations of the Issuer or the Guarantors preferred by operation of Luxembourg law or Brazilian law, including without limitation labor and tax claims, as described herein).

The Notes are effectively junior to all other secured Debt of the Issuer and the Guarantors to the extent of the value of the assets securing such Debt (other than Additional Notes and the Intercreditor Secured Debt to the extent secured by assets constituting Collateral). Subject to the limits described under "*—Certain Covenants—Limitation on Liens*," the Company and its Restricted Subsidiaries, including the Issuer, may Incur additional secured Debt.

Any outstanding amounts due under the Notes and each Note Guarantee after foreclosure on the Collateral will also be effectively subordinated to any debt, preferred stock obligations and other liabilities of the Company's Subsidiaries who will not be Guarantors. See "*Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral—Our obligations with respect to the Notes will be structurally subordinated to all liabilities of our subsidiaries that do not guarantee the Notes, and junior to any of our future secured obligations with a security interest on assets not constituting the Collateral, in each case, to the extent of the value of the collateral securing such obligations*."

Although the Indenture limits the Incurrence of Debt by the Company and Restricted Subsidiaries, the limitation is subject to a number of significant exceptions. Moreover, the Indenture does not impose any limitation on the Incurrence by the Company and Restricted Subsidiaries of liabilities that are not considered Debt under the Indenture. See "*—Certain Covenants—Limitation on Debt*."

Note Guarantees

Guarantors

The Notes will be guaranteed, as of the Issue Date, by the Company and the Subsidiary Guarantors set forth below (collectively, the "**Guarantors**"), all of which are direct Subsidiaries of the Company and Affiliates of the Issuer. The Guarantors and their respective jurisdictions of incorporation are as follows:

Guarantor	**Jurisdiction**
3R Petroleum Óleo e Gás S.A.	Brazil
3R Potiguar S.A.	Brazil
3R RNCE S.A.	Brazil
3R Bahia S.A.	Brazil

Basic Terms of the Note Guarantees

Together, the Guarantors, including companies merged into them on January 1, 2024, represented in aggregate revenue and total assets equal to 75% and 74% of the Company's consolidated revenue and total assets, respectively, as of and for the last nine-months ended September 30, 2023.

Each Note Guarantee of the Notes will, at the time a Guarantor grants such Note Guarantee:

- be senior obligations of the relevant Guarantor, secured by a first lien on the Collateral, upon completion of customary registration and perfection requirements in accordance with and as required by the Security Documents, as provided herein described under *"—Collateral*;"
- rank effectively senior to all unsecured Debt of that Guarantor to the extent of the value of the Collateral;
- any outstanding amounts due after the foreclosure of the Collateral will rank equally in right of payment with all senior existing and future obligations of that Guarantor (except those obligations of the Guarantors incorporated under the laws of Brazil preferred by operation of Brazilian law, including without limitation labor and tax claims, as described herein);
- rank senior in right of payment to all existing and future subordinated indebtedness of that Guarantor;
- be guaranteed by the Guarantors as described under *"—Note Guarantees*;"
- rank effectively junior to any future secured obligations of that Guarantor with a security interest on assets not constituting the Collateral, in each case, to the extent of the value of the collateral securing such obligations;
- after the foreclosure of the Collateral, be structurally subordinated to any existing or future Debt or other obligations of any subsidiary of the Company that is not the Issuer or does not guarantee the Notes;
- be subject to the guarantee limitations described herein and under *"—Certain limitations on the Collateral and the Note Guarantees*."

Each Note Guarantee will be granted on a senior secured basis for the full and punctual payment when due, of all payment obligations of the Issuer under the Indenture and the Notes so Guaranteed, whether for payment of principal of or interest on or in respect of such Notes, fees, expenses, indemnification or otherwise, *provided that* the obligations of a Guarantor under its Note Guarantee will be limited as necessary to reflect limitations under the Guarantor's organizational documents, or applicable law as further described under *"—Certain limitations on the Collateral and the Note Guarantees*." In addition, the Note Guarantees and the Collateral securing the Notes and Note Guarantees will be subject to release under certain circumstances as described under "*Release of the Note Guarantees*" and "*Additional Matters Relating to Collateral –Release of Collateral*" in this Description of Notes.

The Company may be required to cause certain other Subsidiaries to provide a guarantee of the Notes pursuant to the provision described under *"—Certain Covenants—Future Guarantors*."

Collateral

General

The obligations of the Issuer with respect to the Notes and the Guarantors with respect to the Note Guarantees and the performance of all other obligations of the Issuer and the Guarantors under or relating to the Indenture, and the obligations of the Guarantors under the Debentures will be secured by a first-priority security interest (upon completion of customary registration and perfection requirements, as well as fulfillment of the conditions for effectiveness thereof, in accordance with and as required under the Security Agreements) on the Collateral (which shall be shared on a *pari passu* basis) to the extent the aggregate principal amount of the Notes, together with the Debentures does not exceed US$1,000,000,000. Additionally, from time to time and at the Company's discretion, the Collateral may also secure the obligations of the Issuer and the Guarantors under Oil Hedge Agreements and, subject to certain conditions and limitations described below, any other agreement related to additional secured Debt that is permitted to be Incurred under "*—Certain Covenants—Limitation on Debt*" and that is Incurred after the Issue Date in the form of term loans, notes or any other debt instrument (each, an "**Additional Debt Agreement**") (the "**Additional Debt**" and the holders or providers of such Additional Debt, the "**Additional Debt Providers**" and together with the holders of the Notes, the Debenture Holders and the Oil Hedge Providers, the "**Secured Debt**

Providers"); *provided* that such Oil Hedge Agreements and Additional Debt will not be included in the foregoing limitation of US$1,000,000,000. All of the foregoing security interests to secure the Notes and the Note Guarantees will be granted on the Issue Date and in effect and perfected within the timeframes set forth herein and in the Security Documents. See also "*—Additional Matters relating to the Collateral*."

The Collateral will secure up to US$500.0 million aggregate principal amount of the Notes and up to US$500.0 million aggregate principal amount of the Debentures, and then *pari passu* among the Secured Debt Agreements; *provided* that, with respect to Additional Debt Agreements, such underlying Debt will be secured by the first-priority security interest in the Collateral, only to the extent that (i) immediately before and after giving effect to such Incurrence, no Default or Event of Default shall have occurred and be continuing under the Indenture, any other Secured Debt Agreement, or any Security Document, (ii) the aggregate amount of Debt representing the Additional Debt is not greater than US$150.0 million and (iii) that (x) the Stated Maturity of such Additional Debt is no earlier than the 90 days after the maturity date of the Notes and (y) there are no scheduled repayments or prepayments of principal prior to the Stated Maturity of such Additional Debt; *provided, further*, that the following conditions are satisfied: (A) the Additional Debt Providers may accede to the Intercreditor and Collateral Agency Agreement as an "Additional Debt Provider" by executing a joinder agreement, pursuant to the terms of the Intercreditor and Collateral Agency Agreement, and assume the obligations of any Additional Debt Provider thereunder, and (B) the Trustee shall have received (1) copies of all documents, certificates and other instruments that the Trustee may reasonably request relating to the validity and enforceability of such joinder agreement, (2) an opinion of the legal counsel of the Company as to the validity of such joinder agreement, subject to usual assumptions and qualifications, and (3) an Officer's Certificate of the Company confirming satisfaction of the conditions set forth in the Indenture.

If the collateral provided by on or on behalf of the Company or any Restricted Subsidiary (on a consolidated basis) in favor of the Debenture Holders are in any way more favorable to Trustee Distribuidora de Títulos e Valores Mobiliários Ltda. (or any successor debenture trustee) (the "**Debenture Trustee**") for the benefit of the Debenture Holders than the existing collateral provided in favor to the Trustee for the benefit of the holders of the Notes under the Indenture, then within ten (10) days after the security documents to such collateral become effective, the Company shall notify the Trustee in writing of such terms, which notice shall attach the applicable security documents relating to such collateral. Within five (5) Business Days of receipt of such notice, the Issuer, the Company, the Guarantors and the Trustee (on behalf of the holders of the Notes) shall enter into a supplemental indenture to grant (and will enter into all documents and take all actions as may be required by applicable law to grant) a first-priority Lien in favor of the Trustee for the benefit of the holders of the Notes, as the case may be, on such collateral that was provided in favor of the Debenture Trustee for the benefit of the Debenture Holders.

Pursuant to the Intercreditor and Collateral Agency Agreement, the proceeds from enforcement of the Collateral will be shared initially up to US$500.0 million aggregate principal amount of the Notes and up to US$500.0 million aggregate principal amount of the Debentures, and then *pari passu* among the Secured Debt Providers, after the payment of enforcement expenses and other amounts payable to the Trustee, the Collateral Agents and the Intercreditor Agent. However, the enforcement and foreclosure of the Collateral under and pursuant to the Intercreditor and Collateral Agency Agreement will not grant or permit the Trustee, the Collateral Agents, the Intercreditor Agent, or the Secured Debt Providers to seek, claim or collect under different enforcement or foreclosure procedures, irrespective of the jurisdictions where such actions, claims or procedures were filed, double payment or obtain additional payment amounts other than the total amount of the obligations of the Issuer and the Guarantors under the Notes and the Note Guarantees, under the Debentures, under the Oil Hedge Obligations and any Additional Debt pursuant to the provisions set forth in the relevant Security Documents. Once all such obligations have been paid in full, the Secured Debt Providers shall immediately withdraw, desist or abstain from all other pending, outstanding, ongoing or new claims, actions or procedures in any jurisdiction related to the Collateral or payment of such obligations, pursuant to the provisions set forth in relevant the Security Documents.

No appraisal of the Collateral has been prepared in connection with the offering of the Notes and the Indenture will not require the Issuer to provide appraisals of the Collateral in the future. See "*Risk Factors—Risks Relating to the Notes and the Collateral— The value of the Collateral may not be sufficient to satisfy all the obligations secured by the Collateral. As a result, holders may not receive full payment of the obligations owed under their Notes following an event of default*" for additional information. The value of the Collateral at any time will depend on,

among other things, market and other economic conditions, including the availability of suitable buyers for the Collateral, and the aggregate amount of liabilities of the Issuer and the Guarantors. In the event of a foreclosure, liquidation, bankruptcy or similar proceeding, no assurance can be given that the proceeds from any sale or liquidation of the Collateral will be sufficient to pay the Issuer's obligations under the Secured Debt Agreements, in full or at all. In addition, the Intercreditor and Collateral Agency Agreement places limitations on the ability of the Collateral Agents to enforce the Collateral. Each holder of the Notes will be represented by the Trustee in the Intercreditor and Collateral Agency Agreement and, upon appointment of the Collateral Agents by the Trustee under the terms of the Intercreditor and Collateral Agency Agreement, will be deemed to have irrevocably appointed the Collateral Agents to act as its Collateral Agents in each jurisdiction under the Intercreditor and Collateral Agency Agreement and the relevant Security Document. The Debenture Holders will be represented by the Indenture Trustee in the Intercreditor and Collateral Agency Agreement and will be deemed to have irrevocably appointed the Collateral Agents to act as its Collateral Agents in each jurisdiction under the Intercreditor and Collateral Agency Agreement and the relevant Security Documents. Any Oil Hedge Provider will be represented by its respective authorized representative, which will accede to the Intercreditor and Collateral Agency Agreement and upon such accession, such Oil Hedge Provider will be deemed to have irrevocably appointed the Collateral Agents to act as its Collateral Agents in each jurisdiction under the Intercreditor and Collateral Agency Agreement and the relevant Security Documents. Any Additional Debt Provider will be represented by its respective authorized representative, which will accede to the Intercreditor and Collateral Agency Agreement and upon such accession, the Additional Debt Provider will be deemed to have irrevocably appointed the Collateral Agents to act as its Collateral Agents in each jurisdiction under the Intercreditor and Collateral Agency Agreement and the relevant Security Documents. The Collateral Agents will act on behalf of the Secured Debt Providers with respect to the Collateral as directed pursuant to the Intercreditor and Collateral Agency Agreement or the applicable Security Documents.

Also, the Issuer will be able to issue Additional Notes in the future that will equally and ratably share in the Collateral with the holders of Notes, and the other Secured Debt Providers, if applicable. The amount of any Additional Notes will be limited by the covenants described under "*—Certain Covenants—Limitation on Debt*," "*—Limitation on Liens*" and "*Certain Definitions—Permitted Collateral Liens*." Under certain circumstances, the amount of such Debt could be significant.

Share Collateral

The security interests in the Share Collateral will be effected pursuant to one or more pledge agreements (in the case of the Brazilian Share Collateral, as a fiduciary transfer (*alienação fiduciária*)). Such agreements are or will be governed by the laws of Luxembourg and Brazil (the Luxembourg Share Pledge Agreement and the Brazilian Share Fiduciary Transfer Agreement, collectively, the "**Share Pledge Agreements**") to be entered into on the Issue Date. See also "*—Additional Matters relating to the Collateral*."

On the Issue Date, the Share Pledge Agreements will be entered into so that the Secured Debt Providers are secured by a first-priority lien over the Capital Stock representing the percentage of the outstanding Capital Stock set forth opposite the following subsidiaries of the Company (the "**Share Collateral**"), subject to customary registration and perfection requirements, as well as fulfillment of the condition for effectiveness thereof, in accordance with and as required by the Security Documents:

Entity	**% of Capital Stock to be Included in the Initial Share Collateral**
3R Lux	100%
3R Potiguar S.A.	100%
3R Bahia S.A.	100%
3R RNCE S.A.	100%
3R Operações Marítimas S.A.	100%
3R Petroleum Offshore S.A.	70%

Perfection of Share Collateral

The Issuer, the Company and the other Guarantors agree and covenant that:

- each of the Share Pledge Agreements and any related ancillary document shall be executed on or before the Issue Date;
- all internal notifications and procedures relating to the Share Collateral and any relating ancillary document shall be duly completed by the Issuer, the Company, and any relevant Subsidiary of the Company as of the Issue Date;
- with respect to the Luxembourg Share Pledge Agreement, the confirmation of the pledge shall be recorded by the Issuer in its share register book within one (1) Business Day as of the date of the Luxembourg Share Pledge Agreement; and
- all filings, notices and applications for registrations, authorizations, and approvals shall, with respect to the Brazilian Share Fiduciary Transfer Agreement, be made (1) with the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*) within 10 days of the Issue Date, (2) in the share register book of the relevant Subsidiary within 5 Business Days of the Issue Date, *it being understood that* the Share Collateral shall be perfected within 90 days of the Issue Date ("**Share Collateral Perfection**").

Concessions Collateral

As collateral for the benefit of the Secured Debt Providers, on the Issue Date, the Company shall cause its Subsidiaries holding interests in the Encumbered Concessions to enter into the Concession Rights Pledge Agreement so that all obligations of the Issuer and the Guarantors under the Indenture are secured by a first-priority lien (subject to certain registrations and perfection requirements, as well as fulfillment of the condition for effectiveness thereof, as provided under the Concession Rights Pledge Agreement) over the rights of any such subsidiary with regards to the Encumbered Concessions (the "**Concessions Collateral**") and shall cause the Concessions Collateral to be granted on the Issue Date and perfected within the time frame described below and in the Security Documents. See also *"— Additional Matters relating to the Collateral*."

Perfection of Concessions Collateral

Consistent with customary procedures, the interest of the Brazilian Collateral Agent on behalf of the holders of the Notes in the Concessions Collateral will be made and perfected (in the timeframes as described below, as applicable), with the registration of the Concession Rights Pledge Agreement with the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*), *provided, however*, that perfection of the Concession Rights Pledge Agreement against ANP is subject to the delivery of the notice pursuant to the terms under article 23 of ANP's Resolution No. 785/2019.

The Issuer, the Company and the other Guarantors agree and covenant that:

- the Concession Rights Pledge Agreement and any related ancillary document shall be executed, as of the Issue Date and all filings relating to the Concessions Collateral shall be prepared within the timeframes established in the Security Documents, as set forth below;
- all internal notifications, procedures and approvals relating to the Concessions Collateral and any relating ancillary documentation shall be duly completed by the Issuer, the Company, and any relevant Subsidiary of the Company as of the Issue Date;
- the filing of the Concession Rights Pledge Agreement shall be made with the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*) within 10 days of the Issue Date and the relevant registration must be obtained within 90 days from the Issue Date. Any amendments to the Concession Rights Pledge Agreement shall be filed with the competent Registries

of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*) within 10 days of the execution date of such amendment and the relevant registration must be obtained within 90 days from the relevant execution date of such amendment. Therefore, the Concessions Collateral shall be perfected within 90 days from the Issue Date ("**Concessions Collateral Perfection**"); and

- the notification to ANP pursuant to the terms under article 23 of ANP's Resolution No. 785/2019, shall be made by the Company or the relevant Subsidiary within 30 days as of the Issue Date.

The Concessions Collateral will be valid, effective and perfected against third parties (other than ANP) upon registration of the Concession Rights Pledge Agreement (and relevant amendments) before the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*), being the communication to ANP a condition for the effectiveness and perfection of the Concession Rights Pledge Agreement before ANP, in accordance with the applicable laws and the rules provided in ANP regulations.

Credit Receivables Collateral

Initial Credit Receivables Collateral

As additional collateral for the benefit of the Secured Debt Providers, on the Issue Date, the Company shall cause its Subsidiaries that are parties to the Encumbered Initial Off-Take Agreements and the Encumbered Oil Hedge Agreements to enter into the Credit Receivables Fiduciary Assignment Agreement so that all obligations of the Issuer and the Guarantors under the Indenture are secured by a first-priority lien (subject to certain registrations and perfection requirements, as well as fulfillment of the condition for effectiveness thereof, as provided under the Credit Receivables Fiduciary Assignment Agreement) in the form of a fiduciary assignment (*cessão fiduciária*) over (i) the credit receivables under the Encumbered Initial Off-Take Agreements; (ii) any close-out amounts payable to such entities under the Encumbered Oil Hedge Agreements; and (iii) the bank accounts maintained by each relevant entity which is a party to the Credit Receivables Fiduciary Assignment Agreement with a Brazilian bank ("**Brazilian Collateral Accounts**"), *provided that* the Company shall cause each subsidiary that is party to the Encumbered Initial Off-Take Agreements and the Encumbered Oil Hedge Agreements to direct all cash received by such subsidiary in connection with the Encumbered Initial Off-Take Agreements and any close-out amounts payable to such Guarantors under the Encumbered Oil Hedge Agreements to be deposited in such Brazilian Collateral Accounts (the "**Initial Credit Receivables Collateral**") and shall cause the Initial Credit Receivables Collateral to be granted on the Issue Date and perfected within the time frame described below and in the Security Documents. See also *"— Additional Matters relating to the Collateral*."

Future Credit Receivables Collateral

If, following the execution date of the Credit Receivables Fiduciary Assignment Agreement, any of the Guarantors executes any additional crude oil and/or gas off-take agreements, other than the Encumbered Off-Take Agreements and/or any crude oil and/or gas off-take agreements which replaces the Encumbered Initial Off-Take Agreements, in each case (x) related to the Encumbered Concessions and (y) with a duration term of 12 (twelve) months or more (in each case, a "**Future Encumbered Off-Take Agreement**), then the applicable party shall (a) notify the counterparties of such Future Encumbered Off-Take Agreement within the timeframes established in the Credit Receivables Fiduciary Assignment Agreement; and (b) cause, within fifteen (15) Business Days, from the execution of each such Future Encumbered Off-Take Agreement that the Credit Receivables Fiduciary Assignment Agreement be amended, so that such party's credit receivables rights under any such Future Encumbered Off-Take Agreement becomes part of the Credit Receivables Collateral (the "**Future Credit Rights Receivables Collateral**").

Perfection of Credit Receivables Collateral

Consistent with customary procedures, the interest of the Trustee and Brazilian Collateral Agent on behalf of the holders of the Notes in the Credit Receivables Collateral will be made and perfected (in the timeframes as described below), with (i) the registration of the Credit Receivables Fiduciary Assignment Agreement with the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*) and (ii) the delivery of the notice to the applicable counterparties and granting of prior approval from such counterparties, as applicable.

The Issuer, the Company and the Guarantors agree and covenant that:

- the Credit Receivables Fiduciary Assignment Agreement and any related ancillary document shall be executed, and all filings relating to the Credit Receivables Collateral shall be prepared, as of the Issue Date;

- all internal notifications, procedures and approvals relating to the Credit Receivables Collateral and any relating ancillary documentation shall be duly completed by the Issuer, the Company, and any relevant Subsidiary of the Company as of the Issue Date; and

- all filings, notices and applications for registrations, authorizations and approvals (including the delivery of the notice to the applicable counterparty of the relevant off-take agreements) with respect to the Credit Receivables Collateral shall be made by the Company or the relevant Guarantor as follows: (1) the filing of the Credit Receivables Fiduciary Assignment Agreement with the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*) shall be made within 10 days as of the Issue Date and the relevant registration must be obtained within 90 days from the Issue Date; (2) any amendments to the Credit Receivables Fiduciary Assignment Agreement shall be filed with the competent Registries of Titles and Deeds in Brazil (*Cartórios de Registro de Títulos e Documentos*) within 10 days of the relevant execution date of such amendment and the relevant registration must be obtained within 90 days from the relevant execution date of such amendment; (3) the notification of the relevant counterparties of the off-take agreements must occur within 10 Business Days from (a) the Issue Date, with respect to the Initial Credit Receivables Collateral; and (b) the date of execution of the relevant amendment to the Credit Receivables Fiduciary Assignment Agreement, with respect to the Future Credit Rights Receivables Collateral.

Therefore: (A) the Initial Credit Receivables Collateral shall be perfected within 90 days from the Issue Date, *provided that* this deadline may be extended once for 30 days, in accordance with the terms of the Credit Receivables Fiduciary Assignment Agreement ("**Initial Credit Receivables Collateral Perfection**" and, together with the Concessions Collateral Perfection and the Share Collateral Perfection, the "**Initial Collateral Perfection**"); and (B) the Future Credit Rights Receivables Collateral shall be perfected within 90 days from the execution of the relevant amendment to the Credit Receivables Fiduciary Assignment Agreement for inclusion of such collateral within the Credit Receivables Collateral (which amendment must be entered into within fifteen (15) Business Days after the execution of each such Future Encumbered Off-Take Agreement.

Intercreditor and Collateral Agency Agreement

On or about the Issue Date, the Trustee, acting on behalf of the holders of the Notes, will become a party to the Intercreditor and Collateral Agency Agreement by executing a joinder in the form provided therein. If applicable, the Oil Hedge Providers and the Additional Debt Providers will accede to the Intercreditor and Collateral Agency Agreement by executing a joinder in the form provided in the Intercreditor and Collateral Agency Agreement.

The Notes are subject to the terms of the Intercreditor and Collateral Agency Agreement, which will govern, among other things, creditor rights of the Secured Debt Providers in respect of Enforcement Actions (as defined below). in respect of the Collateral. In accordance with the terms of the Intercreditor and Collateral Agency Agreement, at any time after the occurrence and during the continuance of an Event of Default under any Secured Debt Agreement, a remedies notice may be sent by the applicable Secured Debt Provider (including any Representative of the Secured Debt Providers) to the Intercreditor Agent (the "**Remedies Notice**"). Once such Remedies Notes is received by the Intercreditor Agent, the Intercreditor Agent shall promptly send a notice to the other Representatives of the Secured Debt Providers, informing in reasonable detail the nature of the relevant Decision proposed to be taken, the corresponding Decision Period and the Required Voting Parties required to make such Decision) (the "**Intercreditor Vote Notice**").

The Decision Period will be the period of time designated in the Remedies Notice, which shall end not earlier than 30 days after the date of such notice nor later than 120 days after the date of such notice. During the Decision Period, the Representatives of the Secured Debt Providers will collect votes from the Secured Debt Providers they represent and return a voting certificate to the Intercreditor Agent. The taking or initiation of any Enforcement

Action may be made in the times indicated below to the extent that the Voting Party Percentages indicated below are met (the "**Initiating Voting Parties**"):

Period Required to Take an Enforcement Action from the Enforcement Action Decision Date	Minimum Voting Party Percentage on the Enforcement Action Decision Date
Between one and 45 days from the Enforcement Action Decision Date	more than 66% of the Combined Exposure; *provided that*, prior to the Termination Date (as such term is defined in the Term Loan Facility), such percentage shall include Lenders holding in the aggregate greater than 50% of the outstanding principal amount of the Loan.
Between 46 and 60 days from the Enforcement Action Decision Date	more than 50% of the Combined Exposure; *provided that*, prior to the Termination Date (as such term is defined in the Term Loan Facility), such percentage shall include Lenders holding in the aggregate greater than 50% of the outstanding principal amount of the Loan.
60 days and thereafter	either a number of votes from (i) Lenders representing more than 50% of the outstanding principal amount of the Loan or (ii) Debenture Holders representing more than 50% of the outstanding principal amount of the Debentures.

If the Minimum Voting Party Percentages indicated above are not met, then, no Enforcement Action can be taken or initiated with respect to the Collateral. Nothing contained in the Intercreditor and Collateral Agency Agreement precludes any Representative of Senior Secured Debt Providers from participating in any re-voting or further voting relating to the take of any Enforcement Action in connection with such Event of Default.

With respect to other matters that may require an Intercreditor Vote, the approval of any such matters will require the approval by the applicable Required Voting Parties.

For purposes of this section:

"**Combined Exposure**" means, as of any date of calculation, the sum (calculated without duplication) of the following: (a) the aggregate outstanding principal amount of the Term Loan Facility; (b) the aggregate outstanding principal amount of the Debentures; and (c) the aggregate outstanding principal amount of the Notes (including Additional Notes), and in the case of (c), so long as the Notes (including Additional Notes) are used to refinance all or a portion of the Term Loan Facility and/or the Debentures Indenture.

"**Decision**" means any Enforcement Action or grant any Modification with respect to any Financing Document.

"**Enforcement Action**" means: (a) the taking of any steps (including directing a Collateral Agent through the Intercreditor Agent) to enforce or require the enforcement against any of the Collateral in accordance with any Security Document or otherwise; (b) the exercise of any right of setoff against the Company or any Guarantors in respect of any Secured Obligation; (c) the suing for, commencing or joining of any legal or arbitral proceedings against any the Company or any Guarantor to recover or otherwise in respect of any Secured Obligation; or (d) the petitioning, applying or voting for, or the taking of any steps (including the appointment of any trustee, liquidator, receiver, administrator or similar officer) in relation to any proceeding against the

Company or any Guarantor or in the context of any suspension of payments or moratorium of any debt of the Company or any Guarantor or any analogous procedure or step in any jurisdiction.

"**Enforcement Action Decision Date**" means the last day of the Decision Period of such Intercreditor Vote process to take an Enforcement Action.

"**Financing Documents**" means, collectively, the Security Documents, the Term Loan Facility, the Indenture, the Debentures Indenture, the Oil Hedge Agreements, the Additional Debt Agreements and any agreement or instrument contemplated hereby or thereby

"**Intercreditor Vote**" means, at any time, a vote conducted in accordance with the procedures set forth in the Intercreditor and Collateral Agency Agreement with respect to the particular Decision at issue at such time.

"**Modification**" means (a) with respect to the Intercreditor and Collateral Agency Agreement, any amendment, supplement, waiver, consent or other material modification of any of the terms and provisions of the Intercreditor and Collateral Agency Agreement and (b) with respect to any other Financing Document, any amendment, supplement, waiver, consent, or other material modification of the terms and provisions thereof that relate to the Collateral.

"**Representatives of the Senior Secured Debt Providers**" means (i) the Administrative Agent acting on instructions from the lenders, in accordance with the Term Loan Facility, (ii) the Trustee, acting on instructions from the holders of the Notes, in accordance with the Indenture and (iii) any person acting on behalf of the Debentures Holders.

"**Required Voting Parties**" means:

(i) with respect to any Supermajority Voting Issue, an amount of votes equivalent to more than 85% of the Combined Exposure;

(ii) with respect to any Remedies Notice delivered pursuant the terms of the Intercreditor and Collateral Agency Agreement, the Initiating Voting Parties; and

(iii) with respect to all other actions under the Intercreditor and Collateral Agency Agreement which require an Intercreditor Vote and that are not otherwise described in clauses (i) or (ii) above, more than 50% of the Combined Exposure;

provided that, prior to the date on which all of the obligations of the Term Loan Facility have been paid in cash, such percentages included in clauses (i) and (iii) above shall include all Lenders required to consent or approve the relevant matter pursuant to the Term Loan Facility.

For the avoidance of any doubt, Oil Hedge Providers and Additional Debt Providers shall have no voting rights under the Intercreditor and Collateral Agency Agreement and shall not be deemed "Required Voting Parties" or "Initiating Voting Parties" for any purpose whatsoever under the Intercreditor and Collateral Agency Agreement and shall not be counted for purposes of the definition of "Voting Party Percentage".

"**Supermajority Voting Issue**" means :

(iv) modifications to the definition "Required Voting Parties"; or

(v) any modification of any provision of the Intercreditor and Collateral Agency Agreement or any other Secured Debt Agreement that has the effect of: (A) permitting the Issuer or any Guarantor to assign its rights or delegate its duties under any Secured Debt Agreement; (B) releasing any material portion of the Collateral from the lien of any of the Security Documents or allowing the release of any funds held by any Collateral Agent, other than the release of Collateral or funds pursuant to the express provisions of the Intercreditor and Collateral Agency Agreement and any Secured Debt Agreement; or (C) altering the relative lien priority or priority of payments or application of proceeds, in each case, as among the Secured Debt Providers.

"**Voting Party Percentage**" means, in connection with any proposed Decision or action under the Intercreditor and Collateral Agency Agreement, the actual percentage, as determined pursuant to the terms of the Intercreditor and Collateral Agency Agreement, of allotted votes of the Secured Debt Providers entitled to vote with respect to such Decision or action cast in favor of such Decision or action by each Representative of the Senior Secured Debt Providers (on its own behalf or on behalf of each of the Secured Debt Providers that it represents).

The Collateral Agents (acting as directed pursuant to the Intercreditor and Collateral Agency Agreement), the Intercreditor Agent, the Administrative Agent and/or the Trustee (as applicable) will agree to release any of the Collateral if permitted by the Security Documents and the Intercreditor and Collateral Agency Agreement without requiring any consent from the holders of the Notes or any other Secured Debt Providers. The Intercreditor and Collateral Agency Agreement will be governed by the laws of the State of New York.

On or after the Issue Date, under the Intercreditor and Collateral Agency Agreement, the holders of the Notes will be represented by the Trustee and the Debenture Holders will be represented by the Debenture Trustee, and the Oil Hedge Providers (if any) and Additional Debt Providers (if any), as the case may be, will be represented by their respective authorized representative. The Collateral Agents will act on behalf of the Secured Debt Providers with respect to the Collateral under the terms of the Intercreditor and Collateral Agency Agreement.

The Indenture will also provide that each holder of the Notes, by accepting any Notes, shall be deemed to have agreed to and accepted the terms and conditions of the Intercreditor and Collateral Agency Agreement and to have directed the Trustee to enter into such agreement and to appoint the Intercreditor Agent and the Collateral Agents in each jurisdiction thereunder. By accepting any Notes, each holder of the Notes will be deemed to have irrevocably authorized the Intercreditor Agent and each Collateral Agents to (i) perform the duties and exercise the rights, powers and discretions that are specifically given to it under the Intercreditor and Collateral Agency Agreement or the Security Documents (as applicable), (ii) execute each Security Document to which it is intended to be a party (in the case of each of the Collateral Agents), and (iii) grant, or execute, any waiver, modification, amendment, renewal or replacement expressed to be granted and/or executed by the Intercreditor Agent and/or the Collateral Agents (as applicable) on its behalf. Furthermore, by executing the Intercreditor and Collateral Agency Agreement, each of the Secured Debt Providers will have agreed that it will not question or contest or support any other Person in questioning or contesting, in any proceeding, the perfection, priority, validity, attachment or enforceability of a lien held by or on behalf of any of the Secured Debt Providers in all or any part of the Collateral, and each Secured Debt Provider will have agreed that if it obtains possession of any Collateral or realizes any proceeds or payment in respect of any such Collateral for any reason, at any time prior to the discharge of each of the Secured Obligations (as defined below), then it will hold such Collateral, proceeds or payment in trust for the other Secured Debt Provider.

Additional Matters Relating to Collateral

So long as no Event of Default shall have occurred and be continuing, and subject to certain terms and conditions set forth under the Indenture, the Security Documents and the Intercreditor and Collateral Agency Agreement, the Company, the Issuer or any of their Subsidiary, as the case may be (i) will be entitled to exercise, directly or indirectly, any economic, voting and other consensual rights pertaining to all Collateral existing at the time thereof and (ii) may collect, invest and dispose of any income arising from the Collateral. Upon the occurrence and during the continuance of an Event of Default, to the extent permitted by law and subject to the provisions of the relevant Security Documents and the Intercreditor and Collateral Agency Agreement, and as further described in the following paragraph:

(1) all of the rights of the pledgor to exercise voting or other consensual rights with respect to the Collateral shall cease, and all such rights shall depend on previously written instructions of the relevant Collateral Agents (acting as directed pursuant to the Intercreditor and Collateral Agency Agreement);

(2) all rights of the Issuer, the Company, other Guarantors or any of its Subsidiaries to receive all interest, dividends, distributions and other payments made upon or with respect to the Collateral will cease and such interest and other payments will be paid, upon action by the relevant Collateral Agents, acting as

directed pursuant to the Intercreditor and Collateral Agency Agreement, to the relevant Collateral Agents for the benefit of the Trustee and the holders of the Notes; and

(3) the applicable Collateral Agent, as directed pursuant to the Intercreditor Agreement, may sell the Collateral or any part thereof in accordance with the terms of applicable law, applicable governmental requirements and the Security Documents, as the case may be.

See "Risk Factors—*Risks Related to the Notes, the Note Guarantees and the Collateral—As a result of the Term Loan Facility, the rights of the holders of Notes with respect to the Collateral will be subject to the terms of the Intercreditor Agreement, which may materially limit the rights of the holders of the Notes to take enforcement actions, including with respect to the Collateral securing the Notes*."

Upon the occurrence and during the continuance of an Event of Default, upon receiving written instructions from the Intercreditor Agent and providing written notice to the Issuer and subject to the limitations set forth above, the Collateral Agents will have the right to, on behalf of the Secured Debt Providers:

(1) receive its ratable share of cash dividends and other payments made upon or with respect to the Collateral;

(2) exercise its voting or other consensual rights pertaining to the Collateral; and

(3) commence proceedings to foreclose on the Collateral.

In addition to any other requirements in respect of the Secured Debt Providers as described in the Intercreditor and Collateral Agency Agreement, the holders will have the right to direct the Trustee to instruct the Intercreditor Agent to instruct the Collateral Agents in each jurisdiction, subject to the rights of the Trustee and the Intercreditor Agent and such Collateral Agent, including the right to be indemnified and/or provided with security to such entity's satisfaction before following any such direction, following the occurrence of an Event of Default under the Indenture, to foreclose on, or exercise its other rights with respect to, the Collateral (or exercise other remedies with respect to the Collateral). Any action taken or not taken following approval by holders of a majority in principal amount of the Notes but without the affirmative vote of any particular holder will nevertheless be binding on such holder.

The right of the Collateral Agents to repossess and dispose of or otherwise exercise remedies in respect of the Collateral upon the occurrence of an Event of Default under and as defined in the Indenture is likely to be significantly impaired by U.S. bankruptcy and applicable foreign insolvency laws if a bankruptcy or foreign insolvency proceeding were to be commenced by or against the Issuer or any pledgor of Collateral in an applicable jurisdiction prior to the Collateral Agents in any jurisdiction having repossessed and disposed of the Collateral or otherwise completed the exercise of its remedies with respect to the Collateral. See *"Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral— Brazilian insolvency laws may be less favorable to investors than insolvency laws in other jurisdictions." and "Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral —The ability of the Guarantors to guarantee the Notes may be restricted by local law, which may limit your potential recovery" and "Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral —Holders of our Notes may face difficulties in serving process on or enforcing judgments against us and other persons."*

Further Assurances

The Issuer and the Company will deliver to the Trustee and the applicable Collateral Agents, on or prior to the date on which each Collateral is perfected in accordance with the respective Security Document and with section "Collateral" above (to the extent such Collateral is not perfected on the Issue Date), (i) an Officer's Certificate of the Issuer stating that (x) in respect of the applicable Collateral, all filings and other actions (including, without limitation, all required registrations and recordations with the applicable notaries or registries) necessary to formalize the applicable Security Documents or any amendments, as the case may be, and perfect a security interest in such Collateral have been completed, and (y) that no Default or Event of Default has occurred and is continuing; and (ii) a legal opinion from Brazilian or Luxembourg external counsel (as applicable) of the Issuer and the

Company to the effect that (subject to customary exceptions and qualifications), (x) in respect of each Security Document, each has been duly authorized, executed and delivered by the Issuer and the Guarantors, as applicable, and constitutes the legal, valid, and binding obligation of the Issuer and such Guarantor, as applicable, enforceable against such Guarantor in accordance with their respective terms, and (y) in respect of the applicable Collateral, all filings, registrations and authorizations of governmental agency or other regulatory authority required for the validity against the relevant Guarantor of the Security Documents and perfect a security interest in such Collateral in accordance with their respective terms, have been completed.

The Company and, to the extent applicable, the Issuer will take or cause to be taken, all actions necessary (and/or requested by the applicable Collateral Agents) to maintain each Security Document to which it is a party in full force and effect and enforceable in accordance with its terms and to maintain and preserve the Liens created by such Security Documents and the priority thereof.

Notwithstanding anything to the contrary contained herein or in applicable law, none of the Trustee, the Intercreditor Agent, the Administrative Agent, or the Collateral Agents shall have responsibility for (i) preparing, recording, filing, rerecording or re-refiling any financing statement, perfection statement, continuation statement or other instrument (including the Security Documents) in any public office or for otherwise ensuring the perfection or maintenance of any security interest granted pursuant to, or contemplated by, the Indenture and the Security Documents; or (ii) for monitoring or confirming the Issuer's or the Company's compliance with any of their respective covenants, including but not limited to, covenants regarding the granting, perfection or maintenance of any security interest.

Release of Collateral

The Indenture, the Intercreditor and Collateral Agency Agreement and the Security Documents will provide that the Liens on the Collateral will, without the need for any further action by the holders of the Notes, Debenture Holders, or any other Person be released:

(1) in whole, upon payment in full of the principal of, accrued and unpaid interest, if any, and premium, if any, on the Secured Debt Agreements;

(2) with regards to the Notes, upon defeasance or discharge of the Indenture as set forth below under "*—Satisfaction and Discharge"* and *"—Defeasance*;"

(3) with regards to the Collateral, as permitted pursuant to the terms of the Indenture, the Intercreditor and Collateral Agency Agreement or the Security Documents, including (i) upon discharge of the secured obligations under the Secured Debt Agreements or (ii) if, at any time any Collateral Agent acting on behalf of the Secured Debt Providers forecloses upon or otherwise exercises remedies against any Collateral resulting in a sale or disposition thereof (whether or not any insolvency or liquidation proceeding is pending at the time);

(4) with regards to the Debenture Holders Released Collateral, as permitted pursuant to the terms of the Indenture, the Intercreditor and Collateral Agency Agreement or the Security Documents, including (i) upon discharge of the secured obligations under the Debentures Indenture or (ii) if, at any time any Collateral Agent acting on behalf of the Debenture Holders forecloses upon or otherwise exercises remedies against the Debenture Holders Released Collateral resulting in a sale or disposition thereof (whether or not any insolvency or liquidation proceeding is pending at the time);

(5) in the specific case of a Restricted Subsidiary that holds substantially only Offshore Assets, upon the consummation of (i) a Qualified Initial Public Offering, (ii) an Unqualified Initial Public Offering or (iii) a Private Transaction involving such Restricted Subsidiary, *provided that*, in the event of an Unqualified Initial Public Offering or a Private Transaction, the release of the Share Collateral related to such Restricted Subsidiary shall only apply to the amount of Capital Stock sold by the Company in any such event;

(6) in the case of the 3R Operações Marítimas S.A.'s Share Collateral, such Share Collateral or any portion thereof shall be released to the extent transferred or sold to any third party in an arm's length transaction, so long as the Net Cash Proceeds from such sale are used in accordance with *"—Limitation on Asset Sales*"; *provided* that if there is a partial sale or disposition, only the Equity Interest subject to such disposition or sale shall be released; *provided*, *further*, that, if any call option or similar arrangement is entered to repurchase any Equity Interest subject to such sale or disposition, the beneficiary under such agreement shall be a Restricted Subsidiary;

(7) in the case of the 3R Bahia's Share Collateral, Concessions Collateral and Credit Receivables Collateral, such Collateral or any portion thereof shall be released to the extent transferred or sold to any third party in an arm's length transaction, so long as the Net Cash Proceeds from such sale are used in accordance with *"—Limitation on Asset Sales*"; *provided* that if there is a partial sale or disposition, only the Equity Interest, Concessions and Credit Receivables subject to such disposition or sale shall be released; *provided*, *further*, that, if any call option or similar arrangement is entered to repurchase any Equity Interest subject to such sale or disposition, the beneficiary under such agreement shall be a Restricted Subsidiary;

(8) in the case of the 3R Potiguar's Share Collateral, five percent (5%) of the Equity Interests of 3R Potiguar (the "Relevant Equity Interest") will be released only to the extent that the full outstanding amount of the Debentures is converted into Equity Interests of 3R Potiguar. In such case, and upon such conversion into Equity Interests, the Debentures will be terminated, and the Collateral will no longer secure the Debentures;

(9) in the case of any replacement of Collateral pursuant to "*—Replacement of Collateral*;" or

(10) in the case of any consolidation, merger or sale, conveyance, transfer or other disposition of all or substantially all of the assets of a Restricted Subsidiary with, into or to the Issuer, the Company or another Restricted Subsidiary in accordance with the provision under "*—Certain Covenants—Consolidation, Merger or Sale of Assets*."

If any of the aforementioned situations occurs, without the need of any further consent from holders of the Notes, Debentures Holder or any other Person, the Collateral Agents acting on behalf of the Secured Debt Providers are authorized, at the direction of the Intercreditor Agent (acting on behalf in accordance with the Intercreditor and Collateral Agency Agreement), to execute and deliver to the Issuer, the Guarantors or any Restricted Subsidiary that provides Collateral, as applicable, any instrument (including a modification to any Security Document) and to perform all acts and provide all instructions and notices (which are prepared by the Issuer) reasonably required for such purposes as the Issuer and the Guarantors shall reasonably request to evidence (i) the release of any Lien on any Collateral granted to or held by the Collateral Agents under any Security Document, or (ii) the release of the Issuer and the Guarantors from their respective obligations under any Secured Debt Agreement.

Release of the Note Guarantees

The Indenture will provide that the Note Guarantees of a Guarantor will terminate upon:

(1) a sale or other disposition (including by way of consolidation, amalgamation or merger) of all or a portion of the Capital Stock of the relevant Guarantor other than the Company (whether by direct sale or sale of a holding company) following which such Subsidiary Guarantor is no longer a Subsidiary of the Company;

(2) a replacement of all Capital Stock of a Guarantor pursuant to "*—Replacement of Collateral*", *provided* that prior or simultaneously to such release of guarantee, in the event such Capital Stock comprising Replaceable Collateral is replaced by Equity Interests of a third party, such Guarantor causes such third party to become a Guarantor under the Indenture;

(3) the sale or disposition of all or substantially all the assets of the Guarantor (other than to the Company or a Restricted Subsidiary), as permitted under the Indenture;

(4) the designation of a Guarantor as an Unrestricted Subsidiary, as permitted pursuant to the definition of "Unrestricted Subsidiary";

(5) the replacement of such Guarantor's Share Collateral pursuant to and in accordance with the provisions under "*—Replacement of Collateral*";

(6) in the case of any consolidation, merger or sale, conveyance, transfer or other disposition of all or substantially all of the assets of a Restricted Subsidiary with, into or to the Issuer or another Restricted Subsidiary in accordance with the provisions under "*—Certain Covenants—Consolidation, Merger or Sale of Assets*;"

(7) such Subsidiary Guarantor ceasing to be a Significant Subsidiary, provided that the Company and the other Guarantors at the time of determination would directly (i) hold at least 80% of Consolidated Total Assets, as of the most recently available quarterly balance sheet for which financial statements are available and delivered (or which should have been delivered pursuant to the terms of the Indenture) to the Trustee pursuant to the provisions under "*—Reports*," and (ii) generate revenues of at least 80% of the Consolidated Net Revenues, for the twelve-month period ending on the last day of the Company's most recently available quarterly statement of income for which financial statements are available and delivered (or which should have been delivered pursuant to the terms of the Indenture) to the Trustee pursuant to the provisions under "*—Reports*,"

(8) in whole, upon payment in full of the principal of, accrued and unpaid interest, if any, and premium, if any, on, the Notes; or

(9) defeasance or discharge of the Notes as set forth below under "*—Satisfaction and Discharge"* and "*—Defeasance*;"

provided that any such transaction is carried out pursuant to, and in accordance with, all other applicable provisions of the Indenture.

In accordance with the terms of the Indenture and the Intercreditor and Collateral Agency Agreement, upon delivery by the Issuer to the Trustee of an Officers' Certificate and an Opinion of Counsel to the foregoing effect, the Trustee will execute any documents reasonably required in order to evidence the release of the Guarantor from its obligations under its Guarantee. The Trustee and the Collateral Agents at the direction of the Intercreditor Agent (acting on behalf and as instructed by the Secured Debt Providers in accordance with the Intercreditor and Collateral Agency Agreement) shall each take all necessary actions, to effectuate any release of a Note Guarantee in accordance with these provisions, subject to customary protections and indemnifications.

The Notes and the Note Guarantees will be effectively subordinated to claims of creditors (including trade creditors and preferred stockholders, if any) of the Company's Subsidiaries that do not guarantee the Notes, and each of the Company's Unrestricted Subsidiaries.

Replacement of Collateral

The Company or a Restricted Subsidiary, as the case may be, will be entitled to the release of property and other assets constituting Collateral from the Liens securing the obligations under the Notes under any one or more of the following circumstances:

(i) prior to releasing any property and other assets constituting Collateral (the "**Existing Collateral**"), the Company or such Restricted Subsidiary, as the case may be, will grant (and will enter into all documents and take all actions as may be required by applicable law to grant) a first-priority Lien in favor of the Secured Debt Providers, as the case may be, on additional property or assets (including intangible assets) with an Appraised Value that is not less than the Appraised Value of the property or assets to be released and of the same type as the property or assets pledged pursuant to the terms of the Security Documents ("**Additional Collateral**") and will deliver to the Trustee and the Collateral Agents (who shall promptly provide such documents to the Intercreditor Agent):

(a) an appraisal report from an Independent Appraiser dated no more than thirty (30) Business Days prior to the expected date of such replacement of Existing Collateral, setting forth the Appraised Value and the basis for the appraisal of the Additional Collateral and the property or assets to be released from the Existing Collateral, which appraisal shall be based on net present value of the 2P reserves of the reserve certification report discounted at a discount rate of ten percent; and

(b) amended Security Documents reflecting the release of property or assets and granting of a security interest in favor of the Secured Debt Providers over the Additional Collateral (or, if such security interest is not able to be granted pursuant to the Security Documents, a new security document granting a first-priority security interest in favor of the Secured Debt Providers over such Additional Collateral),

provided that if, under the applicable law governing each such Security Document or new security document, the security interest over the Additional Collateral would be perfected at a different time as the release of the Existing Collateral, the Company or such Restricted Subsidiary shall cause the security interest on the Additional Collateral to be perfected prior or simultaneously with the release of the respective Existing Collateral, *provided that* (i) in the event the Existing Collateral comprises Concessions Collateral, such Additional Collateral shall be owned by the same Person that held the replaced Concessions Collateral, and (ii) in the event the Existing Collateral comprises Share Collateral, such Additional Collateral shall be comprised of the shares of the Capital Stock of the Person for which the Share Collateral will be replaced, and such Person's concession rights that will replace the corresponding Concessions Collateral; and

(ii) The Guarantors will deliver to the Trustee and Collateral Agents within 90 days after the completion of steps (i)(a) and (i)(b) above: (a) an Officer's Certificate stating that (x) in respect of such Additional Collateral, all filings and other actions (including, without limitation, all required registrations and recordations with the applicable notaries or registries) necessary for the creation and perfection of a first-priority security interest in such Additional Collateral in favor of the Secured Debt Providers have been completed, and (y) that no Default or Event of Default has occurred and is continuing, and

(iii) a legal opinion from Brazilian external counsel of the Company satisfactory to the Collateral Agents to the effect that (subject to customary exceptions and qualifications), (a) each amended Security Document and any additional security document has been duly authorized, executed and delivered by the applicable Guarantor and constitutes the legal, valid, and binding obligation of such Person, enforceable against such Person in accordance with their respective terms, and (b) in respect of the Additional Collateral, all filings and other actions (including, without limitation, all required registrations and recordations with the applicable notaries or registries) necessary for the registration and perfection of a first-priority security interest (or a perfect security interest in the case of a fiduciary transfer), in accordance with the terms of the relevant Security Document, in such Additional Collateral in favor of the Secured Debt Providers have been completed. In no event shall the Collateral Agents be responsible for reviewing the appraisal report from an Independent Appraiser or charged with knowledge of the contents of the such appraisal report; nor shall the Collateral Agents be responsible for determining whether any such Collateral release is permitted under the Security Documents and the Indenture, as in all such cases the Collateral Agents shall be fully protected in conclusively relying upon a legal opinion from counsel to the Company stating that such release is permitted under the Indenture and all conditions precedent to such release have been complied with.

Certain limitations on the Collateral and the Note Guarantees

The Collateral will secure the obligations of the Issuer and the Guarantors under the Notes and the Note Guarantees, as well as obligations of the Guarantors under the Debentures, under the Oil Hedge Agreements and under the Additional Debt Agreements, if any. The value of the Collateral in the event of liquidation will depend on many factors. In particular, the Equity Interests that are pledged represent an equity interest in the pledged Subsidiaries, and only have value to the extent that the assets of such Subsidiaries are worth in excess of the liabilities of such Subsidiaries (and, in a bankruptcy or liquidation, will only receive value after payment upon all such liabilities, including all Debt of such Subsidiaries). Consequently, liquidating the Collateral may not produce proceeds in an amount sufficient to pay any amounts due on the Notes. See "*Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral—There may be limitations on foreclosure or enforcement of rights in the Collateral.*" In addition, enforcement of the Liens on the Collateral may be limited by applicable governmental requirements. Foreclosure upon the Collateral will be subject to certain rights, including rights of third parties. See

"*Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral—The rights of the holders of Notes with respect to the Collateral will be subject to the terms of the Intercreditor Agreement, which may materially limit the rights of the holders of the Notes to take enforcement actions, including with respect to the Collateral securing the Notes*." The fair market value of the Collateral is subject to fluctuations based on factors that include, among others, prevailing interest rates, the ability to sell the Collateral in an orderly sale, general economic conditions, the availability of buyers and similar factors.

The value of the Collateral securing the Notes and consequently the amount to be received upon a sale of the Collateral would be dependent on numerous factors, including the actual fair market value of the Collateral at such time and the timing and the manner of the sale. By its nature, some of the Collateral may be illiquid and may have no readily ascertainable market value. In the event of a foreclosure, liquidation, bankruptcy or similar proceeding, we cannot assure you that the proceeds from any sale or liquidation of the Collateral will be sufficient to pay the Issuer's Secured Debt Obligations. Any claim for the difference between the amount, if any, realized by holders of the Notes from the sale of Collateral securing the Notes and the Obligations under the Notes will rank equally in right of payment with all of the Issuer's and any Guarantor's other unsecured senior debt and other unsubordinated obligations, including trade payables.

The ability of the holders to realize on the Collateral may be subject to certain bankruptcy law limitations in the event of a bankruptcy. See "*—Certain Bankruptcy Limitations*."

Additionally, the Collateral securing the Notes may be diluted under certain circumstances, including upon the issuance of Additional Notes by the Company, subject to the terms of the Indenture. *See "Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral—Subject to satisfaction of the conditions set forth in the Indenture, the Issuer and the Guarantors will be permitted to incur additional secured debt, which could adversely affect the value of the Collateral and the credit support package securing the Issuer's obligations under the Notes*."

Impairment of Security Interest

The Issuer, the Company and other Guarantors will not be permitted to grant to any Person, or permit any Person to retain (other than the applicable Collateral Agent), any security interest or Lien whatsoever on the Collateral, other than Permitted Collateral Liens. The Issuer, the Company and other Guarantors will not enter into any agreement that requires the proceeds received from any sale of Collateral to be applied to repay, redeem, defease or otherwise acquire or retire any Debt of any Person, other than as permitted by the Indenture, the Notes and the Security Documents.

Certain Bankruptcy Limitations

Brazil

The right of the Brazilian Collateral Agent to repossess and dispose of the Collateral upon the occurrence of an Event of Default would be significantly impaired in the event that a bankruptcy, judicial reorganization, extrajudicial reorganization or injunction for attempt of a mediation/conciliation with creditors were to be commenced by or against the Guarantors incorporated in Brazil prior to the Brazilian Collateral Agent having repossessed and disposed of the Collateral.

Under the Brazilian Bankruptcy Law, all claims existing against the debtor in the date of the judicial reorganization filing, even those not yet due, are subject to the proceeding, except for (i) tax claims; (ii) credits related to an advance of foreign exchange agreements (*adiantamento de contrato de câmbio*); and (iii) credits secured by fiduciary liens (such as the Credit Receivables Collateral and Share Collateral) or arising from financial leases, owner or committed seller of real estate. This means that debt secured by pledge (such as the Concessions Collateral) or mortgage will be subject to the judicial reorganization proceeding, but their holders may try to negotiate better terms of payment in the plan.

The acceptance by the court of a judicial reorganization proceeding stays the course of all lawsuits and enforcement proceedings filed against the debtor for a period of 180 days (the "**Stay Period**"), which may be

extended once for an equal period, on an exceptional basis, provided that the debtor has not caused the surpassing of such term. The Stay Period may be additionally extended for another period of 180 days upon the presentation of an alternative plan by creditors. During the Stay Period, foreclosure of collateral that is not subject to the reorganization proceeding may be subject to certain restrictions. For instance, Article 49, paragraph 3 of Brazilian Bankruptcy Law restricts the foreclosure of assets that were granted by the debtor in fiduciary lien and are deemed to be essential to carry out the debtor's activities.

The judicial reorganization plan will provide new payment conditions, which will novate the existing debts, being mandatory and binding for the debtor and all creditors subject to it. The parties are free to negotiate how the judicial reorganization will be implemented, including, for instance, the reduction of liability, sale of assets and priority of repayment.

The Guarantors can also file an extrajudicial reorganization proceeding. In the extrajudicial reorganization proceeding, the debtor negotiates the plan with its creditors (pre-packaged restructuring) and may request the Court to ratify the plan. The extrajudicial reorganization plan may include all classes of creditors or only certain groups of creditors such as only financial institutions or only suppliers. With respect to labor creditors, an agreement must be reached with the labor union.

The debtor must obtain the approval of creditors that represent more than 50% of each type of creditor included in the extrajudicial reorganization to obtain the ratification of the plan by the Court and bind dissenting creditors. The debtor may also file the request for extrajudicial reorganization that prove the support of approximately one-third of the creditors included in the extrajudicial reorganization and prove the support of more than 50% of the creditors included within ninety (90) days. Provided that the quorum is met, the Stay Period will be applied to creditors included in the extrajudicial reorganization.

If the Court sanctions the plan, then the respective decision will be an enforceable judicial title, and creditors may enforce it if the debtor fails to comply with the plan.

The Brazilian Bankruptcy Law also provides the possibility of the debtor to file an injunction to obtain a stay period of 60 days during negotiations with creditors during mediation or conciliation proceedings. Under the terms of art. 20-B, §1 of the Brazilian Bankruptcy Law, in order to be granted, the debtor must (i) meet the legal requirements to file for judicial reorganization; (ii) have initiated mediation or conciliation proceedings before the specialized chamber; and (iii) meet the requirements of art. 305 of the Brazilian Code of Civil Procedure (likelihood of success and risk of irreparable harm). If negotiations fail, the debtor may file a request for judicial or extrajudicial reorganization.

In the event of bankruptcy liquidation of the Guarantors incorporated in Brazil, their obligations under the Notes will be subordinated to the statutory preferences established by the Article 83 of Brazilian Bankruptcy Law. Payments of any amounts due by the debtor shall follow the following priority ranking: (i) labor-related claims up to 150 minimum monthly wages (as determined by the Federal Government of Brazil) per creditor as well as claims for damages arising from work related accidents; (ii) secured credits (up to the value of the sale of the asset granted as a collateral), such as credits secured by pledges (such as the Concessions Collateral) and mortgages; (iii) tax claims, regardless of their nature and the time of their constitution (except for extra-bankruptcy credits (*créditos extraconcursais)* and fines); (iv) unsecured credits (including labor-related claims that exceed the amount mentioned in item (i) above and claims of secured creditors with a value exceeding that of the collateral); (v) contractual penalties and fines for breach of criminal or administrative law (including tax-related fines); (vi) subordinated claims, (a) as defined by law or pursuant to the relevant agreement and (b) the credits of the shareholders and administrators with no employment relationship, whose contracting has not observed the strictly commutative conditions (i.e., the involved parties are independent and with the same rights and conditions) and market practices; and (vii) interest accrued from liquidation decree, as established by Brazilian Bankruptcy Law. The foregoing priority is established by law and may not be modified by a court. Except for fiduciary property, which will be used for payment of the respective holder, *in rem* guarantees, such as mortgages and pledges, will be collected by the judicial administrator and, once sold, the product of the sale will be implemented in the waterfall of payment for creditors. This means that the holder of *in rem* guarantees is not directly paid with the proceeds arising from the sale of such assets.

According to Article 84 of the Brazilian Bankruptcy Law, there are certain credits that are senior to or excluded from the priority order above, and therefore must take precedence over them, such as: (i) costs of the proceedings (expenses with collection, management, asset realization and distribution of the proceeds, as well as court costs of the bankruptcy liquidation proceeding), including judicial administrator's fees, (ii) labor claims of strictly salary nature due up to three months before the bankruptcy declaration, (iii) amounts provided by creditors, investors or third parties to the debtor during the judicial reorganization proceeding (DIP Financing), (iv) cash restitution related to foreign exchange agreements and fiduciary liens, (v) obligations resulting from valid legal acts performed during the judicial reorganization, and the post-petition claims (after the request for judicial reorganization or the bankruptcy), (vi) sums provided to the bankruptcy estate by the creditors, (vii) court costs with respect to lawsuits and enforcement proceedings in which the bankruptcy estate is defeated, and (viii) taxes relating to generating facts occurring after the decree of bankruptcy liquidation.

Pursuant to Article 85 of the Brazilian Bankruptcy Law, creditors secured by fiduciary liens (such as the Credit Receivables Collateral and Share Collateral) may claim for restitution of the asset over which the security has been constituted, and such restitution claim is also available to owners of assets in possession of the debtor, as well as to sellers of goods to the debtor, when the sale occurred within 15 days prior to the bankruptcy request and the assets have not been transferred to a third party; cash restitution is additionally available with respect to debts arising from an advance against foreign exchange contracts pursuant to Article 86, II, of Brazilian Bankruptcy Law.

In addition, obligations assumed before any clearings systems pursuant to Article 193 of Brazilian Bankruptcy Law, amongst other specific cases established in Brazilian Bankruptcy Law, are not affected by the bankruptcy liquidation.

It is not possible to predict how long payments under the Notes could be delayed following commencement of a judicial reorganization or a bankruptcy liquidation proceeding, neither whether or when the Brazilian Collateral Agent could repossess or dispose of the collateral, the value of the Collateral at the time of the judicial reorganization filing or commencement of a liquidation proceeding, nor whether or to what extent holders of the Notes would be compensated for any delay in payment or diminution in the value of the Collateral. In a judicial reorganization scenario, the holders of the Notes may receive in exchange for their claims a recovery that could be substantially less than the amount of their claims and any such recovery could be in the form of cash, new debt instruments or some other security. Furthermore, in the event that the value of the Collateral is not sufficient to repay all amounts due on the Notes, the balance of the Notes that is not covered by the collateral would be classified as unsecured claims, which means that they would have a secured claim to the extent of the value of the Collateral and an unsecured claim for the difference.

Brazilian Bankruptcy Law also provides for cross-border reorganization or insolvency proceedings. In general terms, these rules follow the United Nations Commission on International Trade Law (UNCITRAL) Model Law and set forth the principles for cross-border insolvency proceedings, mechanisms for cooperation between jurisdictions, and legally define a foreign main proceeding and a foreign secondary proceeding. This means that Brazil would recognize a foreign proceeding and cooperate with the foreign authority in any event.

If the concessionaire is declared bankrupt, or files for judicial reorganization, the Concessions agreements allow ANP to terminate them. In that case, the Concession Collateral would cease to exist. However, more recent oil and gas concession contracts with the ANP provide for a different clause that establishes a 90-day cure period from the date of said events for the concessionaire to assign its undivided interest in concession contracts. ANP's current regulatory practice is to apply this approach, which would grant a cure period, although there is no guarantee that ANP will keep this practice if any event occurs with us as there is no such contractual provision in our concession agreements.

For more detailed information see "*Risk Factors—Risks Related to the Notes, the Notes Guarantees and the Collateral— Brazilian insolvency laws may be less favorable to investors than insolvency laws in other jurisdictions.*"

Luxembourg

See "*Risk Factors—Risks Related to the Notes, the Note Guarantees and the Collateral—There may be limitations on foreclosure or enforcement of rights in the Collateral and the value of the Collateral may not be sufficient to satisfy the obligations under the Notes*" and "*Enforcement of Judgments—Insolvency Proceedings in Luxembourg*."

Additional Amounts

All payments of principal, premium, if any, and interest in respect of the Notes and each Note Guarantee will be made free and clear of, and without withholding or deduction for or on account of, any present or future taxes, duties, claims, assessments or governmental charges of whatever nature (and any fines, penalties or interest related thereto) ("**Taxes**") imposed, levied, collected or assessed by or on behalf of Luxembourg, Brazil or any other jurisdiction in which the Issuer or any Guarantor is organized or otherwise resident for tax purposes or through which payments are made in respect of the Notes or the Note Guarantees, or in each case any political subdivision thereof or authority therein or thereof having power to tax (each such jurisdiction a "**Relevant Jurisdiction**"), unless such withholding or deduction is required by law or by the interpretation or administration thereof. In the event of any such withholding or deduction of Taxes imposed, levied, collected or assessed by or on behalf of a Relevant Jurisdiction, the Issuer or the applicable Guarantor, as the case may be, will pay to the holders of the Notes such additional amounts ("**Additional Amounts**") as will result in the receipt by each holder of the net amount that would otherwise have been received by such holder in the absence of such withholding or deduction, except that no such Additional Amounts will be payable:

(a) in respect of any Taxes that would not have been so imposed, assessed, levied, collected, withheld or deducted but for the existence of any present or former connection between the holder or beneficial owner of the Note (or, if the holder or beneficial owner is an estate, nominee, trust, partnership, corporation or other business entity, between a fiduciary, settlor, beneficiary, member or shareholder of, or possessor of power over, the holder or beneficial owner) and a Relevant Jurisdiction (including, without limitation, such holder or beneficial owner (or such fiduciary, settlor, beneficiary, member, shareholder or possessor) being or having been a citizen or resident thereof, being or having been engaged in a trade or business or present therein, or having, or having had, a permanent establishment therein), other than the mere holding or ownership of such Note or a beneficial interest therein or the receipt of payments or enforcement of rights thereunder;

(b) in respect of any Taxes that would not have been so imposed, assessed, levied, collected, withheld or deducted if the Note had been presented for payment (to the extent presentation is required) within 30 days after the date on which such payment became due and payable or was provided for, whichever is later, except to the extent that the holder would have been entitled to Additional Amounts had the Note been presented for payment on the last day of such 30-day period;

(c) in respect of any Taxes that would not have been so imposed, assessed, levied, collected, withheld or deducted but for the failure by the holder or the beneficial owner of the Note or any payment in respect of such Note to comply with any customary certification, identification, information, documentation or other reporting requirement concerning its nationality, residence, identity or connection with the Relevant Jurisdiction; *provided* that such compliance was required by statute, regulation or administrative practice of such Relevant Jurisdiction or an applicable tax treaty as a precondition to exemption from all or part of such Taxes and the Issuer or a Guarantor has given the holders at least 30 days prior notice that holders or beneficial owners will be required to comply with such requirements;

(d) in respect of any estate, inheritance, gift, value added, sales, use, excise, transfer, personal property or similar Taxes;

(e) in respect of any Taxes that are payable otherwise than by withholding or deduction from payments on or in respect of the Notes or the Note Guarantees;

(f) in respect of any Tax which is due or payable pursuant to the Luxembourg law of 23 December 2005, as amended, which introduced a 20% withholding tax on payments of interest or similar income made by a paying agent established in Luxembourg for the benefit of a Luxembourg individual resident;

(g) in respect of any payment to a holder of a Note that is a fiduciary or partnership (including an entity treated as a partnership for tax purposes) or any Person other than the sole beneficial owner of such payment or Note, to the extent that a beneficiary or settlor with respect to such fiduciary, a member of such partnership or the beneficial owner of such payment or Note would not have been entitled to the Additional Amounts had such beneficiary, settlor, member or beneficial owner been the actual holder of such Note; or

(h) in respect of any combination of clauses (a) through (g) above.

Notwithstanding anything to the contrary in the preceding paragraph, none of the Issuer, a Guarantor, any paying agent or any other person shall be required to pay any Additional Amounts with respect to any withholding or deduction imposed on or in respect of any Note or Note Guarantee pursuant to Sections 1471 to 1474 of the Code ("**FATCA**"), any treaty, law, regulation or other official guidance enacted by any jurisdiction implementing FATCA or an intergovernmental agreement with respect to FATCA, or any agreement entered into pursuant to Section 1471(b) of the Code.

"**Relevant Date**" means, with respect to any payment on a Note, whichever is the later of (i) the date on which such payment first becomes due and (ii) if the full amount payable has not been received by the Trustee on or prior to such due date, the date on which, the full amount having been so received, notice to that effect has been given to the holders in accordance with the Indenture.

All references in this offering memorandum to principal, premium, if any, and interest in respect of the Notes or the Note Guarantees will be deemed also to refer to any Additional Amounts which may be payable as set forth in the Indenture, the Notes or the Note Guarantees.

Notwithstanding the foregoing, the limitations on the obligations to pay Additional Amounts set forth in clause (c) above will not apply if the compliance with any certification, identification, information, documentation or other reporting requirement described in such clause (c) would be materially more onerous, in form, in procedure or in the substance of information disclosed, to a holder or beneficial owner of a Note or any payment in respect of such Note than comparable information or other reporting requirements imposed under U.S. tax law, regulations and administrative practice (such as IRS Forms W-8BEN, W-8BEN-E and W-9).

At least 30 days prior to each date on which any payment under or with respect to the Notes or the Note Guarantees is due and payable (unless such obligation to pay Additional Amounts arises after the 30th day prior to such date, in which case it will be as soon as reasonably practicable thereafter), if the Issuer or any Guarantor will be obligated to pay Additional Amounts with respect to such payment, the Issuer or such Guarantor will deliver to the Trustee an Officers' Certificate stating that such Additional Amounts will be payable and the amounts so payable and setting forth such other information as is necessary to enable the Trustee to pay such Additional Amounts to the holders of such Notes on the payment date.

The Issuer and the Guarantors will furnish to the Trustee documentation reasonably satisfactory to the Trustee evidencing payment of any Taxes deducted or withheld from payments on or in respect of the Notes or the Note Guarantees. Copies of such documentation will be made available by the Trustee to holders upon written request to the Trustee.

The Issuer will also promptly pay when due any present or future stamp, issue, court or similar documentary taxes or any other excise taxes or property taxes, charges or similar levies that arise in any jurisdiction from the execution, delivery, registration or enforcement of the Notes, the Indenture, the Note Guarantees or any other document or instrument referred to herein or therein, excluding (i) any such taxes, charges or similar levies imposed by any jurisdiction outside of any Relevant Jurisdiction other than those resulting from, or required to be paid in connection with, the enforcement of the Notes following the occurrence of any Default or Event of Default, (ii) in

certain cases, taxes, charges or similar levies resulting from certain registration of transfer or exchange of Notes, and (iii) any such taxes, charges or similar levies imposed by Luxembourg due to a registration, submission or filing of the Notes, the Indenture, the Note Guarantees or any other related document or instrument where such registration, submission or filing is not, or was not, required to maintain or preserve the rights of the holders of the Notes under the Notes, the Indenture, the Note Guarantees and any other related document.

The above obligations will survive any termination, defeasance or discharge of the Indenture, and will apply, mutatis mutandis, to any successor Person to the Issuer or any Guarantor.

Open Market Purchases

The Issuer, the Company and its Restricted Subsidiaries may at any time and from time to time purchase Notes in the open market or otherwise, at such price and on such terms as they see fit, provided that any such purchased Notes will not be resold, except in compliance with applicable requirements or exemptions under the relevant securities laws. Any Notes redeemed or repurchased by the Company, the Issuer and its Restricted Subsidiaries may, at the option of the Company, continue to be outstanding or be cancelled.

Optional Redemption

Optional Redemption with a Make-Whole Premium

At any time prior to February 5, 2027, the Issuer will have the right, at its option, to redeem any of the Notes, in whole or in part, at a redemption price equal to 100% of the principal amount of such Notes *plus*, the Make-Whole Premium, as defined and calculated below, as of, and any accrued and unpaid interest on the principal amount of the Notes up to, but excluding, the redemption date (subject to the right of Holders of the Notes on the relevant Record Date to receive interest due on the relevant Interest Payment Date).

The Make-Whole Premium (the "**Make-Whole Premium**") is calculated as the greater of (1) 100% of the outstanding principal amount of the Notes on such redemption date, and (2) the excess, if any, of: (a) an amount equal to the present value at such redemption date of (i) the redemption price of such Notes at February 5, 2027 (such redemption price being set forth in the table below under *"—Optional Redemption without a Make-Whole Premium*") *plus* (ii) all required remaining scheduled interest payments due on such Notes (assuming that the interest rate per annum on the Notes applicable on the date in which the notice of redemption was given was in effect for the entire period) through February 5, 2027 (excluding accrued but unpaid interest to the redemption date), in each case, computed by the Issuer using a discount rate equal to the Adjusted Treasury Rate as of such redemption date *plus* 50 basis points, over (b) the outstanding principal amount of the Notes (the "**Make-Whole Amount**").

Optional Redemption without a Make-Whole Premium

At any time and from time to time on or after February 5, 2027, the Issuer may, at its option, redeem all or part of the Notes, at the redemption prices set forth below (expressed as percentages of principal amount), *plus* accrued and unpaid interest thereof (including Additional Amounts) to, but excluding, the redemption date (subject to the right of holders of the Notes on the relevant Record Date to receive interest due on the relevant Interest Payment Date), if redeemed during the twelve-month period beginning on February 5 of the years indicated below:

Year	Percentage
2027	104.875%
2028	102.438%

Year	Percentage
2029	101.219%
2030 and thereafter	100.000%

Optional Redemption with Proceeds of Equity Offerings

At any time prior to February 5, 2027, the Issuer may, at its option, on one or more occasions, redeem up to 35% of the aggregate principal amount of Notes (including any Additional Notes) at a redemption price (expressed as a percentage of principal amount) of 109.750%, *plus* accrued and unpaid interest (including Additional Amounts, if any) to, but excluding, the redemption date, with the Net Cash Proceeds of one or more Equity Offerings; *provided* that:

(1) after giving effect to any such redemption, at least 65% of the aggregate principal amount of Notes (including any Additional Notes) remain outstanding immediately after the occurrence of such redemption; and

(2) the redemption occurs not more than 120 days after the consummation of such Equity Offering.

Optional Redemption upon a Tax Event

If, as a result of any change in, or amendment to, the treaties or laws (or any regulations or rulings promulgated thereunder) of any Relevant Jurisdiction, or any change in the official application, administration or interpretation of such treaties, laws, regulations or rulings (including a holding by a court of competent jurisdiction), which change or amendment is announced and becomes effective on or after the date of the Indenture (or, if later, the date a Relevant Jurisdiction becomes a Relevant Jurisdiction), (i) the Issuer or any successor has or will become obligated to pay any Additional Amounts as described above under *"—Additional Amounts*" or (ii) any Brazilian Guarantor or any successor has or will become obligated to pay Additional Amounts as described above under *"—Additional Amounts*" in excess of the Additional Amounts such Brazilian Guarantor or any such successor would be obligated to pay if payments were subject to withholding income tax or other deduction at a rate of 15% (or a rate of 25% if the holder of the Notes is resident in a "Favorable Tax Jurisdiction" as defined under "*Taxation—Certain Material Brazilian Tax Considerations*") ("**excess Additional Amounts**"), the Issuer, such Guarantor or any such successor may, at its option, redeem all, but not less than all, of the Notes, at a redemption price equal to 100% of their principal amount, together with interest accrued to, but excluding, the date fixed for redemption, upon publication of irrevocable notice of redemption not fewer than 10 days nor more than 90 days prior to the date fixed for redemption; *provided* that the obligation to pay such Additional Amounts or excess Additional Amounts cannot be avoided by taking reasonable measures available to the Issuer, any Guarantor or any successor; *provided, further*, that no such notice of redemption will be given earlier than 90 days prior to the earliest date on which the Issuer would be obligated to pay such Additional Amounts were a payment in respect of the Notes then due.

Prior to the Issuer, any Guarantor or any successor giving notice of any such redemption of the Notes pursuant to the Indenture, such entity will deliver to the Trustee an Officers' Certificate to the effect that such entity is or at the time of the redemption will be entitled to effect such redemption pursuant to the Indenture, and setting forth in reasonable detail the circumstances giving rise to such right of redemption. The Officers' Certificate will be accompanied by a written opinion of recognized counsel in the Relevant Jurisdiction independent of the Issuer to the effect that the Issuer or a Brazilian Guarantor (or any successor) is, or will become, obligated to pay Additional Amounts or excess Additional Amounts, as the case may be, as a result of a change or amendment described above.

Optional Clean-up Redemption

In connection with any tender for Notes (including any Change of Control Offer or Asset Sale Offer made in accordance with the terms of the Indenture), if holders of not less than 90% in the aggregate principal amount of the outstanding Notes validly tender and do not withdraw such Notes in such tender offer and the Issuer, or any other Person making such tender offer, purchases all of the Notes of such series validly tendered and not withdrawn by such holders, the Issuer will have the right, upon notice given not more than 30 days following such purchase pursuant to such tender offer, to redeem all of the Notes of such series that remain outstanding following such purchase at a price in cash equal to the price offered to each holder in such tender offer, plus, to the extent not included in the tender offer payment, accrued and unpaid interest to but excluding the redemption date. The Issuer will calculate the redemption price in connection with any redemption, and the Trustee will have no duty to calculate or verify any such calculation.

Notice of Redemption

Notice of any redemption will be delivered at least 10 days before the redemption date to the Trustee (unless a shorter notice shall be agreed to in writing by the Trustee) and at least 10 but not more than 60 days before the redemption date to holders of Notes to be redeemed at their respective registered addresses. For so long as the Notes are listed on the Singapore Stock Exchange and the rules of the exchange require, the Issuer will cause notices of redemption to also be published as described in "*—Certain Covenants—Notices*" below.

The notice shall identify the Notes to be redeemed and shall state: (a) the redemption date; (b) the redemption price; (c) that Notes called for redemption must be surrendered to any Paying Agent to collect the redemption price; (d) that on the redemption date the redemption price will become due and payable upon each such Note to be redeemed; (e) that, unless the Issuer defaults in making such redemption payment, interest on Notes called for redemption ceases to accrue on the redeemed Notes on and after the redemption date; (f) the paragraph of the Notes pursuant to which the Notes called for redemption are being redeemed; (g) the "CUSIP" or "ISIN" number, if any, and (h) that no representation is made as to the correctness or accuracy of the CUSIP or ISIN numbers, if any, listed in such notice or printed on the Notes,

provided that, if such redemption or notice is subject to satisfaction of one or more conditions precedent, such notice shall state that, at the Issuer's discretion, the redemption date may be delayed until such time as any or all such conditions will be satisfied, or such redemption may not occur and such notice may be rescinded in the event that any or all such conditions will not have been satisfied by the redemption date, or by the redemption date so delayed.

Notes called for redemption will become due on the date fixed for redemption. The Issuer will pay the redemption price for the Notes together with accrued and unpaid interest thereon (including Additional Amounts, if any) through the date of redemption. On and after the redemption date, interest will cease to accrue on the Notes as long as the Issuer has deposited with the paying agent funds in satisfaction of the applicable redemption price pursuant to the Indenture. Upon redemption of the Notes by the Issuer, the redeemed Notes will be cancelled.

If fewer than all of the Notes are being redeemed, the Trustee will select the Notes to be redeemed in accordance with DTC procedures, in denominations of U.S.$200,000 principal amount and integral multiples of U.S.$1,000 in excess thereof. In the case of certificated notes, upon surrender of any note redeemed in part, the holder will receive a new note equal in principal amount to the unredeemed portion of the surrendered note. Once notice of redemption is sent to the holders, Notes called for redemption become due and payable at the redemption price on the redemption date, and, commencing on the redemption date, Notes to be redeemed will cease to accrue interest.

The Issuer may acquire Notes by means of the redemption provisions above or by means other than a redemption, whether by tender offer, open market purchases, negotiated transactions or otherwise, in accordance with the applicable securities laws, so long as such acquisition does not otherwise breach the terms of the Indenture.

Any redemption of Notes (including in connection with an Equity Offering) or notice thereof may, at the Issuer's discretion, be subject to the satisfaction (or, waiver by the Issuer in its sole discretion) of one or more

conditions precedent, which may include consummation of any related Equity Offering, obtainment of debt financing or the occurrence of a Change of Control that results in a Rating Decline. If such redemption or notice is subject to satisfaction of one or more conditions precedent, such notice may state that, in Issuer's discretion, the redemption date may be delayed until such time as any or all such conditions shall be satisfied (or waived by the Issuer in its sole discretion), or such redemption may not occur and such notice may be rescinded in the event that any or all such conditions shall not have been (or, in the Issuer's sole determination, may not be) satisfied (or waived by the Issuer in its sole discretion) by the redemption date, or by the redemption date so delayed.

No Mandatory Redemption or Sinking Fund

There will be no mandatory redemption or sinking fund payments for the Notes.

Repurchase of Notes upon a Change of Control that results in a Rating Decline

Not later than 30 days following the date on which a Change of Control that Results in a Ratings Decline occurs (unless the Issuer has delivered a redemption notice with respect to all the outstanding notes in accordance with the provisions described under "*—Optional Redemption*"), the Issuer will make an offer to purchase all outstanding Notes (in integral multiples of U.S.$1,000, provided that the principal amount of such holder's note will not be less than U.S.$200,000) at a purchase price equal to 101% of the aggregate principal amount thereof *plus* any accrued and unpaid interest (including Additional Amounts, if any) thereon to, but excluding, the date of purchase ("**Change of Control Offer**" and, along with the Asset Sale Offer, as defined under *–Limitation on Asset Sales*, each an "**Offer to Purchase**").

An "Offer to Purchase" must be made by notice to each holder of Notes by transmitting such notice in accordance with the provision set out under "*—Notices*" below (a copy of which will be delivered to the Trustee), which will specify the principal amount of Notes subject to the offer and the purchase price. The offer must specify an expiration date (the "**expiration date**") not less than 30 days or more than 60 days after the date of the offer and a settlement date for purchase (the "**purchase date**") not more than five Business Days after the expiration date. The offer must include information concerning the business of the Company and its Restricted Subsidiaries which the Issuer in good faith believes will enable the holders to make an informed decision with respect to the Offer to Purchase. The offer will also contain instructions and materials necessary to enable holders to tender Notes pursuant to the offer.

A holder may tender all or any portion of its Notes pursuant to an Offer to Purchase, subject to the requirement that any portion of a note tendered must be in a multiple of U.S.$1,000 principal amount. Holders are entitled to withdraw Notes tendered up to the close of business on the expiration date. On the purchase date the purchase price will become due and payable on each note accepted for purchase pursuant to the Offer to Purchase, and interest on Notes purchased will cease to accrue on and after the purchase date.

The Issuer will not be required to make a Change of Control Offer if a Restricted Subsidiary or a third party makes the Offer to Purchase in the manner, at the times and otherwise in compliance with the requirements set forth in the Indenture applicable to an Offer to Purchase following a Change of Control that results in a Rating Decline made by the Issuer and if such Person purchases all Notes validly tendered and not withdrawn under such Offer to Purchase.

If holders of not less than 90% in aggregate principal amount of the outstanding Notes validly tender and do not withdraw such Notes in the Change of Control Offer and the Issuer, or any third party making the Offer to Purchase in lieu of the Issuer as described above, purchases all of the Notes validly tendered and not withdrawn by such holders, the Issuer or such third party will have the right, upon not less than 10 nor more than 60 days' prior notice, given not more than 30 days following such purchase pursuant to such Offer to Purchase, to redeem all Notes of such series that remain outstanding following such purchase at a price in cash equal to 101% of the principal amount thereof *plus*, to the extent not included in the Change of Control Offer payment, accrued and unpaid interest to but excluding the date of such redemption.

The Issuer will comply with U.S. securities laws, to the extent applicable, and all other applicable laws in making any Offer to Purchase, and the above procedures will be deemed modified as necessary to permit such compliance.

The Issuer has agreed in the Indenture that it will timely repay Debt or obtain consents as necessary under, or terminate, agreements or instruments that would otherwise prohibit an Offer to Purchase required to be made pursuant to the Indenture. Notwithstanding this agreement of the Issuer, it is important to note the following:

Future debt of the Issuer may also prohibit the Issuer from purchasing Notes in the event of a Change of Control (whether or not as a result of a Ratings Decline), provide that a Change of Control is a default or require repurchase upon a change of control. Moreover, the exercise by the holders of the Notes of their right to require the Issuer to purchase the Notes could cause a default under other debt, even if the Change of Control that results in a Rating Decline itself does not, due to the financial effect of the purchase on the Issuer.

Finally, the Issuer's ability to pay cash to the holders of the Notes following the occurrence of a Change of Control that results in a Rating Decline may be limited by the Issuer's then existing financial resources. There can be no assurance that sufficient funds will be available when necessary to make the required purchase of the Notes. See "*Risk Factors—Risks Related to the Notes, the Notes Guarantees and the Collateral— The Issuer may be unable to make a change of control offer required by the Indenture, which would cause a default under the Indenture*."

The phrase "all or substantially all," as used with respect to the assets of the Issuer in the definition of "Change of Control," is subject to interpretation under applicable state law, and its applicability in a given instance would depend upon the facts and circumstances. As a result, there may be a degree of uncertainty in ascertaining whether a sale or transfer of "all or substantially all" the assets of the Issuer has occurred in a particular instance, in which case a holder's ability to obtain the benefit of these provisions could be unclear.

Except as described above with respect to a Change of Control that results in a Rating Decline, the Indenture does not contain provisions that permit the holder of the Notes to require that the Issuer purchase or redeem the Notes in the event of a takeover, recapitalization or similar transaction.

The provisions under the Indenture relating to the Issuer's obligation to make an offer to repurchase the Notes as a result of a Change of Control that results in a Rating Decline may be waived or amended as described in "*—Amendments and waivers*."

Suspension of Certain Covenants

If at any time after the Issue Date that (i) the Notes are rated Investment Grade by at least two of the Rating Agencies and (ii) no Default or Event of Default has occurred and is continuing under the Indenture, the Issuer, the Company, and any of their Restricted Subsidiaries will not be subject to the covenants in the Indenture specifically listed under the following captions in this "Description of Notes" section of this Offering Memorandum (the "**Suspended Covenants**"):

(1) "*—Certain Covenants—Limitation on Debt*;"

(2) "*—Certain Covenants—Limitation on Restricted Payments*;"

(3) "*—Certain Covenants—Limitation on Dividend and Other Payment Restrictions Affecting Restricted Subsidiaries*;"

(4) "*—Certain Covenants—Limitation on Asset Sales*;"

(5) "—Certain Covenants —Limitation on Sale and Leaseback Transactions";

(6) "*—Certain Covenants—Limitation on Transactions with Affiliates*;"

(7) "*—Certain Covenants—Future Guarantors*;" and

(8) clause (a)(C) of each of "*—Certain Covenants—Consolidation, Merger or Sale of Assets—Company"* and *"—Certain Covenants—Consolidation, Merger or Sale of Assets—Issuer and Subsidiary Guarantors*."

Additionally, at such time as the above referenced covenants are suspended (a "**Suspension Period**"), the Company will no longer be permitted to designate any Restricted Subsidiary as an Unrestricted Subsidiary unless the Company would have been permitted to designate such Subsidiary as an Unrestricted Subsidiary if a Suspension Period had not been in effect for any period and such designation shall be deemed to have created a Restricted Payment as set forth under "*Certain Covenants—Limitation on Restricted Payments*" following the Reversion Date (as defined below).

In the event that the Company, the Issuer and any of their Restricted Subsidiaries are not subject to the Suspended Covenants for any period of time as a result of the foregoing, and on any subsequent date (the "**Reversion Date**") the condition set forth in clause (i) of the first paragraph of this section is no longer satisfied, then the Issuer and the Restricted Subsidiaries will thereafter again be subject to the Suspended Covenant with respect to future events. Notwithstanding that the Suspended Covenants may be reinstated, no Default or Event of Default will be deemed to have occurred as a result of a failure to comply with the Suspended Covenants during the Suspension Period. The Company or the Issuer shall give the Trustee written notice of any Suspension Period and any occurrence of a Reversion Date. Absent such written notice the Trustee shall be entitled to assume that no Suspension Period or the occurrence of any Reversion Date has occurred.

On each Reversion Date, all Debt Incurred during the Suspension Period prior to such Reversion Date will be deemed to be Debt Incurred pursuant to clause (b)(8) under *"—Certain Covenants—Limitation on Debt*." For purposes of calculating the amount available to be made as Restricted Payments under clause (3) of clause (a) of *"—Certain Covenants—Limitation on Restricted Payments*," calculations under such covenant shall be made as though such covenant had been in effect during the entire period of time after the Issue Date (including the Suspension Period). Restricted Payments made during the Suspension Period not otherwise permitted pursuant under clause (b) of the *"—Certain Covenants—Limitation on Restricted Payments*" covenant will reduce the amount available to be made as Restricted Payments under clause (3) of clause (a) of such covenant. For purposes of the *"—Limitation on Asset Sales*" covenant, on the Reversion Date, the amount of Excess Proceeds will be reset to the amount of Excess Proceeds in effect as of the first day of the Suspension Period ending on such Reversion Date.

There can be no assurance that the Notes will ever achieve or maintain a rating of Investment Grade from the Rating Agencies.

Certain Covenants

The Indenture contains covenants that apply to the Issuer, the Company or the Guarantors, including, among others, the following:

Further Assurances with respect to Collateral

In accordance with the terms of the Indenture and the Intercreditor and Collateral Agency Agreement, the Issuer, the Company and the Guarantors will take all action necessary to (i) ensure that each of the Security Documents and any relating ancillary documents are promptly and duly filed publicly with all appropriate authorities in Brazil, Luxembourg and the United States, as the case may be, and (ii) secure all such Security Documents are properly recorded, all fees in connection therewith paid, and all ancillary actions to be taken in connection therewith taken as applicable, in each case in accordance with the terms of the Security Documents. The Security Documents and the Indenture will provide that the pledgor, the Issuer or any Guarantor, as applicable, shall, at its sole expense, do all acts which may be reasonably necessary to deliver evidence to that the applicable Collateral Agent that the Collateral was duly created, is enforceable and perfected first-priority Liens (subject to the registrations and perfections requirements provided under the Security Documents) on the Collateral within the timeframe described above under "*—Collateral*," subject to Permitted Collateral Liens. Pursuant to the terms of the Intercreditor and Collateral Agency Agreement and the Security Documents, upon instruction of the Intercreditor Agent to the applicable Collateral Agent and upon subsequent request of such applicable Collateral Agent, the Trustee or a majority of the holders of the Notes, the pledgor, the Issuer and any Guarantor, as applicable, shall, at their sole

expense, execute, acknowledge and deliver such documents and instruments (including the filing of financing statements or amendments or continuations thereto) and take such other actions which may be necessary to assure, perfect, transfer and confirm the rights conveyed by the Security Documents, to the extent permitted by applicable law.

Limitation on Debt

(a) The Company will not, and will not permit any Restricted Subsidiary to, Incur any Debt; *provided, however,* that the Company or any Restricted Subsidiary may Incur Debt if, on the date of such Incurrence and after giving *pro forma* effect to the Incurrence thereof and the application of the proceeds therefrom, the Net Leverage Ratio would be no greater than:

(1) 3.5:1.0 if such Incurrence occurs after the Issue Date and on or prior to June 30, 2024;

(2) 3.0:1.0 if such Incurrence occurs after June 30, 2024 and on or prior to December 31, 2025; and

(3) 2.75:1.0 if such Incurrence occurs after December 31, 2025

(b) Notwithstanding the foregoing, the Company and any Restricted Subsidiary may Incur the following ("**Permitted Debt**"):

(1) Debt Incurred pursuant to Credit Facilities; *provided* that the aggregate principal amount at any time outstanding does not exceed the greater of (x) U.S.$80.0 million (or the equivalent in other currencies) and (y) 7.5% of Consolidated Net Tangible Assets;

(2) intercompany Indebtedness between or among the Company and any Restricted Subsidiary or between or among Restricted Subsidiaries, *provided* that if the obligor is the Issuer, the Company or a Restricted Subsidiary, such Indebtedness is subordinated in right of payment to the Notes;

(3) the incurrence of (i) Debt of the Issuer or the Company pursuant to the Notes and (ii) Debt of any Guarantor pursuant to a Note Guarantee, in each case including in respect of any Additional Notes, as permitted under the Indenture;

(4) Debt ("**Permitted Refinancing Debt**") constituting an extension or renewal of, replacement of, or substitution for, or issued in exchange for, or the net proceeds of which are used to repay, redeem, repurchase, refinance or refund, including by way of defeasance (all of the above, for purposes of this clause, "refinance") any existing and outstanding Debt of the Company or any Restricted Subsidiary (including, for the avoidance of doubt, contingent obligations related to acquisition earn-outs); *provided that*:

(A) the new Debt is incurred in an aggregate amount not to exceed the principal amount that is equal or less than the aggregate principal amount (or if issued with original issue discount, the aggregate accreted value) then outstanding of the Debt to be refinanced, *plus* premiums, interest, fees and expenses incurred in connection therewith;

(B) in case the Debt to be refinanced is Subordinated Debt, the new Debt, by its terms or by the terms of any agreement or instrument pursuant to which it is outstanding, is expressly made subordinate in right of payment to the Notes at least to the extent that the Debt to be refinanced is subordinated to the Notes;

(C) the new Debt has a Stated Maturity no earlier than (a) the Stated Maturity of the Debt to be refinanced or (b) the 91st day after the Maturity Date of the Notes; *provided, further*, that Refinancing Debt shall not include Debt of a Guarantor or a Restricted Subsidiary that Refinances Debt of an Unrestricted Subsidiary or Project Finance Company; and

(D) Debt Incurred pursuant to clause (b)(1), (2), (5), (6), (10), (11), (12), (13), (14), (16) and (17) may not be refinanced pursuant to this clause;

(5) Hedging Agreements entered into (i) in the ordinary course of business and not for speculation or (ii) related to Debt to be Incurred by the Company or any Restricted Subsidiary related to the issuance of the Notes or entered into in connection with the Debentures and the Intercreditor and Collateral Agency Agreement;

(6) Debt consisting of letters of credit, banker's acceptances, performance bonds, appeal bonds, surety bonds and other similar bonds and reimbursement obligations Incurred by the Company or any Restricted Subsidiary in the ordinary course of business;

(7) Debt arising in connection with the remittance to Brazil of the proceeds from the Notes;

(8) (i) Acquired Debt or (ii) Debt incurred in connection with an acquisition, *provided* that, in each case, after giving effect to the Incurrence thereof, the Company could Incur at least U.S.$1.00 of additional Debt under paragraph (a) above;

(9) Debt outstanding on the Issue Date;

(10) Debt (which may include Capitalized Lease Obligations), Incurred on or after the Issue Date no later than 180 days after the date of purchase or completion of construction, improvement, repair, maintenance, upgrade or replacement of property (real or personal) or equipment for the purpose of financing all or any part of the purchase price or cost thereof, *provided* that the principal amount of any Debt Incurred pursuant to this clause may not exceed the greater of U.S.$80.0 million (or the equivalent in other currencies) and 7.5% of Consolidated Net Tangible Assets;

(11) Debt of the Issuer or any Guarantor consisting of Guarantees of Debt of the Issuer or any Guarantor Incurred under any other clause of this covenant;

(12) Debt arising from the honoring by a bank or other financial institution of a check, draft or similar instrument drawn against insufficient funds or Debt in respect of netting services, automatic clearinghouse arrangements, overdraft protections and similar arrangements in connection with deposit accounts, in each case in the ordinary course of business;

(13) Debt Incurred in connection with Decommissioning Obligations;

(14) Debt arising from agreements providing for indemnification, adjustment of purchase price or similar obligations, or Guarantees or letters of credit, surety bonds or performance bonds securing any obligations of the Company or any Restricted Subsidiary pursuant to such agreements, in any case Incurred in connection with the disposition of any business, assets or Subsidiary (other than Guarantees of Debt Incurred by any Person acquiring all or any portion of such business, assets or Subsidiary for the purpose of financing such acquisition), so long as the amount does not exceed the gross proceeds (including non-cash proceeds) actually received by the Company or any Restricted Subsidiary thereof in connection with such disposition, provided that such Debt is not reflected on the balance sheet of the Company or any Restricted Subsidiary;

(15) Debt to the extent that the net proceeds thereof are promptly deposited to defease or to satisfy and discharge the Notes in accordance with the Indenture, or to purchase Notes tendered in a Change of Control Offer made as a result of a Change of Control that Results in a Ratings Decline;

(16) Project Finance Debt, which is not Guaranteed by any Restricted Subsidiaries at any time; and

(17) Debt of the Company or any Restricted Subsidiary Incurred on or after the Issue Date not otherwise permitted in an aggregate principal amount at any time outstanding not to exceed the greater of U.S.$80.0 million (or the equivalent in other currencies) and 7.5% of Consolidated Net Tangible Assets.

For purposes of determining compliance with this covenant:

(a) in the event that an item of Debt (or portion thereof) meets the criteria of more than one of the categories of Permitted Debt, or is entitled to be Incurred pursuant to item (a) above, the Company, in its sole discretion, may classify, and from time to time may reclassify, such item of Debt (or any portion thereof) at the time of Incurrence and will only be required to include the amount and type of such Debt in one of such categories of Permitted Debt described above, or pursuant to item (a) above; and

(b) the Company will be entitled to divide and classify, and from time to time may reclassify, an item of Debt in more than one of the types of Debt described above, including Debt Incurred under the Net Leverage Ratio above.

Notwithstanding any other provision of this covenant, neither the Company nor any Restricted Subsidiary shall, with respect to any outstanding Debt Incurred, be deemed to be in violation of this covenant solely as a result of fluctuations in the exchange rates of currencies. For purposes of determining compliance with any U.S. dollar-denominated restriction on the Incurrence of Debt, the U.S. dollar-equivalent principal amount of Debt denominated in a foreign currency shall be calculated based on the relevant currency exchange rate determined on the date of Incurrence, in the case of term Debt, or first committed, in the case of revolving credit Debt, provided that if such Debt is Incurred to refinance other Debt denominated in a non-U.S. currency, and such refinancing would cause the applicable U.S. dollar-denominated restriction to be exceeded if calculated at the relevant currency exchange rate in effect on the date of such refinancing, such U.S. dollar-denominated restriction will be deemed not to have been exceeded so long as the principal amount of such Refinancing Debt does not exceed the principal amount of such Debt being refinanced. The principal amount of any Debt Incurred to Refinance other Debt, if Incurred in a different currency from the Debt being Refinanced, shall be calculated based on the currency exchange rate applicable to the currencies in which such Refinancing Debt is denominated calculated based on the relevant currency exchange rates as calculated in the first sentence of this paragraph.

The accrual of interest, the accretion or amortization of original issue discount, the payment of regularly scheduled interest in the form of additional Debt of the same instrument will not be deemed to be an Incurrence of Debt for purposes of this covenant; provided that any such outstanding additional Debt in respect of Debt Incurred pursuant to any provision of clause (2) above will be counted as Debt outstanding for purposes of any future Incurrence of Debt under the Net Leverage Ratio above.

If at any time an Unrestricted Subsidiary becomes a Restricted Subsidiary, any Debt of such Subsidiary shall be deemed to be Incurred by a Restricted Subsidiary of the Company as of such date (and, if such Debt is not permitted to be Incurred as of such date under the covenant described under this *"—Limitation on Debt*" section, the Issuer shall be in Default of this covenant).

Notwithstanding anything to the contrary herein, with respect to any amounts incurred or transactions entered into (or consummated) in reliance on a provision of the Indenture that does not require compliance with a financial ratio or financial test (including any Net Leverage Ratio, Consolidated Net Income, Consolidated Net Revenue, Consolidated Net Tangible Assets, Consolidated Total Assets test) (any such amounts, the "Fixed Amounts") substantially concurrently with any amounts incurred or transactions entered into (or consummated) in reliance on a provision of the Indenture that requires compliance with a financial ratio or financial test (including any Net Leverage Ratio, Consolidated Net Income, Consolidated Net Revenue, Consolidated Net Tangible Assets, Consolidated Total Assets test) (any such amounts, the "Incurrence-Based Amounts"), it is understood and agreed that the Fixed Amounts shall be disregarded in the calculation of the financial ratio or test applicable to the Incurrence-Based Amounts (and thereafter, incurrence of the portion of such amount under the Fixed Amount shall be included in such calculation).

Limitation on Restricted Payments

(a) The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly (the payments and other actions described in the following clauses being collectively "**Restricted Payments**"):

(1) declare or pay any dividend or make any distribution on its Equity Interests (other than dividends or distributions payable in the form of the Company's Qualified Equity Interests) held by Persons other

than the Company or any of the Restricted Subsidiaries (and, if such Restricted Subsidiary has shareholders other than the Company or any other Restricted Subsidiary, its other shareholders on a pro rata basis);

(2) purchase, redeem or otherwise acquire or retire for value any Equity Interests of the Company held by Persons other than the Company or any of the Restricted Subsidiaries (other than a purchase, redemption, or other acquisition for value that would constitute a Permitted Investment);

(3) purchase, redeem, repurchase, defease or otherwise acquire or retire for value, or make any payment on or with respect to, any Subordinated Debt except a payment of interest or principal installment at Stated Maturity; or

(4) make any Investment other than a Permitted Investment;

unless, at the time of, and after giving effect to, the proposed Restricted Payment:

(i) no Default or Event of Default has occurred and is continuing;

(ii) the Company could Incur at least U.S.$1.00 of Debt under paragraph (a) under *"—Certain Covenants—Limitation on Debt,"* and

(iii) the aggregate amount expended for all Restricted Payments made on or after the Issue Date would not, exceed the sum of, without duplication:

(A) 50% of the aggregate amount of the Consolidated Net Income (or, if the Consolidated Net Income is a loss, *minus* 100% of the amount of the loss) accrued on a cumulative basis during the period, treated as one accounting period, beginning on January 1, 2023 and ending on the last day of the Company's most recently completed fiscal quarter for which financial statements are available and delivered (or which should have been delivered pursuant to the terms of the Indenture) to the Trustee prior to the date of such Restricted Payment, *plus*

(B) the aggregate Net Cash Proceeds and the Fair Market Value of property other than cash received by the Company (other than from a Subsidiary) after the Issue Date from:

(i) the issuance and sale of Qualified Equity Interests of the Company or any of the Subsidiary Guarantors, including by way of issuance of its Disqualified Equity Interests or Debt to the extent since converted into Qualified Equity Interests of the Company or any of the Subsidiary Guarantors, or

(ii) any contribution to the Company's or any of the Subsidiary Guarantors' common equity subsequent to the Issue Date (other than Net Cash Proceeds received from an issuance or sale of such Qualified Equity Interests to a Restricted Subsidiary of the Company), *plus*

(iii) the portion (proportionate to the Company's Equity Interest in such Unrestricted Subsidiary) of the Fair Market Value of the assets less liabilities of an Unrestricted Subsidiary at the time such Unrestricted Subsidiary is designated a Restricted Subsidiary,

plus

(C) the cash return, after the Issue Date, on any other Investment made after the Issue Date pursuant to this paragraph (C) (other than Permitted Investments), as a result of any sale for cash, repayment, redemption, liquidating distribution, proceeds realized upon the sale of such Investment, or other cash realization, provided that any amount added pursuant to this clause will not be included under this clause to the extent it is already included in Consolidated Net Income); *plus*

(D) the amount of a Guarantee of the Company or any Restricted Subsidiary upon the unconditional release in full of the Company or such Restricted Subsidiary from such Guarantee if such Guarantee was previously treated as a Restricted Payment, *provided* that any amount added pursuant to clauses this paragraph (D) shall not exceed the amount of such Guarantee, respectively, previously made and treated as a Restricted Payment; *provided, however*, that no amount will be included under this paragraph (D) to the extent it is already included in Consolidated Net Income; *plus*

(E) the amount by which Debt of the Company or any Restricted Subsidiary is reduced on the Company's balance sheet or the balance sheet of any Restricted Subsidiary, in each case, upon the conversion or exchange (other than for Debt held by the Company or any Restricted Subsidiary) subsequent to the Issue Date of any such Debt for Qualified Equity Interests (other than Disqualified Equity Interests) of the Company (*less* the amount of any cash or the Fair Market Value of other property distributed by the Company or any Restricted Subsidiary upon such conversion or exchange), provided, however, that no amount will be included under this clause (F) if already included under (B) above.

(b) The foregoing will not prohibit:

(1) dividends or distributions by a Restricted Subsidiary payable, on a pro rata basis or on a basis more favorable to the Company, to all holders of any class of Capital Stock of such Restricted Subsidiary;

(2) the repayment, redemption, repurchase, defeasance or other acquisition or retirement for value of Subordinated Debt with the proceeds of, or in exchange for, Permitted Refinancing Debt;

(3) any Restricted Payment or Investment made in exchange for, or out of the proceeds of a substantially concurrent issuance or sale of, Qualified Equity Interests of the Company or of a cash contribution to the common equity of the Company;

(4) the repayment, redemption, repurchase, defeasance or other acquisition or retirement for value of any Subordinated Debt at a purchase price not greater than (x) 101% of the principal amount thereof in the event of a Change of Control that results in a Rating Decline pursuant to a provision no more favorable to the holders thereof than "*—Repurchase of Notes upon a Change of Control that results in a Ratings Decline*" or (y) 100% of the principal amount thereof in the event of an Asset Sale pursuant to a provision no more favorable to the holders thereof than *"—Limitation on Asset Sales,*" *provided* that, in each case, prior to the repurchase the Company (or a Restricted Subsidiary on behalf thereof) has made a Change of Control Offer or an Asset Sale Offer, as the case may be, and repurchased all Notes issued under the Indenture that were validly tendered for payment in connection with such offer;

(5) the declaration and payment of the Minimum Legally Required Dividends;

(6) dividends and other distributions in each fiscal year if, at the date of declaration, such dividend or distribution would have complied with the Restricted Payment covenant;

(7) repurchases of Qualified Equity Interests deemed to occur upon the exercise of stock options (or any similar share-based compensation plan), warrants or other convertible securities, in each case in connection with employee and management stock option or stock purchase agreements or other agreements to compensate employees and management, if such Qualified Equity Interests represent a portion of the exercise price thereof and cash payments in lieu of the issuance of fractional shares;

(8) payments of dividends on Disqualified Stock and Preferred Stock issued pursuant to the covenant described under *"—Certain Covenants—Limitation on Debt*";

(9) any Restricted Payments made with Qualified Equity Interests of an Unrestricted Subsidiary (or from the proceeds of a sale thereof);

(10) any sale, conveyance, transfer, distribution or other disposition of the Capital Stock (and the proceeds thereof) of a Restricted Subsidiary that holds substantially only Offshore Assets (whether by sale, merger, spin-off, split-off or otherwise); and

(11) other Restricted Payments not otherwise permitted in an aggregate amount not to exceed U.S.$25.0 million or 2.5% of the Consolidated Net Tangible Assets (or the equivalent amount thereof at the time of determination);

provided that, in the case of clauses (b)(1), (2), (3), (5), (7) and (10), no Default or Event of Default has occurred and is continuing or would occur as a result thereof.

The amount of all Restricted Payments (other than cash) shall be the Fair Market Value on the date of such Restricted Payment of the asset(s) or securities proposed to be paid, transferred, issued, purchased, repurchased, redeemed, retired, defeased or otherwise acquired by the Company or such Restricted Subsidiary, as the case may be, pursuant to such Restricted Payment.

(c) In determining the aggregate amount of Restricted Payments made subsequent to the Issue Date, amounts expended pursuant to clauses (4), (7), (8) and (10) above will be included in such calculation and amounts expended pursuant to clauses (1), (2), (3), (5), (6), (9) and (11) will not be included in the calculation required by clause (a)(iii) of the first paragraph.

(d) For purposes of determining compliance with this covenant, in the event that a Restricted Payment permitted under this covenant or a Permitted Investment meets the criteria of more than one of the categories of Restricted Payment described in clauses (b)(1) through (b)(11) above or one or more clauses of the definition of Permitted Investments, as the case may be, the Company shall be permitted to classify such Restricted Payment or Permitted Investment on the date it is made, or later reclassify all or a portion of such Restricted Payment or Permitted Investment, in any manner that complies with this covenant, and such Restricted Payment or Permitted Investment shall be treated as having been made pursuant to only one of such clauses of this covenant or of the definition of Permitted Investments, as the case may be. For purposes of covenant compliance, the amount of any Investment shall be the amount actually invested, without adjustment for subsequent increases or decreases in the value of such Investment, *less* any amount paid, repaid, returned, distributed or otherwise received in cash in respect of such Investment.

Limitation on Liens

The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly, Incur, assume or permit to exist any Lien of any nature whatsoever securing Debt on any of its properties or assets (real or personal, tangible or intangible, and including any Capital Stock, other than the Capital Stock of any Unrestricted Subsidiary or Project Finance Company), whether owned at the Issue Date or thereafter acquired, other than (1) in the case of any property that does not constitute Collateral, Permitted Liens, *provided*, *however*, that any Lien on such property shall be permitted notwithstanding that it is not a Permitted Lien if all Obligations under the Indenture and the Notes are secured on an equal and ratable basis with (or, if the obligation to be secured by the Lien is subordinated in right of payment to the Notes or any Note Guarantee, prior to) the obligations so secured for so long as such obligations are secured by a Lien on such property; and (2) in the case of any property that constitutes Collateral, Permitted Collateral Liens.

Limitation on Dividend and Other Payment Restrictions Affecting Restricted Subsidiaries

(a) Except as provided in paragraph (b) below, the Company will not, and will not permit any Restricted Subsidiary to, create or otherwise cause or permit to exist or become effective any consensual encumbrance or restriction of any kind on the ability of any Restricted Subsidiary to:

(1) pay dividends or make any other distributions on or in respect of any Equity Interests of a Restricted Subsidiary owned by the Company or any Restricted Subsidiary,

(2) pay any Debt or other obligation owed to the Company or any other Restricted Subsidiary,

(3) make loans or advances to, or Guarantee any Debt or other obligations of, or make any Investment in, to the Company or any Restricted Subsidiary, or

(4) transfer any of its property or assets to the Company or any Restricted Subsidiary.

(b) The provisions of paragraph (a) above do not apply to any encumbrances or restrictions:

(1) existing on the Issue Date in the Indenture or any other agreements in effect on the Issue Date, and any amendments, modifications, restatements, extensions, renewals, replacements or refinancing of any of the foregoing; *provided* that the encumbrances and restrictions in the amendment, modification, restatement, extension, renewal, replacement or refinancing are, taken as a whole, in the good faith judgment of the Company, no less favorable in any material respect to the holders of the Notes than the encumbrances or restrictions being amended, modified, restated, extended, renewed, replaced or refinanced;

(2) existing under or by reason of applicable law, rule, regulation or order;

(3) existing under or by reason of Liens permitted to be incurred under the provisions of the covenant described under "*—Limitation on Liens*" and associated agreements that limit the right of the debtor to dispose of the assets subject to such Liens;

(4) existing:

(A) with respect to any Person, or to the property or assets of any Person, at the time the Person is acquired by or merged with or into the Company or any Restricted Subsidiary, or by reason of any Liens on such property or assets, or relating to the Debt of any Person or other entity existing at the time such Person or other entity becomes a Restricted Subsidiary, or restriction relating to a Debt of any such Person, or

(B) with respect to any Unrestricted Subsidiary at the time it is designated or is deemed to become a Restricted Subsidiary,

which encumbrances or restrictions (i) are not applicable to any other Person or the property or assets of any other Person and (ii) were not put in place in anticipation of such event and any amendments, modifications, restatements, extensions, renewals, replacements or refinancing of any of the foregoing, *provided* that the encumbrances and restrictions in the amendment, modification, restatement, extension, renewal, replacement or refinancing are, taken as a whole, in the good faith judgment of the Company, as the case may be, no less favorable in any material respect to the holders of the Notes than the encumbrances or restrictions being amended, modified, restated, extended, renewed, replaced or refinanced;

(5) of the type described in clause (a)(4) arising or agreed to in the ordinary course of business (i) that restrict in a customary manner (A) the subletting, assignment or transfer of any property or asset that is subject to a lease, license, conveyance or similar contract, including with respect to intellectual property, or (B) the assignment or transfer of any such lease, license or other contract or contractual right, (ii) that restrict in a customary manner, pursuant to provisions in partnership agreements, limited liability company organizational governance documents, joint venture agreements and other similar agreements, the transfer of ownership interests in, or assets of, such partnership, limited liability company, joint venture or similar Person (in each case relating solely to the respective partnership, limited liability company, joint venture or similar Person) or (iii) that exist by virtue of any Lien on, or agreement to transfer, option or similar right with respect to any property or assets of, the Company or any Restricted Subsidiary or (iv) imposed by Purchase Money Debt for property acquired in the ordinary course of business or by Capital Lease permitted under the Indenture on the property so acquired, but only to the extent that such encumbrances or restrictions restrict the transfer of the property;

(6) with respect to a Restricted Subsidiary and imposed pursuant to an agreement that has been entered into for the sale or disposition of all or substantially all of the Capital Stock of, or property and assets of, such Restricted Subsidiary that is permitted by *"—Limitation on Asset Sales"* whether or not pending the closing of such sale or disposition;

(7) with respect to a Restricted Subsidiary and imposed pursuant to customary provision in a joint venture or other similar agreement with respect to such Restricted Subsidiary that was entered into in the ordinary course of business;

(8) contained in the terms governing any Debt if (as determined in good faith by the Company) (i) the encumbrances or restrictions are ordinary and customary for a financing of that type and (ii) the encumbrances or restrictions either (x) would not, at the time agreed to, be expected to materially adversely affect the ability of the Issuer or any Guarantor to make payments on the Notes or (y) in the case of any Permitted Refinancing Debt, are, taken as a whole, no less favorable in any material respect to the holders of the Notes than those contained in the agreements governing the Debt being refinanced;

(9) required pursuant to the Indenture, the Notes or any Note Guarantee; or

(10) imposed by the standard loan documentation in connection with loans from (i) *Banco Nacional de Desenvolvimento Econômico e Social*—BNDES, *Banco do Nordeste*—BNB, or *Financiadora de Estudos e Projetos*—FINEP (including loans from or any other Brazilian governmental development bank, credit agency or other entity), or (ii) the International Finance Corporation or any other international or multilateral development bank, government sponsored agency, export-import bank or official export-import credit insurer to any Restricted Subsidiary.

Future Guarantors

If, after the Issue Date, (i) any Significant Subsidiary ceases to be an Excluded Subsidiary, (ii) any Subsidiary that is not an Excluded Subsidiary is formed, created or acquired, (iii) any Subsidiary that is not an Excluded Subsidiary becomes a Significant Subsidiary, or (iv) the Issuer, at its option, elects to cause a Subsidiary to become a Guarantor, then the Company or the Issuer shall, within 10 Business Days of such event, cause such Subsidiary to:

(1) execute and deliver to the Trustee a supplemental indenture, pursuant to which such Significant Subsidiary shall Guarantee the payment of the Notes, and

(2) deliver to the Trustee an Officers' Certificate and Opinion of Counsel stating that such supplemental indenture (a) has been duly authorized, executed and delivered by such Significant Subsidiary; and (b) constitutes a valid and legally binding obligation of such Significant Subsidiary, that is enforceable in accordance with its terms.

provided that,

(A) any such Significant Subsidiary will not be required to Guarantee the Issuer's obligations under the Notes if, the Company and the other Guarantors at the time of determination would directly (i) hold at least 80% of Consolidated Total Assets on a consolidated basis as of the most recent quarterly balance sheet for which financial statements are available and delivered to the Trustee pursuant to "*—Reports*" and (ii) generate revenues of at least 80% of Consolidated Net Revenues on a consolidated basis for the twelve-month period ending on the date of the Company's most recent quarterly consolidated statement of income for which financial statements are available and delivered to the Trustee pursuant to "*—Reports*"; and

(B) any such Significant Subsidiary's Guarantee of the Borrower's obligations under the Notes will be limited to the maximum amount that (i) would not render such Significant Subsidiary's obligations subject to avoidance under applicable law, including applicable fraudulent conveyance laws, or (ii) would not result in a breach or violation by such Significant Subsidiary of any then-existing agreement to which it is party or its organizational documents;

provided, however, that the Company, at its sole discretion, may designate any such Subsidiary as a Project Finance Company.

By virtue of the limitation set forth under item (B) above, a Guarantor's obligation under its Note Guarantee could be significantly less than amounts payable with respect to the Notes, or a Guarantor may have effectively no obligation under its Note Guarantee.

Limitation on Asset Sales

The Company will not, and will not permit any Restricted Subsidiary to, make any Asset Sales unless the following conditions are met:

(1) The Asset Sale is for at least Fair Market Value at the time of such Asset Sale.

(2) At least 75% of the consideration consists of cash or Cash Equivalents, Marketable Securities and/or Productive Assets received at closing, *provided that*, for purposes of this clause (2), each of the following will be deemed to be cash:

(A) any liabilities of the Company or such Restricted Subsidiary (other than Subordinated Debt) that are assumed by the transferee of any such assets pursuant to a customary novation agreement that releases the Company or such Restricted Subsidiary from further liability; and

(B) any securities, notes or other obligations received by the Company or such Restricted Subsidiary from such transferee that are, within 120 days after the closing of such Asset Sale, converted by the Company or such Restricted Subsidiary into cash or Cash Equivalents, but only to the extent of the cash or Cash Equivalents actually received in that conversion;

provided, further, that consideration received with respect to the sale of oil and gas properties (to the extent constituting an Asset Sale) until one year after such Asset Sale will be deemed to be received at closing;

(3) Solely with respect to an Asset Sale in respect of the Collateral, such Asset Sale (i) is permitted by the Indenture and (ii) the Net Cash Proceeds from such Asset Sale of Collateral are used within 120 days after the receipt of any such Net Cash Proceeds exclusively in accordance with paragraphs (4)(A) through (D) below;

(4) Within 360 days after the receipt of any Net Cash Proceeds from an Asset Sale (other than Collateral) (or 540 days in the event such Net Cash Proceeds are used to fund the acquisition of a Concession agreed pursuant to a binding agreement entered into by the Issuer or any Guarantor within 180 days from the date of consummation of any such Asset Sale), the Net Cash Proceeds may be used to:

(A) permanently repay Debt (other than Subordinated Debt) of the Company or any Restricted Subsidiary (and in the case of a revolving credit, permanently reduce the commitment thereunder by such amount), in each case owing to a Person other than the Company or any Restricted Subsidiary;

(B) acquire (i) all or substantially all of the assets of a Permitted Business, or a majority of the Voting Stock of another Person that thereupon becomes a Restricted Subsidiary engaged in a Permitted Business, or (ii) to make Capital Expenditures or otherwise acquire long-term assets that are to be used in a Permitted Business;

(C) acquire Productive Assets for the Company or any of its Restricted Subsidiaries; or

(D) any combination of (A) and (B) and (C).

(5) The Net Cash Proceeds of an Asset Sale not applied pursuant to paragraph (4) above shall constitute "**Excess Proceeds**." Excess Proceeds of less than US$30.0 million (or the equivalent thereof at the time of determination) will be carried forward and accumulated. When accumulated Excess Proceeds equals or

exceeds such amount, the Issuer must, within 30 days, make an offer to purchase Notes (an "**Asset Sale Offer**") having a principal amount equal to:

(A) accumulated Excess Proceeds, *multiplied by*:

(B) a fraction (x) the numerator of which is equal to the then outstanding principal amount of the Notes and (y) the denominator of which is equal to the then outstanding principal amount of the Notes and all *pari passu* Debt similarly required to be repaid, redeemed or tendered for in connection with the Asset Sale,

rounded down to the nearest US$1,000. The purchase price for the Notes will be 100% of the principal amount *plus* accrued interest (including Additional Amounts, if any) thereon to, but excluding, the date of purchase. Upon completion of the Asset Sale Offer, Excess Proceeds will be reset at zero, and any Excess Proceeds remaining after consummation of the Asset Sale Offer may be used for any purpose not otherwise prohibited by the Indenture.

If at any time any non-cash consideration received by the Issuer, the Company or any Restricted Subsidiary, as the case may be, in connection with any Asset Sale is converted into or sold or otherwise disposed of for cash (other than interest received with respect to any non-cash consideration), the conversion or disposition will be deemed to constitute an Asset Sale hereunder and the Net Cash Proceeds thereof will be applied in accordance with this covenant within 360 days or 540 days, as applicable, of conversion or disposition.

The Issuer will comply with the requirements of U.S. securities laws, to the extent applicable, and any other securities laws and regulations to the extent any such rule, laws and regulations are applicable in connection with the purchase of Notes pursuant to an Asset Sale Offer. To the extent that the provisions of any applicable securities laws or regulations conflict with the "Asset Sale" provisions of the Indenture, the Issuer will comply with these laws and regulations and will not be deemed to have breached its obligations under the "Asset Sale" provisions of the Indenture by doing so.

The Issuer will not be required to make an Asset Sale Offer following an Asset Sale if a Restricted Subsidiary or a third party makes the Asset Sale Offer in the manner, at the times and otherwise in compliance with the requirements set forth in the Indenture applicable to an Asset Sale Offer following an Asset Sale made by the Issuer or the Company and if such Person purchases all Notes validly tendered and not withdrawn under such Asset Sale Offer.

Limitation on Transactions with Affiliates

(a) The Company will not, and will not permit any Restricted Subsidiary to, directly or indirectly, enter into, renew or extend any transaction or arrangement including the purchase, sale, lease or exchange of property or assets, or the rendering of any service with any Affiliate of the Company or any Affiliate of any Restricted Subsidiary involving an aggregate amount in excess of U.S.$2.5 million (a "**Related Party Transaction**"), except upon fair and reasonable terms that are no less favorable to the Company or the Restricted Subsidiary than could be obtained in a comparable arm's-length transaction with a Person that is not an Affiliate of the Company or such Restricted Subsidiary, as the case may be.

(b) Prior to entering into any Related Party Transaction or series of Related Party Transactions (i) with an aggregate value in excess of US$15.0 million (or the equivalent in other currencies), the Issuer must deliver to the Trustee an Officer's Certificate stating that such Related Party Transaction complies with this covenant, and (ii) with an aggregate value in excess of US$30.0 million (or the equivalent in other currencies), the terms of such Related Party Transaction will be approved by a majority of the members of the board of directors of the Company (including a majority of the members of the board of directors who are disinterested directors with respect to such Related Party Transaction), the approval to be evidenced by a board resolution that such transaction or series of related transactions are on terms no less favorable to the Company or such Restricted Subsidiary than could be obtained in a comparable arm's length transaction.

(c) The foregoing paragraphs do not apply to:

(1) any transaction between or among the Company and any of the Restricted Subsidiaries or between or among Restricted Subsidiaries of the Company;

(2) reasonable fees and compensation paid to, and any indemnity or insurance provided on behalf of, officers, directors, managers, employees, consultants or agents of the Company or any Restricted Subsidiary;

(3) transactions or payments pursuant to any employee, manager, consultant, officer or director compensation or benefit plans, stock options or arrangements entered into in the ordinary course of business, customary indemnifications or arrangements or reimbursement of expenses entered into in the ordinary course of business, on market terms and consistent with past practice or industry norms.

(4) transactions pursuant to any contract or agreement in effect on Issue Date, as amended, modified or replaced from time to time so long as the amended, modified or new agreements, taken as a whole, are no less favorable to the Company and the Restricted Subsidiaries than those in effect on the Issue Date;

(5) loans and advances to employees in the ordinary course of business or consistent with past practices;

(6) any issuance or sale of Qualified Equity Interests of the Company;

(7) Permitted Investments and Restricted Payments that are permitted by the provisions of the Indenture;

(8) the provision of administrative services to any joint venture, Project Finance Company, or Unrestricted Subsidiary on substantially the same terms provided to Restricted Subsidiaries;

(9) any Sale and Leaseback Transaction otherwise permitted under "—Limitation on Sale and Leaseback Transactions" if such transaction is on market terms;

(10) the disposition of all or substantially all of the assets of the Company, the Issuer or a Subsidiary Guarantor in a manner permitted under "*—Certain Covenants—Consolidation, Merger or Sale of Assets*"; and

(11) (A) transactions with customers, clients, operators, distributors, suppliers or purchasers or sellers of goods or services, in each case in the ordinary course of business and on market terms, or (B) transactions with joint ventures or other similar arrangements entered into in the ordinary course of business, on market terms and consistent with past practice or industry norms.

Limitation on Sale and Leaseback Transactions

The Company will not, and will not permit any Restricted Subsidiary to, enter into any Sale and Leaseback Transaction unless:

(a) either the Company or such Restricted Subsidiary would be entitled: (A) to Incur Debt in a principal amount equal to or exceeding the Attributable Debt in respect of such Sale and Leaseback Transaction pursuant to the covenant described under "*—Certain Covenants—Limitation on Debt*"; and (B) to Incur a Lien to secure such Attributable Debt pursuant to the covenant described under "*—Certain Covenants—Limitation on Liens*"; and

(b) the net proceeds received by the Company or such Restricted Subsidiary in connection with such Sale and Leaseback Transaction are at least equal to the Fair Market Value of such property.

Line of Business

The Company will not, and will not permit any of the Restricted Subsidiaries, to engage in any business other than a Permitted Business, except to the extent that so doing would not be material to the Company and its Restricted Subsidiaries, taken as a whole.

Reports

The Issuer and the Company will furnish or cause to be furnished to the Trustee in English:

- within 90 days (i) after the end of the first, second and third quarters of the Company's fiscal year (commencing with the quarter ending immediately following the Company no longer being subject to such reporting requirements), quarterly unaudited financial statements for the Company on a consolidated basis, prepared in accordance with IFRS;

- within 120 days after the end of the fiscal year of the Company (commencing with the first fiscal year ending immediately following the Company or the Issuer no longer being subject to such reporting requirements), annual audited financial statements of the Company on a consolidated basis for such fiscal year prepared in accordance with IFRS and a report on such annual financial statements by the Company's internationally recognized certified independent accountants.

If the Company makes available the reports described above on its website and notifies the Trustee in writing thereof, the Company will be deemed to have satisfied this reporting requirement. The Trustee shall have no obligation to determine if and when the Company has made any of the reports described above available on the Company's website. Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such reports shall not constitute constructive notice of any information contained therein or determinable from information contained therein, including the Issuer's, the Company's or any other Person's compliance with any of its covenants under the Indenture or the Notes (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

The Trustee shall not be obligated to monitor or confirm, on a continuing basis or otherwise, the Issuer's, the Company's or any other Person's compliance with the covenants described above or with respect to any reports or other documents filed under the Indenture; *provided*, *however*, that nothing herein shall relieve the Trustee of any obligations to monitor the Issuer's and the Company's timely delivery of all reports and certificates described in this section.

The Issuer and the Company will make the information and reports available to securities analysts and prospective investors upon request. Delivery of such reports, information and documents to the Trustee is for informational purposes only and the Trustee's receipt of such reports shall not constitute constructive or actual notice or knowledge of any information contained therein or determinable from information contained therein, including the Issuer's, the Company's or any other Person's compliance with any of its covenants under the Indenture or the Notes (as to which the Trustee is entitled to rely exclusively on Officers' Certificates).

In addition, the Issuer and the Company will deliver to the Trustee, within 120 days after the end of each fiscal year a certificate stating that each of the Issuer, the Company and the Guarantors are in compliance (without regard to periods of grace or notice requirements) with all conditions and covenants under the Indenture, and if the Issuer, the Company and the Guarantors are not be in compliance, specifying such non-compliance and the nature and status thereof of which such signer may have knowledge.

Consolidation, Merger or Sale of Assets

Company

(a) The Company will not, in a single transaction or series of related transactions,

(1) consolidate with, or merge with or into any Person (other than a Restricted Subsidiary); or

(2) sell, convey, transfer, or otherwise dispose of (or cause or permit any Restricted Subsidiary to sell, assign, transfer, lease, convey or otherwise dispose of) all or substantially all of its assets as an entirety or substantially an entirety (determined on a consolidated basis for the Company and the Restricted Subsidiaries), to any Person (other than a Restricted Subsidiary); or

(3) permit any Person (other than a Restricted Subsidiary) to merge with or into the Company.

unless:

(A) either (x) the Company is the continuing Person or (y) the resulting, surviving or transferee Person is organized and validly existing under the laws of Luxembourg, the United States of America, any State thereof or the District of Columbia, Brazil or any OECD Country and expressly assumes by supplemental indenture all of the obligations of the Company under the Indenture and the Note Guarantee, the Intercreditor and Collateral Agency Agreement, the Notes and under any Security Document to which the Company is a party, as applicable;

(B) immediately after giving effect to the transaction on a *pro forma* basis, no Default or Event of Default has occurred and is continuing;

(C) immediately after giving effect to the transaction on a pro forma basis, the Company or the resulting surviving or transferee Person (i) could Incur at least U.S.$1.00 of Debt under paragraph (a) under "*—Certain Covenants—Limitation on Debt*" or (ii) would have a Net Leverage Ratio less than or equal to that of the Company immediately prior to such transaction; and

(D) the Company delivers to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that the consolidation, merger, sale, conveyance, transfer or other disposal of the assets and the supplemental indenture (if any) comply with the Indenture, and all conditions precedent provided for in the Indenture relating to such transaction have been complied with.

(b) Upon the consummation of any transaction effected in accordance with these provisions, if the Company is not the continuing Person, the resulting, surviving or transferee Person will succeed to, and be substituted for, and may exercise every right and power of, the Issuer under the Indenture and the Notes with the same effect as if such successor Person had been named as Company in the Indenture. Upon such substitution, except in the case of a sale, conveyance, transfer or disposition of less than all its assets, the Company will be released from its obligations under the Indenture and the Notes.

Issuer and Subsidiary Guarantors

(a) The Issuer and any Subsidiary Guarantor will not, in a single transaction or series of related transactions,

(1) consolidate with, or merge with or into any Person (other than the Company or any Restricted Subsidiary); or

(2) sell, convey, transfer, lease or otherwise dispose of (or cause or permit any Restricted Subsidiary to sell, assign, transfer, convey or otherwise dispose of) all or substantially all of its assets as an entirety or substantially an entirety (determined on a consolidated basis for the Company and the Restricted Subsidiaries), to any Person (other than the Company or any Restricted Subsidiary); or

(3) permit any Person (other than the Company or any Restricted Subsidiary) to merge with or into the Issuer or such Subsidiary Guarantor;

unless:

(A) either (x) the Issuer or such Guarantor is the continuing Person or (y) the resulting, surviving or transferee Person is organized and validly existing under the laws of Luxembourg, the United States of America, any State thereof or the District of Columbia, Brazil or any OECD Country and

expressly assumes by supplemental indenture all of the obligations of the Issuer or such Subsidiary Guarantor under the Indenture, the Notes and the Note Guarantee, the Intercreditor and Collateral Agency Agreement and any Security Document, as applicable;

(B) immediately after giving effect to the transaction on a *pro forma* basis, no Default or Event of Default has occurred and is continuing;

(C) immediately after giving effect to the transaction on a pro forma basis, the Issuer or such Guarantor or the resulting surviving or transferee Person (i) could Incur at least U.S.$1.00 of Debt under paragraph (a) under *"—Certain Covenants—Limitation on Debt*" or (ii) would have a Net Leverage Ratio less than or equal to that of the Issuer or such Guarantor immediately prior to such transaction; and

(D) the Company delivers to the Trustee an Officers' Certificate and an Opinion of Counsel, each stating that the consolidation, merger, or transfer and the supplemental indenture (if any) comply with the Indenture, and all conditions precedent provided for in the Indenture relating to such transaction have been complied with;

(b) Upon the consummation of any transaction effected in accordance with these provisions, if the Issuer or such Subsidiary Guarantor is not the continuing Person, the resulting, surviving or transferee Person will succeed to, and be substituted for, and may exercise every right and power of, the Issuer or such Subsidiary Guarantor under the Indenture and the Notes with the same effect as if such successor Person had been named as Issuer or Subsidiary Guarantor in the Indenture. Upon such substitution, except in the case of a sale, conveyance, transfer or disposition of less than all its assets, the Issuer and such Subsidiary Guarantor, as the case may be, will be released from its obligations under the Indenture and the Notes.

(c) Notwithstanding the restriction described in clauses (B) and (C) of the first paragraph under *"—Consolidation, Merger or Sale of Assets—Company"* or clauses (B) and (C) of the first paragraph under *"—Consolidation, Merger or Sale of Assets—Issuer and Subsidiary Guarantors"*, any Restricted Subsidiary may consolidate with, merge into or transfer all or part of its properties and assets to the Company, the Company may merge into a Restricted Subsidiary, and any Restricted Subsidiary may consolidate with, merge into or transfer all or part of its properties and assets to another Restricted Subsidiary, so long as the resulting entity remains or, prior to such consolidation, merger or transfer, becomes a Restricted Subsidiary, in which case such clauses, and only these clauses, will not apply.

For the avoidance of doubt, no consent of the holders of the Notes shall be deem necessary to execute any consolidation, merger or sale (or other disposition) of assets among the Company and any Restricted Subsidiary or among Restricted Subsidiaries, as well as to amend the applicable Security Documents in this context.

Notwithstanding the restrictions of this covenant, the Company, the Issuer and the Subsidiary Guarantors shall be able to enter into any transaction permitted under *"—Certain Covenants –Limitation on Sale and Leaseback Transactions.*"

Notices

The Indenture contains certain notice provisions, including notice requirements to the Trustee, the holders of the Notes and, to the extent required, to the Singapore Stock Exchange, or such other exchange on which the Notes may be listed.

Neither the failure to give any notice to a particular holder of Notes, nor any defect in a notice given to a particular holder of Notes, will affect the sufficiency of any notice given to another holder of Notes.

Limitations and Restrictions on the Issuer

The Issuer will not, except as otherwise specifically permitted by the Indenture, so long as any Notes are outstanding:

(a) engage in any business or entering into, or being a party to, any transaction or agreement except for:

(1) the issuance, sale, redemption, repurchase, exchange or defeasance of the Notes, Additional Notes, if any, and any other Debt permitted to be incurred pursuant to the Indenture and activities incidentally related thereto;

(2) the entering into of affiliate loans, including import and export financing and/or trading transactions, with regards to proceeds from the Notes (including any Additional Notes);

(3) the entering into of Hedging Agreements in the ordinary course of business and not for speculative purposes;

(4) in order to maintain its existence as a private limited liability company (*société à responsabilité limitée*); and

(5) any financing transaction structured as a "back-to-back" financing or similar transaction, directly or indirectly, with respect to the proceeds from any financing;

(6) other activities required by law; and

(7) as otherwise required by the Indenture.

(b) acquire or own any subsidiaries or other assets or properties, except (i) an interest in Hedging Agreements relating to its indebtedness and instruments evidencing interests in the foregoing; (ii) cash, cash equivalents, Cash Equivalents, Restricted Cash or Marketable Securities; (iii) any assets related to the intercompany loans, including Debt and any import and export financing transactions; (iv) the Notes and other Debt; and (v) other non-material assets and properties;

(c) Incur any additional Debt, except for additional Debt that is permitted to be incurred under "*Limitation on Debt*";

(d) create, assume, incur or suffer to exist any Lien upon any properties or assets whatsoever, except for Permitted Liens; and

(e) enter into any consolidation, merger, amalgamation, joint venture, or other form of combination with any person, except to the extent that it complies with the conditions set forth in "*—Consolidation, Merger or Sale of Assets—Issuer and Subsidiary Guarantors*."

In addition, the Company will covenant that the Issuer will continue to be its Wholly-Owned Subsidiary.

Substitution of the Issuer

The Issuer may, without the consent of any holder of the Notes, be substituted by (a) the Company or (b) any Wholly-Owned Subsidiary of the Company as principal debtor in respect of the Notes (in that capacity, the "**Substituted Issuer**"), *provided that* the following conditions are satisfied:

(1) such documents will be executed by the Substituted Issuer, the Issuer, the Company and the Trustee as may be necessary to give full effect to the substitution, including a supplemental indenture under which the Substituted Issuer assumes all of the Issuer's obligations under the indenture and the Notes and, unless the Guarantors' then existing guarantees remain in full force and effect, substitute guarantees issued by the Guarantors in respect of the Notes (collectively, the "**Issuer Substitution Documents**");

(2) the Issuer Substitution Documents will contain a covenant to ensure that each holder and beneficial owner of the Notes has the benefit of a covenant in terms corresponding to the obligations of the Issuer in respect of the payment of Additional Amounts (but, if relevant, replacing references to Luxembourg with references to the jurisdiction in which the Substituted Issuer is organized or resident for tax purposes);

(3) the Issuer will deliver, or cause the delivery, subject to any applicable legal reservation, to the Trustee of an Opinion of Counsel in the jurisdiction of organization of the Substituted Issuer, Luxembourg and the United States as to the validity, legally binding effect and enforceability of the Issuer Substitution Documents and specified other legal matters, as well as an Officer's Certificate as to compliance with the provisions described under this section;

(4) no Event of Default has occurred or is continuing;

(5) the substitution will comply with all applicable requirements under the laws of the jurisdiction of organization of the Substituted Issuer, Luxembourg and Brazil; and

(6) the Substituted Issuer shall have appointed a process agent in the Borough of Manhattan, the City of New York to receive service of process on its behalf in relation to any legal action or proceedings arising out of or in connection with the Notes or the Issuer Substitution Documents.

Upon the execution of the Issuer Substitution Documents, any substitute guarantees and compliance with the other conditions set forth above, the Substituted Issuer will be deemed to be named in the Indenture and the Notes as the principal debtor in place of the Issuer and the Issuer will be released from all of its obligations under the Notes and the Indenture.

Not later than 10 (ten) Business Days after the execution of the Issuer Substitution Documents, the Substituted Issuer will give notice thereof to the holders of the Notes.

Notwithstanding any other provision of the Indenture, the Company will (unless it is the Substituted Issuer) do or cause to be done all acts and things and promptly execute and deliver any documents or instruments, including any substitute guarantees and a legal opinion of internationally recognized Brazilian or Luxembourg counsel, that may be required, or that the Trustee may reasonably request, to ensure that the Guarantors' guarantees are in full force and effect for the benefit of the holders and beneficial owners of the Notes following the substitution.

Default and Remedies

Events of Default

An "**Event of Default**" occurs if:

(1) the Issuer defaults in the payment of the principal or of premium, if any, on the Notes when the same become due and payable at maturity, upon acceleration or redemption, or otherwise (other than pursuant to an Asset Sale Offer or a Change of Control Offer as required pursuant to *"—Certain Covenants—Repurchase of Notes upon a Change of Control that results in a Rating Decline*" or "*—Certain Covenants—Limitation on Asset Sales*");

(2) the Issuer defaults in the payment of interest (including any Additional Amounts) on any note when the same becomes due and payable, and the default continues for a period of 30 days;

(3) the Issuer, the Company or a Significant Subsidiary defaults in the performance of or breaches any other covenant or agreement of the Issuer, the Company, any Guarantor or a Restricted Subsidiary in the Indenture, under the Notes, or the Security Documents, and the default or breach continues for a period of 60 consecutive days after written notice to the Issuer by the Trustee or to the Issuer and the Trustee by the holders of 25% or more in aggregate principal amount of the Notes;

(4) the occurrence with respect to any Debt of the Company, any Guarantor or Significant Subsidiary having an outstanding principal amount of US$50 million or more in the aggregate for all such Debt of all such

Persons (i) an event of default that results in such Debt being due and payable prior to its scheduled maturity or (ii) failure to make a principal payment when due and such defaulted payment is not made, waived or extended within the applicable grace period, and that results in acceleration of such Debt prior to its Stated Maturity;

(5) one or more final judgments or orders for the payment of money are rendered against the Company, any Guarantor or any Significant Subsidiary and are not paid (whether in full or if there is a failure to pay installments in accordance with the terms of the judgment aggregating in excess of U.S.$50 million) or discharged, and remains unstayed for a period of 60 consecutive days after such judgment becomes final and non-appealable;

(6) any involuntary case or other proceeding is commenced against the Company, any Guarantor or any Significant Subsidiary with respect to it or its debts, or of a substantial part of its assets under any bankruptcy, insolvency or other similar law now or hereafter in effect seeking the appointment of a trustee, receiver, *administrador judicial*, liquidator, custodian or other similar official of it or a substantial part of its assets, and such involuntary case or other proceeding remains undismissed and unstayed for a period of 60 or more days; or a non-appealable final order for relief is entered against the Company, any Guarantor or any Significant Subsidiary under relevant bankruptcy laws as now or hereafter in effect;

(7) the Company, any Guarantor or any Significant Subsidiary (i) commences a voluntary case or other proceeding seeking liquidation, dissolution, *recuperação judicial* or *extrajudicial* or other relief with respect to itself or its debts under any applicable bankruptcy, insolvency or other similar law now or hereafter in effect, or consents to the entry of an order for relief in an involuntary case under any such law, (ii) consents to the appointment of or taking possession by a receiver, *administrador judicial*, liquidator, assignee, custodian, trustee, sequestrator or similar official of the Company, any Guarantor or any Significant Subsidiary or for all or substantially all of the assets of the Company, any such Guarantor or any such Significant Subsidiary or (iii) effects any general assignment for the benefit of creditors;

(8) any Note Guarantee or any Collateral ceases to be in full force and effect, other than in accordance with the terms of the Indenture, the Security Documents and the Intercreditor and Collateral Agency Agreement, or a Guarantor or party to any Note Guarantee or Security Document denies or disaffirms its obligations under its Note Guarantee or Security Document;

(9) the Issuer, the Company or any of its Subsidiaries fails to complete any perfection requirement or perfect a first priority security interest in:

(i) any of the Concessions Collateral, within the applicable periods as required pursuant to the covenants described under the caption *Collateral—Concessions Collateral—Perfection of Concessions Collateral;*" or

(ii) any of the Credit Receivables Collateral, within the applicable periods as required pursuant to the covenants described under the caption *Collateral—Credit Receivables Collateral—Perfection of Credits Receivable Collateral*."

(10) a final and non-appealable determination is made in a judicial proceeding that any of the Security Documents, or any other agreement or instrument purporting to grant a security interest on the Collateral is unenforceable or invalid against the Issuer, the Company, or any Restricted Subsidiary for any reason; or

(11) all or substantially all of the undertaking, assets and revenues of the Company or any Significant Subsidiary is condemned, seized or otherwise appropriated by any Person acting under the authority of any national, regional or local government; or the Company or any Significant Subsidiary is prevented by any such Person from exercising normal control over all or substantially all of the undertaking, assets and revenues of the Company or any Significant Subsidiary; in each case for a period of 90 consecutive days or longer.

Consequences of an Event of Default

If an Event of Default, other than a default described under (7) and (8) occurs and is continuing under the Indenture, the Trustee or the holders of at least 25% in aggregate principal amount of the Notes then outstanding, by written notice to the Issuer (and to the Trustee if the notice is given by the holders), may, and the Trustee at the request of such holders shall, declare the principal of and accrued interest on the Notes to be immediately due and payable. Upon a declaration of acceleration, such principal and interest will become immediately due and payable. If a default occurs as described under (7) and (8), the principal of and accrued interest on the Notes then outstanding will become immediately due and payable without any declaration or other act on the part of the Trustee or any holder.

However, if the Issuer or the Company, as applicable, cures all Defaults (except the nonpayment of principal of and accrued interest or premium (and Additional Amounts) on Notes at maturity or which shall become due by acceleration), including the deposit with the Trustee of a sum sufficient to pay all sums paid or advanced by the Trustee and the reasonable fees, expenses, disbursements and advances of the Trustee, its agents and counsel incurred in connection with such Event of Default, such declaration may be rescinded and annulled by the holders of not less than a majority in aggregate principal amount of the Notes.

In addition, holders of a majority in principal amount of the outstanding Notes by written notice to the Issuer and to the Trustee may waive all past defaults and rescind and annul a declaration of acceleration and its consequences except for (i) a Default in the payment of principal of (or premium, if any) or interest or premium (and Additional Amounts), if any, on any Note or (ii) in respect of a provision of the Indenture which cannot be amended without the consent of the holder of each outstanding Note affected thereby.

Subject to the provisions of the Indenture and the Intercreditor and Collateral Agency Agreement relating to the duties of the Trustee and each Collateral Agent, neither the Trustee nor each Collateral Agent will be under any obligation to exercise any of its rights or powers under the Indenture, the Intercreditor and Collateral Agency Agreement or the Security Documents at the request or direction of any of the holders of the Notes, unless such holders shall have offered to the Trustee or such Collateral Agent, as applicable, security or indemnity satisfactory to the Trustee or such Collateral Agent, as applicable. Subject to such provision for indemnification, the holders of a majority in principal amount of the outstanding Notes may direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or the Collateral Agents or exercising any trust or power conferred on the Trustee with respect to the Notes or the Collateral Agents with respect to the Security Documents, *provided* that the Trustee or the Collateral Agents, as applicable, is offered indemnity or security satisfactory to it; *provided*, further that the Trustee and the Collateral Agents shall have the right to decline to follow any such direction if the Trustee or the Collateral Agents, as applicable, shall determine that the action so directed conflicts with any law or the provisions of the Indenture or the Security Documents, if the Trustee shall determine that such action would be prejudicial to holders of the Notes not taking part in such direction or if the Trustee or the Collateral Agents determine in good faith that such action would involve the Trustee or the Collateral Agents, as applicable, in personal liability.

No holder of any Note shall have any right to institute any proceeding, judicial or otherwise, with respect to the Indenture or the Notes, or for the appointment of a receiver or Trustee, or for any other remedy under the Indenture or the Notes, unless:

(1) the holder has previously given to the Trustee written notice of a continuing Event of Default;

(2) holders of at least 25% in aggregate principal amount of outstanding Notes have made written request to the Trustee to institute proceedings in respect of the Event of Default in its own name as Trustee under the Indenture;

(3) holders have offered to the Trustee indemnity and/or security satisfactory to the Trustee against any costs, liabilities or expenses to be incurred in compliance with such request;

(4) the Trustee for 60 days after its receipt of such notice, request and offer of indemnity and/or security has failed to institute any such proceeding; and

(5) during such 60-day period, the holders of a majority in aggregate principal amount of the outstanding Notes have not given the Trustee a direction that is inconsistent with such written request.

it being understood and intended that no one or more of such holders shall have any right in any manner whatsoever by virtue of, or by availing of, any provision of the Indenture to affect, disturb or prejudice the rights of any other of such holders, or to obtain or to seek to obtain priority or preference over any other of such holders or to enforce any right under the Indenture, except in the manner therein provided and for the equal and ratable benefit of all such holders.

Notwithstanding anything to the contrary, the right of a holder of a note to receive payment of principal of or interest on its Note on or after the Stated Maturities thereof, or to bring suit for the enforcement of any such payment on or after such dates, may not be impaired or affected without the consent of that holder.

If any Default occurs and is continuing and written notice of which is received by a responsible officer of the Trustee with direct responsibility for the administration of the Indenture, the Trustee will send notice of the Default to each holder within 90 days after it occurs, unless the Default has been cured; provided that, except in the case of a Default in the payment of the principal of or interest on any note, the Trustee may withhold the notice if and so long as the board of directors, the executive committee or a trust committee of directors of the Trustee in good faith determine that withholding the notice is in the interest of the holders.

The Trustee shall not be deemed to have notice of any Default or Event of Default unless written notice of any event which is in fact such a default is received by a responsible officer of the Trustee at the Corporate Trust Office of the Trustee, and such notice references the Notes and the Indenture.

A Default under the Notes, unless cured or waived, could trigger a default under certain of our future debt agreements.

Notwithstanding any of the foregoing, a notice of Default, notice of acceleration or instruction to the Trustee to provide a notice of Default or notice of acceleration with respect the Notes may not be given by the Trustee or the Holders of the Notes (or any other action taken on the assertion of any Default) with respect to any action taken, and reported publicly or to Holders of the Notes, more than two years prior to such notice of Default, notice of acceleration or instruction to the Trustee to provide a notice of Default or notice of acceleration (or other action).

No Liability of Directors, Managers, Officers, Employees, Incorporators, Members and Stockholders

No past, present or future director, officer, manager, partner, employee, incorporator, member or stockholder of the Issuer or any Guarantor, as such, will have any liability for any obligations of the Issuer or such Guarantor under the Notes (including any Additional Notes), any Note Guarantee, the Indenture, the Security Documents or for any claim based on, in respect of, or by reason of, such obligations or their creation. Each holder of Notes by accepting a note waives and releases all such liability. Such waivers and releases are part of the consideration for issuance of the Notes. This waiver may not be effective to waive liabilities under the U.S. securities laws or under Luxembourg law, and it is the view of the SEC that such a waiver is against public policy.

Amendments and Waivers

Amendments With Consent of Holders

The Indenture contains provisions permitting the Issuer and the Trustee, with the consent of the holders of a majority in aggregate in principal amount of the outstanding Notes, to modify the Indenture or any supplemental indenture or the rights of the holders of the Notes; *provided* that without the consent of the holder of each outstanding Note affected thereby (except that (10) below will just require the consent of holders of at least two thirds ($^2/_3$) in aggregate amount of the outstanding Notes, in addition to any requirement under the Intercreditor and Collateral Agency Agreement) no such modification shall:

(1) reduce the principal amount of or change the Stated Maturity of any installment of principal of any Note;

(2) reduce the rate of or change the Stated Maturity of any interest payment on any Note;

(3) reduce the amount payable upon the redemption of any Note or change the time of any mandatory redemption or, in respect of an optional redemption, the times at which any Note may be redeemed;

(4) make any Note payable in money other than that stated in the note;

(5) make any change in the provisions of the Indenture relating to waivers of past Defaults or the rights of holders of the Notes to receive payments of principal of, or interest or premium on, the Notes;

(6) modify or change any provision of the Indenture affecting the ranking of the Notes or any Note Guarantee in a manner materially adverse to the holders of the Notes;

(7) make any change in any Note Guarantee that would adversely affect the holders of the Notes;

(8) reduce any premium and Additional Amounts with respect to any Note;

(9) make any change in the percentage of the principal amount of the Notes required for amendments or waivers; and

(10) make any change in the Security Documents or in the provisions of the Indenture or Intercreditor and Collateral Agency Agreement dealing with the Collateral with the effect of releasing the Liens securing the Obligations in respect of the Notes, except as expressly permitted by the Indenture and the Intercreditor and Collateral Agency Agreement.

Amendments Without Consent of Holders

Notwithstanding the preceding, without the consent of any holder of the Notes, the Issuer, the Trustee and, if applicable, the Guarantors or Collateral Agents may amend or supplement the Indenture, the Notes or any Note Guarantees or Security Documents:

(1) to cure any ambiguity, defect or inconsistency in the Indenture or the Notes in a manner that is not materially adverse to the interest of the holders of the Notes;

(2) to comply with "*—Certain Covenants—Consolidation, Merger or Sale of Assets*," including to provide for the assumption by a successor of the obligations of the Company, the Issuer or any Subsidiary Guarantor;

(3) to evidence and provide for the acceptance of an appointment by a successor trustee;

(4) to provide for uncertificated Notes in addition to or in place of certificated Notes, *provided* that the uncertificated Notes are issued in registered form for purposes of Section 163(f) of the Code;

(5) to provide for any Guarantee of the Notes or to confirm and evidence the release, termination or discharge of any Guarantee of or Lien securing the Notes when such release, termination or discharge is permitted by the Indenture;

(6) to provide for or confirm the issuance of Additional Notes;

(7) to make any other change (i) that would provide any additional rights or benefits to the holders of Notes or (ii) that would not adversely affect the legal rights under the Indenture of any such holder in any material respect;

(8) to conform any provision of the Indenture, the Notes, the Intercreditor and Collateral Agency Agreement or the Security Documents to this "*Description of Notes*";

(9) to add Additional Assets as Collateral for the Notes;

(10) to allow any Guarantor or a new Subsidiary Guarantor to execute a supplemental Indenture with respect to a Note Guarantee and/or a Note Guarantee with respect to the Notes; or

(11) to release Collateral from the Liens pursuant to the provisions of the Indenture, the Intercreditor and Collateral Agency Agreement or the Security Documents.

The Trustee shall receive an Officer's Certificate and Opinion of Counsel stating that all conditions precedent to any modification of the Indenture, have been met and that such modification is authorized and permitted under the Indenture.

The Indenture shall provide that Notes (or beneficial interest therein) owned by the Company, the Issuer or any of their Affiliates shall be disregarded and deemed not to be outstanding, for, among other purposes, consenting to any such amendments.

It is not necessary for holders of the Notes to approve the particular form of any proposed amendment, supplement or waiver, but is sufficient if their consent approves the substance thereof.

After any amendment described herein becomes effective, the Issuer will mail to the holders of the Notes a notice in accordance with the procedure set forth in "*—Notices*" briefly describing such amendment. However, the failure to give notice to all holders of the Notes, or any defect therein, will not impair or affect the validity of the amendment.

Satisfaction and Discharge

The Indenture will be discharged and (together with all Note Guarantees) will cease to be of further effect as to all Notes issued thereunder, when:

(1) (a) all Notes that have been authenticated, except lost, stolen or destroyed Notes that have been replaced or paid and Notes for whose payment money has been deposited in trust and thereafter repaid to the Issuer, have been delivered to the Trustee for cancellation; or

(b) all Notes that have not been delivered to the Trustee for cancellation (i) have become due and payable, (ii) will become due and payable at their Stated Maturity within one year or (iii) are to be called for redemption within one year under arrangements satisfactory to the Trustee for the giving of notice of a redemption by the Trustee and, in each case, the Issuer, a Guarantor or any Restricted Subsidiary has irrevocably deposited or caused to be deposited with the Trustee as funds in trust solely for the benefit of the holders, cash in U.S. dollars and/or U.S. Government Obligations, in amounts as will be sufficient without consideration of any reinvestment of interest, to pay and discharge the entire Indebtedness on the Notes not delivered to the Trustee for cancellation for principal, premium and Additional Amounts, if any, and accrued interest to the date of maturity or redemption;

(2) no Default or Event of Default has occurred and is continuing on the date of the deposit or will occur as a result of the deposit and the deposit will not result in a breach or violation of, or constitute a default under, any other material instrument to which the Issuer, a Guarantor or any Significant Subsidiary is a party or by which the Issuer, a Guarantor or any Significant Subsidiary is bound;

(3) the Issuer, a Guarantor or any Restricted Subsidiary has paid or caused to be paid all other sums payable by it under the Indenture; and

(4) the Issuer has delivered irrevocable instructions to the Trustee under the Indenture to apply the deposited money toward the payment of the Notes at maturity or the redemption date, as the case may be.

In addition, the Issuer must deliver an Officers' Certificate and an Opinion of Counsel to the Trustee stating that all conditions precedent to satisfaction and discharge have been satisfied.

Defeasance

The Issuer and the Guarantors, at the Issuer's option:

(1) will be discharged from any and all obligations in respect of the Notes and the Note Guarantees (except in each case for certain obligations, including to register the transfer or exchange of Notes, replace stolen, lost or mutilated Notes, maintain paying agencies and hold moneys for payment in trust), or

(2) need not comply with certain covenants of the Indenture and any omission to comply with such obligations will not constitute a Default or an Event of Default with respect to the Notes and the Note Guarantees,

if the Issuer irrevocably deposits with the Trustee, in trust:

- money, or
- in certain cases, U.S. Government Obligations which through the payment of interest and principal in respect thereof in accordance with their terms will provide money in an amount, or
- a combination thereof,

in each case, sufficient to pay and discharge the principal of each installment of principal and interest, if any, on the outstanding Notes on the dates such payments are due, in accordance with the terms of the Notes, to, but excluding, the redemption date irrevocably designated by the Issuer pursuant to the final sentence of this section on the day on which payments are due and payable in accordance with the terms of the Indenture and of the Notes.

To exercise any such option, the Issuer is required to deliver to the Trustee:

(a) an opinion of recognized U.S. counsel independent of the Issuer and the Guarantors to the effect that the beneficial owners of the Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such deposit, defeasance and discharge of certain obligations and will be subject to U.S. federal income tax on the same amount and in the same manner and at the same times as would have been the case if such deposit, defeasance and discharge had not occurred, which in the case of clause (1) above must be based on a change in law or a ruling by the U.S. Internal Revenue Service; and

(b) an Opinion of Counsel and an Officers' Certificate as to compliance with all conditions precedent provided for in the Indenture relating to the satisfaction and discharge of the Notes.

If the Issuer has deposited or caused to be deposited money or U.S. Government Obligations to pay or discharge the principal of (and premium, if any) and interest, if any, on the outstanding Notes to and including a redemption date on which all of the outstanding Notes are to be redeemed, such redemption date shall be irrevocably designated by the Issuer on or prior to the date of deposit of such money or U.S. Government Obligations, and such designation shall be accompanied by an irrevocable request from the Issuer that the Trustee give notice of such redemption in

the name and at the expense of the Issuer not less than 10 nor more than 60 days prior to such redemption date in accordance with the Indenture.

Trustee, Registrar, Paying Agent and Transfer Agent for the Notes

UMB Bank, N.A. will be the Trustee, Registrar, Paying Agent and Transfer Agent under the Indenture. The Trustee will initially act as registrar and paying agent and transfer agent. In the event that the Notes are listed on the Singapore Stock Exchange, for so long as the Notes are listed on such exchange and the rules of the exchange so require, the Issuer will also maintain a listing agent in Singapore. Upon any issuance of definitive notes, the Issuer will appoint and maintain a paying agent in Singapore, for so long as the Notes are listed on the Singapore Stock Exchange and the rules of such exchange so require. In such event, an announcement shall be made through the Singapore Stock Exchange and will include all material information with respect to the delivery of the definitive Notes, including details of the paying agent in Singapore.

The Issuer may change the registrar, paying agents or transfer agents without prior notice to the holders of then, and the Issuer or any of its Subsidiaries may act as registrar, paying agent or transfer agent. Any change in respect of such agents will be published in accordance with *"—Certain Covenants—Notices*."

So long as no Default or Event of Default has occurred and is continuing, the Issuer may remove the Trustee and promptly appoint a successor trustee, which shall comply, at time of the appointment, with the eligibility requirements set forth in the Indenture. Upon delivery of the written acceptance of appointment by the successor trustee to the retiring trustee and to the Issuer, the removal of the retiring trustee shall become effective, and the successor trustee shall have all the rights, powers and duties of the Trustee under the Indenture. The successor trustee shall mail a notice of its succession to the holders of the Notes. The retiring trustee shall promptly transfer all Property held by it as Trustee to the successor trustee.

Except during the continuance of an Event of Default, the Trustee need perform only those duties that are specifically set forth in the Indenture and no others, and no implied covenants or obligations will be read into the Indenture against the Trustee. In case an Event of Default has occurred and is continuing, the Trustee shall exercise such of the rights and powers vested in it by the Indenture, and use the same degree of care and skill in their exercise, as a prudent man would exercise or use under the circumstances in the conduct of his own affairs. No provision of the Indenture will require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of its duties thereunder, or in the exercise of its rights or powers, unless it receives indemnity and/or security satisfactory to it against any loss, liability or expense.

Enforceability of Judgments

The Issuer is incorporated under the laws of Luxembourg and the Guarantors are incorporated under the laws of Brazil. All of the operating assets of the Issuer and each Guarantor are outside the United States. Accordingly, any judgment obtained in the United States against the Issuer or a Guarantor, including judgments with respect to the payment of principal, premium, if any, and interest, Additional Amounts and any purchase price with respect to the Notes, may not be collectable within the United States. See "*Enforcement of Judgments*."

Waiver of Immunity

To the extent that the Issuer or a Guarantor or any of their respective properties, assets or revenues may have or may hereafter become entitled to, or have attributed to the Issuer or a Guarantor, any right of immunity, on the grounds of sovereignty or otherwise, from any legal action, suit or proceeding, from the giving of any relief in any such legal action, suit or proceeding, from setoff or from counterclaim from Luxembourg, New York State, U.S. federal court or other applicable jurisdiction, from service of process, from attachment upon or prior to judgment, from attachment in aid of execution of judgment, or from execution of judgment, or other legal process or proceeding for the giving of any relief or for the enforcement of any judgment, in any such court in which proceedings may at any time be commenced, with respect to the obligations and liabilities of the Issuer or such Guarantor, or any other matter under or arising out of or in connection with, the Notes or the Indenture, the Issuer and each Guarantor irrevocably and unconditionally waives or will waive such right, and agrees not to plead or claim any such immunity and consents to such relief and enforcement, except for the immunity that certain assets of

the Guarantors in the concession area under the Concessions may be subject to on the grounds of being either necessary for the continuance of petroleum operations thereunder or subject to public interest (*bens reversíveis*), which immunity cannot be waived.

Governing Law, Consent to Jurisdiction, Currency Conversion and Service of Process

The Indenture, and the Note Guarantees will each be governed by, and construed in accordance with, the laws of the State of New York. For the avoidance of doubt, the provisions of articles 470-1 to 470-19 of the Luxembourg law of 10 August 1915 on commercial companies, as amended, are excluded. For the avoidance of doubt, the Notes shall not be construed or qualify as *"billets à ordre"* or *"lettres de change"* within the meaning of the Luxembourg law of 8 January 1962 relating to the introduction into Luxembourg law of the uniform law on *"lettres de change and billets à ordre"* (as amended from time to time) and the provisions of this law shall not apply. The Brazilian Share Fiduciary Transfer Agreement, the Concession Rights Pledge Agreement and the Credit Rights Pledge Agreement will each be governed and construed in accordance with, the laws of Brazil. The Luxembourg Share Pledge Agreement is governed and construed in accordance with, the applicable laws of Luxembourg. The Issuer and each Guarantor will submit to the non-exclusive jurisdiction of the New York State and U.S. federal courts located in the Borough of Manhattan, New York City with respect to any action that may be brought in connection with the Indenture or the Notes and has irrevocably appointed Cogency Global Inc., located at 122 East 42nd Street, 18th Floor, New York, NY 10168, as agent for service of process.

If for the purpose of obtaining judgment in any court it is necessary to convert a sum due hereunder to the holder of a note from U.S. dollars into another currency, the Issuer and each Guarantor has agreed, and each holder by holding such note will be deemed to have agreed, to the fullest extent that the Issuer and each Guarantor may effectively do so, that the rate of exchange used will be that at which in accordance with normal banking procedures such holder could purchase U.S. dollars with such other currency in New York City, New York on the two Business Days preceding the day on which final judgment is given.

The Issuer and each Guarantor's obligation in respect of any sum payable by it to a holder will, notwithstanding any judgment in a currency (the "judgment currency") other than U.S. dollars, be discharged only to the extent that on the Business Day following receipt by the holder of a note of any sum adjudged to be so due in the judgment currency, the holder of such note may in accordance with normal banking procedures purchase U.S. dollars with the judgment currency; if the amount of the U.S. dollars so purchased is less than the sum originally due to the holder in the judgment currency (determined in the manner set forth in the preceding paragraph), the Issuer and each Guarantor, agree, jointly and severally, as a separate obligation and notwithstanding any such judgment, to indemnify the holder of such note against such loss, and if the amount of the U.S. dollars so purchased exceeds the sum originally due to such holder, such holder agrees to remit to the Issuer or such Guarantors, as the case may be, such excess, *provided* that such holder will have no obligation to remit any such excess as long as the Issuer or the Guarantors, as the case may be, has failed to pay such holder any obligations due and payable under such note, in which case such excess may be applied to the Issuer or each Guarantors' obligations under such note in accordance with the terms thereof.

Listing

The Issuer will apply to list the Notes on the Singapore Stock Exchange and will use commercially reasonable efforts to obtain and maintain such listing; *provided* that if the admission of the Notes on the Singapore Stock Exchange would, in the future, require the Issuer to publish financial information either more regularly than it would otherwise be required to, or requires the Issuer or the Guarantors to publish separate financial information, or if the listing, in the judgment of the Issuer, is unduly burdensome, the Issuer may seek an alternative admission to listing, trading and/or quotation for the Notes by another listing authority, stock exchange and/or quotation system. If such alternative admission to listing, trading and/or quotation of the Notes is not available to the Issuer or is, in the Issuer's commercially reasonable judgment, unduly burdensome, an alternative admission to listing, trading and/or quotation of the Notes may not be obtained. So long as the Notes are listed on the Singapore Stock Exchange and the rules of such exchange so require, transfers or exchange of definitive Notes may be made by presenting and surrendering such Notes at, and obtaining new definitive Notes from, the office of a Singapore paying agent to be appointed by the Issuer, such Singapore paying agent to have the same duties and rights conferred to a Paying Agent.

The Notes will be traded in a minimum board lot size of U.S.$200,000 as long as the Notes are listed on the Singapore Stock Exchange.

Certain Definitions

"**Acquired Debt**" means Debt of a Person existing at the time the Person merges with or into or becomes a Restricted Subsidiary and not Incurred in connection with, or in contemplation of, the Person merging with or into or becoming a Restricted Subsidiary. Acquired Debt will be deemed to have been Incurred at the time such Person becomes a Restricted Subsidiary or at the time it merges or consolidates with the Company or a Restricted Subsidiary or at the time such Debt is assumed in connection with the acquisition of assets from such Person.

"**Acquired Entity**" has the meaning set forth in the definition of "Net Leverage Ratio."

"**Additional Amounts**" has the meaning set forth under *"—Additional Amounts*" above.

"**Additional Assets**" means (1) any property or assets (other than Debt and Capital Stock) to be used by the Company or a Restricted Subsidiary in a Permitted Business; (2) the Capital Stock of a Person that becomes a Restricted Subsidiary as a result of the acquisition of such Capital Stock by the Company or another Restricted Subsidiary; or (3) Capital Stock constituting a minority interest in any Person that at such time is a Restricted Subsidiary.

"**Additional Collateral**" has the meaning set forth under *"Additional Matters Relating to Collateral—Replacement of Collateral."*

"**Additional Debt**" has the meaning set forth under *"—Collateral—General*."

"**Additional Debt Agreements**" has the meaning set forth under *"—Collateral—General*."

"**Additional Debt Providers**" has the meaning set forth under *"—Collateral—General*."

"**Additional Notes**" means any of the additional notes issued under the Indenture having identical terms and conditions as the Notes issued on the Issue Date, except for issue price, issue date and date from which interest accrues.

"**Adjusted EBITDA**" means, for any period, the amount equal to the sum of Consolidated Net Income for such period *adjusted by*, to the extent deducted in calculating such Consolidated Net Income:

(1) consolidated net financial result for such period (excluding (i) any realized results from Oil Hedge Agreements and (ii) any cash payment effect from any lease that would, solely due to the implementation of IFRS 16, be accounted for as a finance or capital lease);

(2) consolidated income and social contribution taxes for such period;

(3) consolidated depreciation and amortization for such period;

(4) consolidated non-cash assets and investment impairments, asset retirement obligations; and any gain or loss resulting from the write-off of property, plant and equipment; and

(5) non-recurring or non-cash expenses,

in the case of (1) through (5) above, in respect of the Company and its Restricted Subsidiaries.

Notwithstanding the foregoing, any of the items described in clauses (1) through (5) above of any consolidated Subsidiary of the Company or a joint venture will be added to Consolidated Net Income to compute Adjusted EBITDA only to the extent (and in the same proportion) that the net income (loss) of such Subsidiary or joint venture was included in calculating Consolidated Net Income in such period.

"**Adjusted Treasury Rate**" means, with respect to any redemption date, (1) the yield, under the heading which represents the average for the immediately preceding week, appearing in the most recently published statistical release designated "H. 15(519)" or any successor publication which is published weekly by the Board of Governors of the Federal Reserve System and which establishes yields on actively traded United States Treasury securities adjusted to constant maturity under the caption "Treasury Constant Maturities" for the maturity corresponding to the Comparable Treasury Issue (if no maturity is within three months before or after February 5, 2031, yields for the two published maturities most closely corresponding to the Comparable Treasury Issue shall be determined and the Adjusted Treasury Rate shall be interpolated or extrapolated from such yields on a straight line basis, rounding to the nearest month) or (2) if such release (or any successor release) is not published during the week preceding the calculation date or does not contain such yields, the rate per year equal to the semi-annual equivalent yield to maturity of the Comparable Treasury Issue, calculated using a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date, in each case calculated on the third Business Day immediately preceding the redemption date.

"**Advance Transaction**" means an advance from a financial institution involving either (a) a foreign exchange contract (ACC – *Adiantamento sobre Contrato de Câmbio*) or (b) an export contract (ACE – *Adiantamento sobre Cambiais Entregues*). For the avoidance of doubt, any transaction that is an Advance Transactions pursuant to this definition will not be deemed to be a transaction secured by receivables.

"**Affiliate**" means, with respect to any Person, any other Person directly or indirectly controlling, controlled by, or under direct or indirect common control with, such Person. For purposes of this definition, "control" (including, with correlative meanings, the terms "controlling," "controlled by" and "under common control with") with respect to any Person, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise.

"**ANP**" means the Brazilian National Agency of Petroleum, Natural Gas and Biofuel (*Agência Nacional de Petróleo, Gás Natural e Biocombustíveis*).

"**Appraised Value**" means, with respect to any property or assets (including intangible assets), the probable sale price of such property, as described in the Independent Appraisal Reports.

"**Asset Sale**" means any sale, lease, transfer or other disposition of any assets by the Company or any Restricted Subsidiary, including by means of a merger, consolidation or similar transaction, of (A) Equity Interests of any Restricted Subsidiary (other than officers, directors and employees' qualifying shares, newly issued shares of a Restricted Subsidiary that holds substantially only Offshore Assets or shares required by applicable law to be held by a Person other than the Company or a Restricted Subsidiary); or (B) any other assets (other than Equity Interests) of the Company or any Restricted Subsidiary (each of the above referred to as a "disposition"), provided that the following are not included in the definition of "Asset Sale":

(1) a disposition by a Restricted Subsidiary to the Company or another Restricted Subsidiary or by the Company to a Restricted Subsidiary, including the sale or issuance by any Restricted Subsidiary of any Equity Interests of any Restricted Subsidiary to the Company or another Restricted Subsidiary;

(2) the disposition of any shares of Capital Stock of an Unrestricted Subsidiary or Project Finance Company;

(3) the sale of oil, gas and derivatives to clients;

(4) the disposition by the Company or any Restricted Subsidiary in the ordinary course of business of (a) cash and cash management investments, (b) inventory and other assets and other properties acquired and held for resale, (c) damaged, worn out or obsolete assets or assets or property which are no longer useful for the Company or any Restricted Subsidiary, (d) rights granted to others pursuant to leases or licenses, or (e) any property, rights or assets upon expiration of the concession term in accordance with the terms of any Concession Agreement, or (f) imposed by virtue of applicable law and/or regulation which do not materially adversely affect the value of the Consolidated Total Assets;

(5) the sale or discount of accounts receivable, including any receivables in respect of any crude oil sales, arising in the ordinary course of business;

(6) the disposition of all or substantially all of the assets of the Company, the Issuer or a Subsidiary Guarantor in a manner permitted under "*—Certain Covenants—Consolidation, Merger or Sale of Assets*" or any disposition that constitutes a Change of Control;

(7) the disposition of assets in a Sale and Leaseback Transaction permitted under "*—Certain Covenants – Limitation on Sale and Leaseback Transactions*";

(8) the Incurrence of any Lien permitted by the covenant described under "*—Restrictive Covenants—Limitation on Liens*" (but not the sale or disposition of the property subject to such Lien);

(9) a Restricted Payment permitted under "*—Certain Covenants—Limitation on Restricted Payments*" or a Permitted Investment;

(10) the issuance of Disqualified or Preferred Stock permitted under "*—Certain Covenants—Limitation on Debt*";

(11) the surrender or waiver of contract rights or the settlement, release or surrender of contract, tort or other claims;

(12) the licensing or sub-licensing of intellectual property or other general intangibles in the ordinary course of business;

(13) the sale or other disposition (regardless of whether in the ordinary course of business) of oil and gas properties; *provided that*, at the time of such sale or other disposition, the aggregate proved reserves of any property sold or disposed pursuant to this clause (after giving *pro forma* effect to the proposed sale or disposition) do not exceed one million boe;

(14) sales, transfers or other dispositions of assets for non-cash consideration at least equal to the Fair Market Value of such assets sold, to the extent that such non-cash consideration would constitute an Additional Assets to the Company or any Restricted Subsidiary; and

(15) any disposition in a transaction or series of related transactions of assets in any fiscal year with a Fair Market Value of less than US$5.0 million (or the equivalent in other currencies).

"**Attributable Debt**" in respect of a Sale and Leaseback Transaction means, as at the time of determination, the present value (discounted at the interest rate implicit in the Sale and Leaseback Transaction) of the total obligations of the lessee for rental payments during the remaining term of the lease included in such Sale and Leaseback Transaction (including any period for which such lease has been extended).

"**Board of Directors**" means, with respect to any Person, the board of directors or managers (as the case may be) or similar governing body of such Person or any duly authorized committee thereof.

"**Board Resolution**" means, with respect to any Person, a copy of a resolution certified by the Secretary or an Assistant Secretary of such Person to have been duly adopted by the Board of Directors of such Person and to be in full force and effect on the date of such certification, and delivered to the Trustee.

"**Brazilian Bankruptcy Law**" means the Brazilian Federal Law No. 11,101, dated February 9, 2005, as amended or any similar Brazilian federal or state law for the relief of debtors or the administration or liquidation of debtors' estates for the benefit of their creditors.

"**Brazilian Guarantor**" means a Guarantor that is incorporated or organized under the laws of Brazil.

"**Brazilian Share Fiduciary Transfer Agreement**" means the "*Segundo Aditamento ao Contrato de Alienação Fiduciária de Ações*" by and among 3R Petroleum Óleo e Gás S.A., 3R Potiguar S.A., 3R Bahia S.A., 3R RNCE

S.A., 3R Petroleum Offshore S.A., 3R Operações Marítimas S.A., 3R Pescada S.A. (as resigning party) and the Brazilian Collateral Agent and the Debentures Trustee, dated as of the Issue Date (as amended, supplemented, restated, modified or replaced).

"**Business Day**" means a day other than a Saturday, Sunday or any day on which banking institutions are authorized or required by law, regulation or executive order to close in New York City, New York, Luxembourg, Grand Duchy of Luxembourg, the city of São Paulo, São Paulo, or in the City of Rio de Janeiro, Rio de Janeiro.

"**Capital Expenditures**" means, with respect to the Company and the Restricted Subsidiaries on a consolidated basis at any date of determination, all expenditures for assets which, in accordance with IFRS, are required to be capitalized and so shown on the consolidated balance sheet of the Company and any Restricted Subsidiary and which are incurred for property, plant and equipment in the ordinary course of business.

"**Capital Lease**" means, with respect to any Person, any lease of any Property which, in conformity with IFRS, is required to be capitalized on the balance sheet of such Person (except for any lease which would, solely due to the implementation of IFRS 16, be accounted for as a finance or capital lease), and the Stated Maturity thereof shall be the date of the last payment of rent or any other amount due under such lease prior to the first date upon which such lease may be prepaid by the lessee without payment of a penalty.

"**Capital Stock"** means, with respect to any Person, any and all shares of stock of a corporation, partnership interests, membership interests or other equivalent interests (however designated, whether voting or non-voting) in such Person's equity, entitling the holder to receive a share of the profits and losses, and a distribution of assets, after liabilities, of such Person.

"**Capitalized Lease Obligations**" means, with respect to any Person, any lease of any property which, in conformity with IFRS, is required to be capitalized on the balance sheet of such Person, except for any lease that would, solely due to the implementation of IFRS 16, be accounted for as a finance or capital lease, and the Stated Maturity thereof shall be the date of the last payment of rent or any other amount due under such lease prior to the first date upon which such lease may be prepaid by the lessee without payment of a penalty.

"**Cash Equivalents**" means:

(i) cash existing on the Issue Date;

(ii) United States dollars, Brazilian reais or money in other currencies received in the ordinary course of business;

(iii) U.S. Government Obligations or certificates representing an ownership interest in U.S. Government Obligations, with maturities not exceeding one year from the date of acquisition;

(iv) (A) demand deposits, (B) time deposits and certificates of deposit with maturities of one year or less from the date of acquisition, (C) bankers' acceptances with maturities not exceeding one year from the date of acquisition, and (D) overnight bank deposits, in each case with any bank or trust company organized or licensed under the laws of Brazil or any political subdivision thereof or the United States or any state thereof having capital, surplus and undivided profits in excess of U.S.$500 million whose short-term debt is rated "A-2" or higher by S&P, "P-2" or higher by Moody's or "A" or higher by Fitch;

(v) repurchase obligations with a term of not more than 30 days for underlying securities of the type described in paragraphs (iii) above entered into with any financial institution meeting the qualifications specified in paragraph (iv) above;

(vi) investments in commercial paper rated at least P-1 by Moody's or A-1 by S&P and maturing within six months after the date of acquisition;

(vii) investments in securities with maturities of twelve months or less from the date of acquisition issued or unconditionally guaranteed by Brazil or a foreign country recognized by the United States, or by any political subdivision or taxing authority thereof, and rated at least "A" by S&P or "A" by Moody's (or such similar equivalent rating);

(viii) certificates of deposit, banker's acceptances and time deposits with maturities of one year or less from the date of acquisition issued or guaranteed by or placed with, and money market deposit accounts issued or offered by, any Brazilian or United States office of any Permitted Financial Institution;

(ix) money market funds substantially all the assets of which consist of investments of the type described in paragraphs (i) through (vii) above; or

(x) substantially similar investments of comparable credit quality to paragraph (i) through (ix) above, denominated in the currency of any jurisdiction in which the Company or any Restricted Subsidiary conducts business, of issuers whose country's credit rating is at least "BBB-" (or the then equivalent grade) by S&P and the equivalent rating by Moody's.

"**Change of Control**" means the occurrence of any of the following events:

(1) the direct or indirect sale, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the properties or assets of the Company and its Restricted Subsidiaries, taken as a whole, to any Person (other than a Restricted Subsidiary);

(2) the consummation of any transaction (including without limitation, any consolidation, amalgamation or merger) the result of which is that (x) any "person" or "group" of related persons (as such terms are used in Sections 13(d) and 14(d) of the Exchange Act as in effect on the Issue Date), becomes the "beneficial owner" (as defined in Rules 13d-3 and 13d-5 under the Exchange Act as in effect on the Issue Date), directly or indirectly of 50% or more of the outstanding Voting Stock of the Company, measured by voting power rather than number of shares;

(3) the Company ceases to directly or indirectly hold 100% of the Capital Stock of the Issuer; or

(4) the adoption of a plan relating to the liquidation or dissolution of the Company or the Issuer.

"**Clearstream**" means Clearstream Banking S.A. Luxembourg, a public limited company (*société anonyme*), incorporated and existing under the laws of Luxembourg, having its registered office at 42, avenue J F. Kennedy, L-1855 Luxembourg, Grand Duchy of Luxembourg and registered with the Luxembourg Commerce and Companies Register (*R.C.S., Luxembourg*) under number B 9248.

"**Code**" means the Internal Revenue Code of 1986, as amended.

"**Collateral**" means, collectively, the Share Collateral, the Concessions Collateral and the Credit Receivables Collateral.

"**Collateral Agent**" means TMF Brasil Administração e Gestão de Ativos Ltda., as Brazilian Collateral Agent and TMF Luxembourg S.A., as Luxembourg Collateral Agent, or any other TMF Sub-Agent appointed by the TMF Group New York, LLC to act as Brazilian Collateral Agent or Luxembourg Collateral Agent.

"**Concession**" means a concession contract entered into by and between the Company and/or any of its Subsidiaries, or any other Person, as the case may be, and the ANP relating to the exploration, development and production of oil and/or natural gas.

"**Concessions Collateral**" has the meaning set forth under *"—Collateral—Concession Collateral*."

"**Concession Rights Pledge Agreement**" means the "*Segundo Aditamento ao Contrato de Penhor de Direitos Emergentes de Concessões*" by and among 3R Petroleum Óleo e Gás S.A., 3R Potiguar S.A., 3R RNCE S.A., 3R Bahia S.A., 3R Pescada S.A. (as resigning party), the Collateral Agent and the Debenture Trustee, dated as of the Issue Date (as amended, supplemented, restated, modified or replaced).

"**Consolidated Net Income**" means, for any period, the aggregate net income (or loss) of the Company and the Restricted Subsidiaries for such period determined on a consolidated basis in conformity with IFRS, provided that the following (without duplication) will be excluded in computing Consolidated Net Income:

(1) the net income (but not loss) of any Person that is not a Restricted Subsidiary, except to the extent of the lesser of

(A) the dividends or other distributions actually paid in cash to the Company or any of the Restricted Subsidiaries (subject to paragraph (2) below) by such Person during such period, and

(B) the Company's pro rata share of such Person's net income earned during such period;

(2) the net income (but not loss) of any Restricted Subsidiary to the extent that the declaration or payment of dividends or similar distributions by such Restricted Subsidiary of such net income would not have been permitted for the relevant period by charter or by any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to such Restricted Subsidiary;

(3) any net after-tax gains or losses attributable to Asset Sales or the extinguishment of Debt; and

(4) any net after-tax extraordinary gains or losses.

In calculating the aggregate net income (or loss) of the Company and the Restricted Subsidiaries on a consolidated basis, income attributable to Unrestricted Subsidiaries will be excluded altogether.

"**Consolidated Net Revenues**" means, for any period, the total net sales of oil and gas and other services rendered by the Company and its Restricted Subsidiaries on a consolidated basis for the most recent twelve month period; all calculated (i) based on the consolidated income statements of the Company and its Restricted Subsidiaries for the fiscal quarter most recently ended for which financial statements are available and delivered to the Trustee, (ii) in accordance with IFRS and (iii) on a pro forma basis to give effect to any acquisition or disposition of companies, divisions, lines of businesses or operations by the Company and its Restricted Subsidiaries subsequent to such date and on or prior to the date of determination.

"**Consolidated Net Tangible Assets**" means Consolidated Total Assets minus (i) all current liabilities of the Company and its Restricted Subsidiaries on a consolidated basis and (ii) all goodwill, right-of-use software, trade names, trademarks, patents, unamortized debt discount and expense, know-how, non-compete and other like intangibles of the Company and its Restricted Subsidiaries on a consolidated basis as set forth on the consolidated balance sheet as of the most recent fiscal quarter for which financial statements are available and delivered to the Trustee.

"**Consolidated Total Assets**" means, for the Company and the Restricted Subsidiaries, at any time, the total consolidated assets of the Company and the Restricted Subsidiaries as set forth on the balance sheet as of the most recent fiscal quarter for which financial statements are available and delivered to the Trustee.

"**Comparable Treasury Issue**" means the United States Treasury security or securities selected by an Independent Investment Banker as having an actual or interpolated maturity that would be utilized, at the time of selection and in accordance with customary financial practice.

"**Comparable Treasury Price**" means, with respect to any redemption date (i) the average of the Reference Treasury Dealer Quotations for such redemption date, after excluding the highest and lowest such Reference

Treasury Dealer Quotation or (ii) if the Issuer obtains fewer than four such Reference Treasury Dealer Quotations, the average of all such quotations.

"**Credit Facilities**" means one or more credit facilities with banks or other lenders providing for revolving credit loans, working capital facilities, term loans, the issuance of letters of credit or bankers' acceptances or the like, or other instruments or agreements evidencing any other Debt, including bonds, debentures, notes or other similar instruments, in each case, as amended, supplemented, modified, waived, extended, restructured, repaid, renewed, refinanced, restated, replaced (whether or not upon termination, and whether with the original lenders or otherwise) or refunded in whole or in part from time to time.

"**Credit Receivables Collateral**" has the meaning set forth under *"—Collateral—Credit Receivables Collateral*."

"**Credit Receivables Fiduciary Assignment Agreement**" means the "*Terceiro Aditamento ao Contrato de Cessão Fiduciária de Direitos Creditórios*" by and among 3R Petroleum Óleo e Gás S.A., 3R Potiguar S.A., 3R RNCE S.A., 3R Pescada S.A. (as resigning party), the Debenture Trustee and the Collateral Agent, dated as of the Issue Date (as amended, supplemented, restated, modified or replaced).

"**Debentures**" has the meaning set forth in the preamble.

"**Debenture Holders Released Collateral**" means (1) the following oil and/or gas concessions: (a) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003629/97-43 entered between ANP and Petrobras on August 6, 1998 in relation to Água Grande field in the onshore portion of the Recôncavo basin, originating from "round zero"; (b) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003638/97-34 entered between ANP and Petrobras on August 6, 1998 in relation to Candeias field in the onshore portion of the Recôncavo basin, originating from "round zero"; (c) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003641/97-49 entered between ANP and Petrobras on August 6, 1998 in relation to Cexis field in the onshore portion of the Recôncavo basin, originating from "round zero"; (d) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003644/97-37 entered between ANP and Petrobras on August 6, 1998 in relation to Dom João field in the offshore portion of the Recôncavo basin, originating from "round zero"; (e) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003697/97-01 entered between ANP and Petrobras on August 6, 1998 in relation to Socorro field in the onshore portion of the Recôncavo basin, originating from "round zero"; (2) the Credit Receivables Collateral of 3R Bahia; and (3) the Share Collateral.

"**Debt**" means, with respect to any Person on any date of determination, without duplication:

(1) the principal in respect of indebtedness of such Person for borrowed money;

(2) the principal and premium, if any, in respect of obligations of such Person evidenced by bonds, debentures, notes or other similar instruments;

(3) all obligations of such Person to pay the deferred and unpaid purchase price of property (for the avoidance of doubt, including contingent obligations related to acquisition of property) which are recorded as liabilities under IFRS, excluding (i) trade payables arising in the ordinary course of business and (ii) deferred and unpaid purchase price for the acquisition of property in relation to which the approval of the ANP is pending or for which closing has not yet happened;

(4) all reimbursement obligations of such Person in respect of the face amount of letters of credit or other similar instruments, other than obligations with respect to letters of credit securing obligations (other than obligations described in clauses (1) through (3) above) entered into in the ordinary course of business of such Person, such as import tax credits and import transactions, to the extent such letters of credit are not drawn upon or presented, or, to the extent drawn upon or presented, the resulting obligation of the Person is paid in ten (10) Business Days following receipt by such Person of a demand for reimbursement following payment on the letter of credit;

(5) all Capitalized Lease Obligations of such Person;

(6) all Debt of other Persons secured by a Lien on any asset of such Person, whether or not such Debt is assumed by such Person;

(7) the amount of all obligations of such Person with respect to the redemption, repayment or other repurchase of any Disqualified Stock or Preferred Stock (but excluding, in each case, any accrued dividends);

(8) all obligations of such Person under Hedging Agreements; and

(9) all Debt of other Persons Guaranteed by such Person to the extent so Guaranteed

If and to the extent any of the preceding items (1) through (9) (other than letters of credit and Hedging Agreements) would appear as a liability upon a balance sheet of the specified Person prepared in accordance with IFRS.

The amount of Debt of any Person will be deemed to be:

(A) with respect to contingent obligations, the maximum liability upon the occurrence of the contingency giving rise to the obligation;

(B) with respect to Debt secured by a Lien on an asset of such Person but not otherwise the obligation, contingent or otherwise, of such Person, the lesser of (x) the Fair Market Value of such asset on the date the Lien attached and (y) the amount of such Debt;

(C) with respect to any Debt issued with original issue discount, the face amount of such Debt less the remaining unamortized portion of the original issue discount of such Debt;

(D) with respect to any Hedging Agreement provided for under item (8) above, the net amount payable if such Hedging Agreement terminated at that time due to default by such Person; and

(E) otherwise, the outstanding principal amount thereof.

"**Default**" means any event that is, or after notice or passage of time or both would be, an Event of Default.

"**Decommissioning**" means, without limitation, the following activities: (a) the removal, abandonment and disposal of debris, structures, facilities, foundations, wellheads, tanks, pipelines, flowlines, pumps, compressors, separators, heater treaters, valves, fittings, platforms and equipment and machinery of any nature and all materials contained therein, located on or used in connection with wells; (b) the clearance, restoration and remediation of the lands, sediment, soils, surface and groundwater covered or burdened by the wells, or otherwise affected by the wells and the cleanup and complete reclamation of the ground portion of the wells associated with the properties underlying such area, (in each case) in connection with such abandoning, decommissioning, removing or making safe such wells and associated facilities; and (c) the removal, remediation and abatement of any petroleum and/or gas material, any contamination or pollution (including but not limited to spilling, leaking, pumping, pouring, emitting, emptying, discharging, leaching, dumping, disposing or other release of any chemical substances, pollutant, contaminant, toxic substance, radioactive material, dangerous substance, naturally occurring radioactive materials, waste, cuttings, muds, crude oil, or petroleum product) of surface soils and water, subsurface soils, sediment, air, groundwater, or any piping, equipment, tubing or subsurface structure or strata associated with the concession area, (in each case) in connection with such abandoning, decommissioning, removing or making safe such Wells and associated facilities.

"**Decommissioning Obligations**" means certain obligations established by ANP in connection with the Decommissioning of oil and gas clusters operated by the Company and/or its Subsidiaries, including the proper plugging and abandoning of any wells, the restoration of the wellsite, if applicable, and the abandonment and decommissioning and removing and making safe of all operations of fields (including but not limited to the decommissioning of the production unit, platform, pipelines, facilities and any equipment), according to the good

oilfield practices of the petroleum industry and in compliance with concession contracts, environmental licenses, permits and the applicable laws and regulations, included, but not limited to, Resolution 817/2020 from ANP.

"**Disqualified Equity Interests**" means Equity Interests that by their terms or upon the happening of any event are:

(1) required to be redeemed or redeemable at the option of the holder prior to the Stated Maturity of the Notes for consideration other than Qualified Equity Interests, or

(2) convertible at the option of the holder into Disqualified Equity Interests or exchangeable for Debt;

provided that Equity Interests will not constitute Disqualified Equity Interests solely because of provisions giving holders thereof the right to require repurchase or redemption upon an Asset Sale or Change of Control occurring prior to the Stated Maturity of the Notes, as provided in the Indenture.

"**Disqualified Stock**" means Capital Stock constituting Disqualified Equity Interests.

"**DTC**" means The Depository Trust Company.

"**Encumbered Off-Take Agreements**" means the Encumbered Initial Off-Take Agreements and the Future Encumbered Off-Take Agreements.

"**Encumbered Concessions**" means the following oil and/or gas concessions: (a) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003808/97-62 entered between ANP and Petrobras on August 6, 1998 in relation to Macau field in the onshore portion of the Potiguar basin, originating from "round zero"; (b) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.03825/97-81 entered between ANP and Petrobras on August 6, 1998 in relation to Salina Cristal field in the onshore portion of the Potiguar basin, originating from "round zero"; (c) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48610.00007998/2004 entered between ANP and Petrobras on November 24, 2004 in relation to Sanhaçu field in the onshore portion of the Potiguar basin, originating from "round six"; (d) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003816/97-91 entered between ANP and Petrobras on August 6, 1998 in relation to Ponta do Mel field in the onshore portion of the Potiguar basin, originating from "round zero"; (e) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003818/97-16 entered between ANP and Petrobras on August 6, 1998 in relation to Redonda field in the onshore portion of the Potiguar basin, originating from "round zero"; (f) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003792/97-24 entered between ANP and Petrobras on August 6, 1998 in relation to Canto do Amaro in the onshore portion of the Potiguar basin, originating from "round zero"; (g) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48610.004003/98 entered between ANP and Petrobras on August 6, 1998 in relation to Benfica in the onshore portion of the Potiguar basin, originating from "round zero"; (h) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003784/97-04 entered between ANP and Petrobras on August 6, 1998 in relation to Alto do Rodrigues in the onshore portion of the Potiguar basin, originating from "round zero"; (i) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003799/97-73 entered between ANP and Petrobras on August 6, 1998 in relation to Fazenda Pocinho in the onshore portion of the Potiguar basin, originating from "round zero"; (j) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003800/97-51 entered between ANP and Petrobras on August 6, 1998 in relation to Guamaré in the onshore portion of the Potiguar basin, originating from "round zero"; (k) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003793/97-97 entered between ANP and Petrobras on August 6, 1998 in relation to Estreito in the onshore portion of the Potiguar basin, originating from "round zero"; (l) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003629/97-43 entered between ANP and Petrobras on August 6, 1998 in relation to Água Grande field in the onshore portion of the Recôncavo basin, originating from "round zero"; (m) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003638/97-34 entered between ANP and Petrobras on August 6, 1998 in relation to Candeias field in the onshore portion of the Recôncavo basin, originating from "round zero"; (n) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No.

48000.003641/97-49 entered between ANP and Petrobras on August 6, 1998 in relation to Cexis field in the onshore portion of the Recôncavo basin, originating from "round zero"; (o) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003644/97-37 entered between ANP and Petrobras on August 6, 1998 in relation to Dom João field in the offshore portion of the Recôncavo basin, originating from "round zero"; (p) Concession Agreement for Exploration, Development and Production of Oil and Natural Gas No. 48000.003697/97-01 entered between ANP and Petrobras on August 6, 1998 in relation to Socorro field in the onshore portion of the Recôncavo basin, originating from "round zero".

"**Encumbered Oil Hedge Agreements**" means any Oil Hedge Agreements in force as of the Issue Date.

"**Encumbered Initial Off-Take Agreements**" means the following crude oil and/or gas off-take agreements: (a) Interruptible Gas Sale and Purchase Agreement, entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.), 3R Petroleum Offshore S.A. and Companhia de Gás do Ceará – CEGÁS, on September 28, 2023, as amended; (b) Gas Sale and Purchase Agreement entered by and between 3R Petroleum Offshore S.A, 3R Bahia S.A (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Companhia de Gás do Espírito Santo – ESGÁS, on July 10, 2023, as amended; (c) Interruptible Gas Sale and Purchase Agreement entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.), 3R Petroleum Offshore S.A. and MGAS Comercializadora de Gás Natural Ltda, on September 20, 2023, as amended; (d) Gas Sale and Purchase Agreement entered by and between 3R Petroleum Offshore S.A., 3R Potiguar S.A. and Companhia Potiguar de Gás – Potigás, on October 31, 2023, as amended ; (e) Oil Sale and Purchase Agreement entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Refinaria de Mataripe S.A., on March 31, 2023, as amended; (f) Oil Sale and Purchase Agreement from the Rio Ventura cluster entered by and between Petróleo Brasileiro S.A. – Petrobras and 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.), on September 1, 2023, as amended; (g) Oil Sale and Purchase Agreement from the Água Grande, Bonsucesso, Fazenda Alto das Pedras, Pedrinhas and Tapiranga Norte fields entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Dax Oil Refino S.A., on April 24, 2023, as amended; (h) Firm Gas Sale and Purchase Agreement entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Companhia de Gás da Bahia – Bahiagás, on May 25, 2022, as amended; (i) Interruptible Gas Sale and Purchase Agreement entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Companhia de Gás da Bahia – Bahiagás, on December 29, 2022, as amended; (j) Interruptible Gas Sale and Purchase Agreement entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Galp Energia Brasil S.A. on May 5, 2022, as amended; (k) Gas Sale and Purchase Agreement for use as fuel gas entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Petróleo Brasileiro S.A. – Petrobras on December 26, 2022, as amended; (l) Gas Sale and Purchase Agreement for use as fuel gas entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.) and Petróleo Brasileiro S.A. – Petrobras on December 26, 2022, as amended; (m) Gas Sale and Purchase Agreement entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.), 3R Petroleum Offshore S.A., 3R Potiguar S.A., 3R RNCE S.A. (new corporate name of 3R Areia Branca and successor by incorporation of 3R Fazenda Belém S.A.), Petrorecôncavo S.A., SPE Miranga S.A and Potiguar E&P S.A., on August 7, 2023, as amended; (n) General Terms and Conditions for the Sale and Purchase of Gas entered by and between 3R Bahia S.A. (new corporate name of 3R Candeias and successor by incorporation of 3R Rio Ventura S.A.), 3R Petroleum Offshore S.A., 3R Potiguar S.A. and Shell Energy do Brasil Gás Ltda, on June 29, 2023, as amended.

"**Equity Interests**" means all Capital Stock and all warrants or options with respect to, or other rights to purchase, Capital Stock, but excluding Debt convertible into equity.

"**Equity Offering**" means an offering for cash, after the Issue Date, of Qualified Stock of the Company or any of its Restricted Subsidiaries to any Person (other than a Restricted Subsidiary) pursuant to (i) a public offering in accordance with applicable laws, rules and regulations or (ii) a private offering in accordance with CVM Resolution 160/2022, Section 4(a)(2) of the Securities Act, Rule 144A under the Securities Act, Regulation S under the

Securities Act, Regulation D under the Securities Act and/or any other exemption to, or in a transaction not subject to, the registration requirements of the Securities Act.

"**Euroclear**" means Euroclear Bank S.A./N.V., as operator of the Euroclear System.

"**Exchange Act**" means the United States Securities Exchange Act of 1934, as amended from time to time.

"**Excluded Subsidiary**" means (i) each Significant Subsidiary that is prohibited from guaranteeing the Notes by any requirement of law or that would require consent, approval, license or authorization of a Governmental Authority to Guarantee the Notes as determined in good faith by the board of directors of the Company whose determination will be conclusive and evidenced by a board resolution, (ii) each Significant Subsidiary that is prohibited by any applicable contractual requirement from guaranteeing the Notes on the Issue Date or at the time such Significant Subsidiary becomes a Significant Subsidiary (to the extent not incurred in connection with becoming a Restricted Subsidiary and in each case for so long as such restriction or any replacement or renewal thereof is in effect), and (iii) any Unrestricted Subsidiary.

"**Fair Market Value**" of any Property, asset, share of Capital Stock, other security, Investment or other item means, on any date, the fair market value of such Property, asset, share of Capital Stock, other security, Investment or other item on that date as determined in good faith by the management of the relevant Person.

"**Fitch**" means Fitch Ratings Inc., and any successor to its rating agency business.

"**Governmental Authority**" means the government of Brazil, the Grand Duchy of Luxembourg, the United States of America or any other nation, or of any political subdivision thereof, whether state or local, and any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative powers or functions of or pertaining to government (including any supra-national bodies such as the European Union or the European Central Bank).

"**Guarantee**" means any obligation, contingent or otherwise, of any Person directly or indirectly guaranteeing any Debt or other obligation of any other Person and, without limiting the generality of the foregoing, any obligation, direct or indirect, contingent or otherwise, of such Person (i) to purchase or pay (or advance or supply funds for the purchase or payment of) such Debt or other obligation of such other Person (whether arising by virtue of partnership arrangements, or by agreement to keep-well, to purchase assets, goods, securities or services, to take-or-pay, or to maintain financial statement conditions or otherwise) or (ii) entered into for purposes of assuring in any other manner the obligee of such Debt or other obligation of the payment thereof or to protect such obligee against loss in respect thereof, in whole or in part; provided that the term "Guarantee" does not include endorsements for collection or deposit in the ordinary course of business. The term "Guarantee" used as a verb has a corresponding meaning.

"**Guarantor**" means the Guarantors and each Person that executes a Supplemental Indenture to the Indenture providing for the guarantee of the payment of the Notes, or any successor obligor under its Note Guarantee pursuant to *"—Certain Covenants—Consolidation, Merger or Sale of Assets,*" in each case unless and until such Guarantor is released from its Note Guarantee pursuant to the Indenture.

"**Hedging Agreement**" means (i) any interest rate swap agreement, index transaction, floor transaction, interest rate cap agreement or other agreement designed to protect, hedge and cap against fluctuations in inflation and interest rates, (ii) any foreign exchange forward contract, currency swap agreement or other agreement designed to protect, hedge and cap against fluctuations in foreign exchange rates, or (iii) any puts, cap transactions, floor transactions, collar swap transactions, forward contract, commodity swap agreement, commodity futures agreements or other similar agreement designed to protect, hedge or cap against commodities price fluctuations, especially related to a Permitted Business (including, without limitation, oil, gas and methanol).

"**Hydrocarbons**" means oil, gas, casinghead gas, drip gasoline, natural gasoline, condensate, distillate, liquid hydrocarbons, gaseous hydrocarbons, natural gas liquids, and all constituents, elements or compounds thereof and products refined or processed therefrom.

"**IFRS**" means the International Financial Reporting Standards as issued by the International Accounting Standards Board as in effect from time to time.

"**Incur**" means, with respect to any Debt or Capital Stock, to incur, create, issue, assume or Guarantee such Debt or Capital Stock (and "Incurrence" and "Incurred" will have meanings correlative to the foregoing).

"**Indenture**" means the Indenture related to the Notes, as amended or supplemented from time to time.

"**Independent Appraisal Report**" means each report of an Independent Appraiser setting forth the Appraised Value of the Additional Collateral and the Property to be released, both of which shall use the same valuation method.

"**Independent Appraiser**" means (i) with respect to the appraisal of reserves or any other property comprising Concessions Collateral, any Independent Expert, or (ii) with respect to the appraisal of Property comprising Share Collateral, any independent appraisal firm with relevant and international experience in the valuation and certification of oil and gas assets from time to time appointed by the Company and certified by the Company to the Trustee by delivery of an Officer's Certificate of the Company confirming the appraisal firm's experience and qualifications as an independent appraisal firm.

"**Independent Expert**" means (i) DeGolyer and MacNaughton or any of its successor entity, or (ii) any other independent international appraisal firm with relevant experience from time to time appointed by the Company and certified as such by the Company to the Trustee by delivery of an Officer's Certificate of the Company.

"**Independent Investment Banker**" means one of the Reference Treasury Dealers appointed by the Issuer.

"**Initial Interest Rate**" has the meaning set forth under *"—Basic terms of Notes*."

"**Intercreditor and Collateral Agency Agreement**" means the Intercreditor and Collateral Agency Agreement, dated as of March 29, 2023, as amended on or about the Issue Date, and as may be further amended, restated or supplemented from time to time, by and between the Issuer, the Guarantors, the Intercreditor Agent, the Trustee, and the Collateral Agent.

"**Interest Payment Date**" means each February 5 and August 5 of each year, commencing on August 5, 2024.

"**Investment**" means:

(1) any direct or indirect advance, loan or other extension of credit to another Person,

(2) any capital contribution to another Person, by means of any transfer of cash or other property or in any other form,

(3) any purchase or acquisition of Equity Interests, bonds, notes or other Debt, or other instruments or securities issued by another Person, or

(4) any Guarantee of any obligation of another Person.

If the Company or any Restricted Subsidiary (i) sells or otherwise disposes of any Equity Interests of any direct or indirect Restricted Subsidiary so that, after giving effect to that sale or disposition, such Person is no longer a Subsidiary of the Company, or (ii) designates any Restricted Subsidiary as an Unrestricted Subsidiary in accordance with the provisions of the Indenture, the Company or such Restricted Subsidiary will be deemed to have made an Investment on the date of any such sale, disposition or designation equal to the Fair Market Value of the Company's or Restricted Subsidiary Investments in such subsidiary that were not sold or disposed of. The acquisition by any Subsidiary Guarantor or any Restricted Subsidiary of a Person that holds an Investment in a third Person will be deemed to be an Investment by such any Subsidiary Guarantor or Restricted Subsidiary in such third Person in an amount equal to the Fair Market Value of the Investment held by the acquired Person in such third Person.

"**Investment Grade**" means BBB- or higher by S&P, Baa3 or higher by Moody's and BBB- or higher by Fitch, or the equivalent of such ratings by another Rating Agency.

"**Issue Date**" means the date on which the Notes are originally issued under the Indenture.

"**Lien**" means any mortgage, pledge, security interest, encumbrance, lien or charge of any kind (including any conditional sale or other title retention agreement or Capital Lease).

"**Luxembourg Collateral Agent**" means TMF Luxembourg S.A. or each TMF Sub-Agent appointed as collateral agent in Luxembourg or any successor Luxembourg collateral agent appointed by the Collateral Agent pursuant to the terms of the Indenture.

"**Luxembourg Share Pledge Agreement**" means the first ranking share pledge agreement dated 29 March 2023, governed by Luxembourg law and entered into by and between the Company as pledgor, the Luxembourg Collateral Agent as pledgee and the Issuer as company, as confirmed by an amendment and security confirmation agreement, dated as of the Issue Date, governed by Luxembourg law and entered into by and between the Company as pledgor, the Luxembourg Collateral Agent as pledgee and the Issuer as company.

"**Marketable Securities**" means publicly traded debt or equity securities that are listed for trading on a national securities exchange and that were issued by a corporation with debt securities rated at least "AA-" from S&P or "Aa3" from Moody's.

"**Minimum Legally Required Dividends**" means, for any Person and any period, an amount equal to the minimum dividend required to be distributed under applicable law by such Person to holders of its Capital Stock during such period, which may be paid in the form of interest on shareholders' equity.

"**Moody's**" means Moody's Investors Service, Inc. and any successor to its rating business.

"**Net Cash Proceeds**" means, (a) with respect to any Asset Sale, the proceeds of such Asset Sale in the form of cash (including (A) cash payments in respect of deferred payment of principal, but not interest, pursuant to a note or installment receivable, and (B) proceeds from the conversion of other consideration received when converted to cash), net of:

(1) all brokerage commissions, and other fees and expenses related to such Asset Sale, including fees and expenses of counsel, accountants and investment bankers, title and recording tax expenses, commissions and other fees and expenses Incurred, and all federal, state, provincial, foreign and local taxes required to be paid or accrued as a liability in accordance with IFRS;

(2) provisions for taxes as a result of such Asset Sale without regard to the consolidated results of operations of the Company and the Restricted Subsidiaries;

(3) all payments, including any prepayment premiums or penalties, made on any Debt that is secured by any assets subject to such Asset Sale, in accordance with the terms of any Lien upon or other security agreement of any kind with respect to such assets, or which must by its terms, or in order to obtain a necessary consent to such Asset Sale, or by applicable law be repaid out of the proceeds from such Asset Sale;

(4) payments required to be made to holders of minority interests in the Restricted Subsidiaries or joint ventures as a result of such Asset Sale; and

(5) appropriate amounts to be provided by the seller, in accordance with IFRS, as a reserve against liabilities associated with such Asset Sale and retained by the Company or any Restricted Subsidiary after such Asset Sale, including pension and other post-employment benefit liabilities, liabilities related to environmental matters and indemnification obligations associated with such Asset Sale, with any subsequent reduction of the reserve other than by payments made and charged against the reserved amount to be deemed a receipt of cash.

(b) with respect to any Qualified Initial Public Offering, Unqualified Initial Public Offering or a Private Transaction whereby Collateral is released and thereafter sold, and such Net Cash Proceeds are used in accordance with *"—Limitation on Asset Sales*", the aggregate cash proceeds received by the Issuer or the Guarantors pursuant to such Qualified Initial Public Offering, Unqualified Initial Public Offering or Private Transaction net of (i) the reasonable direct costs relating to such Qualified Initial Public Offering, Unqualified Initial Public Offering or Private Transaction (including underwriting fees) and (ii) taxes and other governmental costs and expenses paid or reasonably estimated by the Issuer or the Guarantors to be payable as a result thereof (after taking into account any available tax credits or deductions and any tax sharing arrangements).

"**Net Leverage Ratio**" means, on any date (the "transaction date"), the ratio of:

(1) the sum of the Debt (except for (x) Debt under Oil Hedge Agreements and (y) Subordinated Debt) of the Company and the Restricted Subsidiaries at that time, *minus* (ii) the aggregate amount of cash and Cash Equivalents held by the Company and the Restricted Subsidiaries at that time, all calculated on a consolidated basis, to

(2) the aggregate amount of Adjusted EBITDA for the four fiscal quarters immediately (the "**Aggregated Adjusted EBITDA**") prior to the transaction date for which financial statements are available and delivered to the Trustee (the "**reference period**").

In making the foregoing calculation:

(3) any Debt to be repaid or redeemed on the transaction date will be excluded; and

(4) pro forma effect will be given to:

i. the creation, designation or redesignation of Restricted Subsidiaries and Unrestricted Subsidiaries,

ii. the acquisition or disposition of companies, divisions or lines of businesses by the Company and the Restricted Subsidiaries, including any acquisition or disposition of a company, division or line of business during the reference period by a Person that became a Restricted Subsidiary after the beginning of the reference period, and

iii. the discontinuation of any discontinued operations

in each case, that have occurred during the reference period as if such events had occurred, and, in the case of any disposition, the proceeds thereof applied, on the first day of the reference period for which financial statements are available and delivered to the Trustee. To the extent that *pro forma* effect is to be given to an acquisition or disposition of a company, division or line of business, the *pro forma* calculation will be (i) based upon the most recent four full fiscal operating quarters for which financial statements are available and delivered to the Trustee, and (ii) determined in good faith by a financial or accounting officer of the Company.

In connection with an acquisition or disposition of a company, division or line of business (each an "**Acquired Entity**" and each such transaction an "**Acquired Entity Transaction**") for which audited or reviewed financial statements are not available, for purposes of determining Net Leverage Ratio on any date of determination, the Aggregated Adjusted EBITDA for such Acquired Entity shall be calculated (A) in good faith by the Company based upon management reports or other similar information available to the Company (including but not limited to reserve reports and oil & gas historical production data) until the results of operations of such Acquired Entity are reflected in the financial statements of the acquirer for two full fiscal quarters following the consummation of the Acquired Entity Transaction and (B) based on the annualized Adjusted EBITDA of such Acquired Entity counted from the day of consummation of the Acquired Entity Transaction, after the results of operations of such Acquired Entity are reflected in the financial statements of the acquirer for two full fiscal quarters following the consummation of the Acquired Entity Transaction.

"**Non-Recourse Debt**" means Debt:

(1) as to which neither the Company nor any of its Restricted Subsidiaries (a) provides credit support of any kind (including any undertaking, agreement or instrument that would constitute Debt), (b) is directly or indirectly liable as a guarantor, contingently or otherwise, or (c) constitutes the lender;

(2) no default with respect to which (including any rights that the holders of the Debt may have to take enforcement action against an Unrestricted Subsidiary) would permit upon notice, lapse of time or both any holder of any other Debt of the Company or any of its Restricted Subsidiaries to declare a default on such other Debt or cause the payment of the Debt to be accelerated or payable prior to its Stated Maturity; and

(3) as to which the lenders have been notified in writing that they will not have any recourse to the stock or assets of the Company or any of its Restricted Subsidiaries.

"**Note Guarantee**" means the guarantee of the Notes by a Guarantor pursuant to the Indenture.

"**Obligations**" means, with respect to any Debt, all obligations (whether in existence on the Issue Date or arising afterwards, absolute or contingent, direct or indirect) for or in respect of principal (when due, upon acceleration, upon redemption, upon mandatory repayment or repurchase pursuant to a mandatory offer to purchase, or otherwise), premium, interest, Additional Amounts, penalties, fees, indemnification, reimbursement and other amounts payable and liabilities with respect to such Debt, including all interest accrued or accruing after the commencement of any bankruptcy, insolvency or similar case or proceeding at the contract rate (including, without limitation, any contract rate applicable upon default) specified in the relevant documentation, whether or not the claim for such interest is allowed as a claim in such case or proceeding.

"**OECD Country**" means any member of the Organization for Economic Co-operation and Development.

"**Officers' Certificate**" means an officer certificate of the Company on behalf of itself or its Subsidiaries, including the Issuer, signed by two Officers of the Company, one of whom is the principal executive officer, the principal financial officer, the treasurer or the principal accounting officer, or by any other officer and either an assistant treasurer or an assistant secretary of the Company, and delivered to the Trustee.

"**Offshore Assets**" means assets which operations are undertaken at 300 meters, or more under the sea in association with an oil, natural gas or condensate field that is under the seabed, or to activities carried out in relation to such a field, to the extent that the Offshore Assets are located, at least, 30km from the shore.

"**Opinion of Counsel**" means a written opinion of counsel, who may be an employee of or counsel for the Issuer or the Company (except as otherwise provided in the Indenture), obtained at the expense of the Issuer or the Company, or the surviving or transferee Person or a Restricted Subsidiary, and who is reasonably acceptable to the Trustee or the Collateral Agents, as the case may be.

"**Oil and Gas Business**" means:

(1) the business or activity of acquiring, exploring, exploiting, developing, producing, operating, transporting and disposing of interests in oil, natural gas, liquefied natural gas and other Hydrocarbon properties or products produced in association with any of the foregoing;

(2) any business or activity relating to oil and gas field sales and service, including trading and refining of oil and gas products; and

(3) any business or activity relating to, arising from, or necessary, appropriate or incidental to the activities described in the foregoing paragraphs (1) and (2) of this definition.

"**Oil Hedge Agreement**" means a Hedging Agreement specifically designated to protect, hedge or cap against price fluctuations of commodities directly related to the Oil and Gas Business and that is entered into with any Person that is designated as an Oil Hedge Provider by the Issuer by written notice to the Trustee.

"**Oil Hedge Obligations**" means any obligations of payment or performance of the Issuer and the Restricted Subsidiaries under each Oil Hedge Agreement (any such counterparty an "**Oil Hedge Provider**").

"**Oil Hedge Provider**" has the meaning set forth in the definition of "Oil Hedge Obligations."

"**Permitted Business**" means an Oil and Gas Business and any business or activity related to the renewable energy industry.

"**Permitted Collateral Liens**" means: (1) Liens on the Collateral to secure Obligations in respect of the Notes, the Additional Notes, the Debentures, and Oil Hedge Agreements secured by the Collateral and Additional Debt Agreements, and (2) Liens on the Collateral that rank *pari passu* with the Liens securing the Obligations in respect of the Notes, the Debentures, Oil Hedge Agreements secured by the Collateral, Additional Notes and Additional Debt permitted to be Incurred pursuant to the covenant described under "*—Certain Covenants—Limitation on Debt*," and (3) Liens on the Collateral to secure Permitted Refinancing Debt in connection with the foregoing.

"**Permitted Financial Institution**" means any of (i) Morgan Stanley & Co. LLC or any of its respective affiliates, or (ii) any other financial institution, or any of its respective affiliates, regulated by the Brazilian Central Bank or the United States Federal Reserve.

"**Permitted Investments**" means:

(1) any Investment by the Company or any Restricted Subsidiary in the Company or any Restricted Subsidiary;

(2) Cash Equivalents;

(3) any Investment by the Company or any Subsidiary of the Company in a Person, if as a result of such Investment, such Person becomes a Restricted Subsidiary or is merged or consolidated with or into, or transfers or conveys substantially all its assets to, or is liquidated into, the Company or a Restricted Subsidiary;

(4) Investments received as, or made as a result of the receipt of, non-cash consideration from an Asset Sale made pursuant to and in compliance with "*—Certain Covenants—Limitation on Asset Sales*";

(5) Hedging Agreements otherwise permitted under the Indenture or entered into in connection with the Debentures or the Intercreditor and Collateral Agency Agreement;

(6) (i) receivables owing to the Company or any Restricted Subsidiary if created or acquired in the ordinary course of business, (ii) endorsements for collection or deposit in the ordinary course of business, and (iii) stocks, obligations, securities, instruments or other obligations received in compromise or settlement of (or foreclosure with respect to) debts created in the ordinary course of business, or by reason of a composition or readjustment of debts or reorganization or similar arrangement upon the bankruptcy or insolvency of another Person, or in satisfaction of claims or judgments;

(7) Guarantees of Debt permitted to be Incurred under "*—Certain Covenants—Limitation on Debt*";

(8) payroll advances, travel and other loans or advances to, or Guarantees issued to support the obligations of, directors, officers and employees, in each case in the ordinary course of business, not in excess of US$1.0 million (or the equivalent in other currencies) outstanding at any time;

(9) any Guarantees, advances, loans and extensions of credit to customers, suppliers, services providers or operators in the ordinary course of business, including in the context of oil and gas clusters in which the Company or any Restricted Subsidiary has a working interest but is not the operator of any such oil and gas cluster;

(10) any Investment or Restricted Payment existing on, or made pursuant to written agreements existing on, the Issue Date or an Investment consisting of an extension, modification or renewal of any Investment in

existence on the Issue Date; provided that such Investment does not increase the aggregate amount of the Investment so extended, modified or renewed except by an amount equal to any premium payable pursuant to the terms thereunder or other reasonable amount paid in respect of the underlying obligations and fees and expenses incurred in connection with such replacement, refinancing or refunding;

(11) Investments which are made exclusively with Capital Stock of the Company or Restricted Subsidiary (other than Disqualified Stock);

(12) Investments in connection with pledges, deposits, payments or performance bonds made or given in the ordinary course of business or as a result of regulatory or statutory obligations within the Permitted Business, including Decommissioning Obligations;

(13) repurchases of the Notes and the related Note Guarantees;

(14) any Investments to make Capital Expenditures for the Company and any Restricted Subsidiaries; and

(15) in addition to Investments listed above, other Investments not to exceed the greater of US$80 million (or the equivalent in other currencies) and 7.5% of Consolidated Net Tangible Assets.

"**Permitted Liens**" means:

(1) Liens existing on, or granted pursuant to written agreements existing on, the Issue Date;

(2) Liens securing the Notes and any Note Guarantee pursuant to the Indenture, the Debentures, the Oil Hedge Obligations under the Oil Hedge Agreements secured by the Collateral, or any Additional Debt pursuant to Additional Debt Agreements, and the Collateral pursuant to the terms of the Security Documents;

(3) Liens securing Debt or other obligations of the Company or a Restricted Subsidiary to the Company, or a Restricted Subsidiary;

(4) pledges or deposits under worker's compensation laws, unemployment insurance laws or similar legislation, judgment liens and any deposit to secure appeal bonds in proceedings being contested in good faith to which the Company or any Restricted Subsidiary is a party (as long as no Event of Default exists as a result thereof), good faith deposits in connection with bids, tenders, contracts or leases, or to secure public or statutory obligations, surety bonds, customs duties and the like, or for the payment of rent, in each case incurred in the ordinary course of business and not securing Debt;

(5) Liens imposed by law, such as carriers', vendors', warehousemen's and mechanics' liens and other similar Liens, on the property or assets of the Company and Restricted Subsidiary arising in the ordinary course of business, in each case for sums not yet due or being contested in good faith and by appropriate proceedings;

(6) Liens in respect of Taxes which are not yet due or thereafter can be paid without penalty or which are being contested in good faith and by appropriate proceedings, and Liens under mandatory law relating to taxes, social security charges or employee payments;

(7) survey exceptions, encumbrances, easements or reservations of, or rights of others for, licenses, rights of way, sewers, electric lines, telegraph and telephone lines and other similar purposes, or zoning or other restrictions as to the use of real property, and any leases and subleases of real property, in each case not interfering in any material respect with the conduct of the business of the Company and the Restricted Subsidiaries, and which are made on customary and usual terms applicable to similar properties, including any Liens on pipelines and pipeline facilities that arise by operation of law;

(8) licenses or leases or subleases as licensor, lessor or sublessor of any of its property, including intellectual property, in the ordinary course of business;

(9) customary Liens in favor of trustees and escrow agents, and netting and setoff rights, banker's liens or similar rights and remedies as to deposit accounts or other funds maintained with a creditor depository or financial institution, in each case maintained in favor of financial institutions and counterparties to financial obligations and instruments, including Hedging Agreements;

(10) Liens in favor of issuers of surety or performance bonds or letters of credit issued pursuant to the request of and for the account of the Company or any Restricted Subsidiary in the ordinary course of business, including Liens securing reimbursement obligations with respect to letters of credit that encumber documents and other property relating to such letters of credit and the proceeds thereof;

(11) options, put and call arrangements, rights of first refusal and similar rights relating to Investments in joint ventures, partnerships and other similar investments not prohibited by the Indenture;

(12) Liens (including the interest of a lessor under a Capital Lease, Sale and Leaseback Transactions, and Purchase Money Debt) on property, equipment or asset that secure Debt Incurred for the purpose of financing (i) all or any part of the purchase price of such assets or property, equipment or asset, or (ii) the cost of construction or improvement of such asset or property (including, for the avoidance of doubt, Equity Interests, improvements, or improvements on property consisting of undeveloped land) and which attach within 180 days after the date of such acquisition, purchase or the completion of construction or improvement;

(13) Liens on property of a Person which is merged with or into the Company or any Restricted Subsidiary, or any Liens on the property or assets of any Person or other entity existing at the time such Person or other entity becomes a Restricted Subsidiary, *provided* such Liens (i) were not created in contemplation thereof (ii) do not extend to any other property of the Company or any Restricted Subsidiary, and (iii) shall secure only those obligations which it secured on the date of such merger or the date such Person becomes a Restricted Subsidiary, as the case may be;

(14) Liens on assets, property, or shares of stock of a Person at the time Company or any of the Restricted Subsidiaries acquires such assets or property, including any acquisition by means of a merger or consolidation with or into the Company or a Restricted Subsidiary of such Person, and which is not created as a result of or in connection with or in anticipation of such acquisition; *provided*, that such Liens are limited to the assets, property or shares of stock acquired (including those of a Person that becomes a Restricted Subsidiary) and may not extend to any other property owned by the Company or any Restricted Subsidiary;

(15) Liens securing Hedging Agreements that are (i) incurred in the ordinary course of business and not for speculation or (ii) entered into in connection with the Notes, the Debentures and the Intercreditor and Collateral Agency Agreement;

(16) [Reserved].

(17) extensions, renewals or replacements of any Liens referred to in paragraphs (1), (13), (14), or (17) in connection with the refinancing of the obligations secured thereby, *provided* that such Lien does not extend to any other property of the Company or any Restricted Subsidiary and, except as contemplated by the definition of Permitted Refinancing Debt, the amount secured by such Lien is not increased;

(18) Liens reserved in oil and gas mineral leases for bonus, royalty or rental payments and for compliance with the terms of such leases;

(19) any Lien imposed by applicable law or regulation and Incurred in the ordinary course of business in order to comply with regulatory or statutory obligations in the Permitted Business, including Decommissioning Obligations;

(20) Liens granted to secure borrowing from, directly or indirectly, (i) *Banco Nacional de Desenvolvimento Econômico e Social*—BNDES, *Banco do Nordeste*—BNB, *Financiadora de Estudos e Projetos*—FINEP

(including loans from any other Brazilian governmental development bank, credit agency or other entity), or (ii) the International Finance Corporation or any other international or multilateral development bank, government-sponsored agency, export-import bank or official export-import credit insurer, in each case as permitted pursuant to *"—Certain Covenants— Limitation on Debt*";

(21) any Lien on inventory, cash, receivables and related assets of the Company or any Restricted Subsidiary securing the Obligations of such Person, as long as such receivables and assets are not part of the Collateral (except for Permitted Collateral Liens), under any credit facility, lines of credit or working capital facility or in connection with any structured export or import financing or other trade transaction in the ordinary course of business; provided that the aggregate amount of receivables securing such Debt will not exceed 80% of the Company's consolidated gross revenues for the most recently concluded period of four consecutive fiscal quarters; provided, further, that Advance Transactions will not be deemed transactions secured by receivables for the purpose of the above calculation;

(22) Liens arising under joint venture agreements, partnership agreements, oil and gas leases or subleases, assignments, purchase and sale agreements, division orders, contracts for the sale, purchasing, processing, transportation or exchange of oil or natural gas, unitization and pooling declarations and agreements, development agreements, area of mutual interest agreements, licenses, sublicenses, net profits interests, participation agreements, carried working interest, joint operating, unitization, royalty, sales and similar agreements relating to the exploration or development of, or production from, oil and gas properties entered into in the ordinary course of business in a Permitted Business;

(23) Liens on, or related to, properties or assets to secure all or part of the costs incurred in the ordinary course of a Permitted Business for exploration, drilling, development, production, processing, transportation, marketing, storing, abandonment or operation; and

(24) other Liens securing obligations in an aggregate amount not exceeding the greater of (x) US$80.0 million (or the equivalent in other currencies) and (y) 7.5% of Consolidated Net Tangible Assets;

"**Person**" means an individual, a corporation, a partnership, a limited liability company, an association, a trust or any other entity, including a government or political subdivision or an agency or instrumentality thereof.

"**Preferred Stock**" means, with respect to any Person, any and all Capital Stock which is preferred as to the payment of dividends or distributions, upon liquidation or otherwise, over another class of Capital Stock of such Person.

"**Private Transaction**" means the sale of Capital Stock to any Person (other than the Company, a Restricted Subsidiary or an Affiliate of the Company) in a directly negotiated private transaction.

"**Productive Assets**" means assets (including Capital Stock or its substantial equivalent or other Investments), other than inventory, that are used or usable by the Company and its Restricted Subsidiaries in Permitted Businesses (or in the case of Capital Stock or its substantial equivalent or other Investments that represent a direct, or indirect (via a holding company), ownership or other interests held by the Company or any Restricted Subsidiary in entities engaged in Permitted Businesses).

"**Project Finance Debt**" means any Debt:

(1) which is issued, borrowed or raised (other than Debt Incurred by the Company) to finance the ownership, acquisition, construction, development and/or operation of an asset or project where there is no recourse whatsoever for repayment thereof other than: (a) recourse solely to the cash flow or net cash flow from such asset or project (including insurance proceeds); and/or (b) recourse, for the purpose only of enabling amounts to be claimed in respect of such Debt, solely to such asset or project or the income, cash flow or other proceeds deriving therefrom, provided that the extent of such recourse is limited solely to the amount of any recoveries made on any such enforcement; and

(2) with respect to which (as expressly shall be set forth in the relevant instruments governing such Debt): (a) none of the Company or its Subsidiaries other than the borrower of the Debt (i) provides credit support of any kind (including any undertaking, agreement or instrument that would constitute Debt), (ii) is directly or indirectly liable as a guarantor or otherwise, or (iii) constitutes the lender; and (b) no default (including any rights that the holders thereof may have to take enforcement action against the obligor thereof) would permit upon notice, lapse of time or both any holder of any other Debt (other than the Notes) of any of the Company or its Subsidiaries other than the borrower of the Debt to declare a default on such other Debt or cause the payment thereof to be accelerated or payable prior to its Stated Maturity.

"**Project Finance Company**" means any Person (a) which is formed or acquired for the sole purpose of (x) acquiring, developing, financing and operating the infrastructure and capital projects of such Person or (y) owning or financing any such Person described in clause (x), (b) has no Debt other than Non-Recourse Debt, or Subordinated Debt, *provided that* if such Non-Recourse Debt is a Permitted Investment, Permitted Lien, Permitted Collateral Lien or Debt of the Company or its Restricted Subsidiaries, the holding of such Non-Recourse Debt shall not affect the designation of such Person as a Project Finance Company; (c) is a Person with respect to which neither the Company nor any of its Restricted Subsidiaries has any direct or indirect obligation to maintain or preserve such Person's financial condition or to cause such Person to achieve any specified levels of operating results; and (d) has not guaranteed or otherwise directly provided credit support for any Debt of the Company or any of its Restricted Subsidiaries; *provided* that any newly-acquired or created Subsidiary of the Company or any of its Restricted Subsidiaries which are designated as Project Finance Companies shall be considered Unrestricted Subsidiaries, regardless of any other requirement.

"**Purchase Money Debt**" means Debt: (1) consisting of the deferred purchase price of an asset, conditional sale obligations, obligations under any title retention agreement and other purchase money obligations; or (2) Incurred to finance all or any part of the purchase price, or other cost of construction or improvement, of any property; provided, however, that the aggregate principal amount of such Debt does not exceed the lesser of (x) the Fair Market Value of such asset or property at the time of such purchase and (y) such purchase price or cost, including any refinancing of such Debt that does not increase the aggregate principal amount (or accreted amount, if less) of such Debt at the time it was initially Incurred (or if issued with original issue discount, the aggregate accreted value at the time of Refinancing), *plus*, in either case, premiums, interest and reasonable expenses incurred in connection therewith

"**Qualified Equity Interests**" means all Equity Interests of a Person other than Disqualified Equity Interests.

"**Qualified Initial Public Offering**" means an Equity Offering whereby the issuer receives at least US$50.0 million (or its equivalent in other currencies) in aggregate in gross proceeds, *provided that* the sale of Capital Stock under such Equity Offering will be made at Fair Market Value as determined at the time of the pricing of such Equity Offering.

"**Qualified Stock**" means all Capital Stock of a Person other than Disqualified Stock.

"**Rating Agencies**" means any of Fitch, Moody's and S&P; or if Fitch, Moody's or S&P are not making ratings of the Notes publicly available, an internationally recognized U.S. rating agency or agencies, as the case may be, selected by the Issuer, which will be substituted for Fitch, Moody's or S&P, as the case may be.

"**Rating Decline**" means that at any time within 90 days (which period shall be extended so long as the rating of the Notes is under publicly announced consideration for possible down grade by any Rating Agency) after the earlier of the (a) date of public notice of a Change of Control and (b) Company's intention or that of any Person to effect a Change of Control, either (i) the long-term credit rating of the Company (if the Rating Agencies maintain or provide such rating) or (ii) the rating of the Notes, by at least one of two of the Rating Agencies shall be decreased by one or more categories; provided that any such Rating Decline is in whole or in part based on or made in connection with a Change of Control. Notwithstanding the foregoing, no Change of Control with Rating Decline will be deemed to have occurred in connection with any particular Change of Control unless and until such Change of Control has actually been consummated.

"**Record Date**" means each February 3 and August 3 of each year.

"**Reference Treasury Dealer**" means Morgan Stanley & Co. LLC and one nationally recognized investment banking firm selected by the Issuer which is a primary United States government securities dealers in New York City.

"**Reference Treasury Dealer Quotation**" means, with respect to each Reference Treasury Dealer and any redemption date, the average, as determined by the Issuer, of the bid and asked price for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to the Issuer by such Reference Treasury Dealer at 3:30 pm New York City time on the third Business Day preceding such redemption date.

"**Restricted Cash**" means cash deposited in a financial institution or with a third party on behalf of creditors that is provided as collateral to secure Indebtedness owed to such financial institution or creditors.

"**Restricted Payment**" has the meaning set forth under *"—Certain Covenants—Limitation on Restricted Payments.*"

"**Restricted Subsidiary**" means the Issuer, any Guarantor or any other Subsidiary of the Company other than an Unrestricted Subsidiary.

"**Reversion Date**" has the meaning set forth under *"—Suspension of Certain Covenants*."

"**S&P**" means S&P Global Ratings, and any successor to its rating agency business.

"**Sale and Leaseback Transaction**" means any arrangement with any Person (other than the Company or a Restricted Subsidiary), or to which any such Person is a party, providing for the leasing to or by the Company or a Restricted Subsidiary for a period of more than three years of any property or assets which property or assets have been or are to be sold or transferred by the Company or such Restricted Subsidiary to such Person or to any other Person (other than the Company or a Restricted Subsidiary) to which funds have been or are to be advanced by such Person on the security of the leased property or assets.

"**SEC**" means the Securities and Exchange Commission or any Governmental Authority succeeding to any of its principal functions.

"**Secured Debt Agreements**" means the Indenture, the Debentures Indenture, the Oil Hedge Agreements secured by the Collateral and the Additional Debt Agreements, if any.

"**Secured Debt Providers**" means the holders of the Notes, the Debenture Holders, and, if applicable, each Oil Hedge Provider and each Additional Debt Provider.

"**Secured Obligations**" means the obligations under the Notes, the Debentures, the Oil Hedge Agreements, if any, and the Additional Debt Agreements, if any, in each case, secured by the Collateral.

"**Securities Act**" means the Securities Act of 1933, as amended.

"**Security Documents**" means, collectively, the Share Pledge Agreements, the Concession Rights Pledge Agreement, the Credit Receivables Fiduciary Assignment Agreement, the Intercreditor and Collateral Agency Agreement and any other document or instrument that creates or purports to create a Lien in favor of any Agent for the benefit of the Secured Debt Providers or otherwise designated as a "Security Document" by the Trustee and the Company.

"**Share Pledge Agreements**" means the Brazilian Share Fiduciary Transfer Agreement and the Luxembourg Share Pledge Agreement.

"**Significant Subsidiary**" of any Person means any Subsidiary that at the time of determination would constitute a "Significant Subsidiary" in accordance with Rule 1-02 under Regulation S-X under the Securities Act in effect on the Issue Date.

"**Stated Maturity**" means (i) with respect to any Debt, the date specified as the fixed date on which the final installment of principal of such Debt is due and payable or (ii) with respect to any scheduled installment of principal of or interest on any Debt, the date specified as the fixed date on which such installment is due and payable as set forth in the documentation governing such Debt, not including any contingent obligation to repay, redeem or repurchase prior to the regularly scheduled date for payment.

"**Subordinated Debt**" means any Debt of the Issuer or any Guarantor which is expressly subordinated in right of payment to the Notes or the Note Guarantees, as applicable, pursuant to a written agreement to that effect.

"**Subsidiary**" means with respect to any Person, any corporation, association or other business entity of which more than 50% of the outstanding Voting Stock is owned, directly or indirectly, by, or, in the case of a partnership, the sole general partner or the managing partner or the only general partners of which are, such Person and one or more Subsidiaries of such Person (or a combination thereof). Unless otherwise specified, "Subsidiary" means a Subsidiary of the Company.

"**Subsidiary Guarantor**" means any Subsidiary that has provided a Note Guarantee.

"**Suspended Covenants**" has the meaning set forth under *"—Suspension of Certain Covenants*."

"**Suspension Period**" has the meaning set forth under *"—Suspension of Certain Covenants*."

"**Term Loan Facility**" means the Credit and Guarantee Agreement, dated August 2, 2022, as amended on May 25, 2023 (as amended, supplemented, restated, modified, replaced or refinanced in whole or in part from time to time).

"**Treasury Rate**" means, with respect to any redemption date, the rate per annum equal to the semi-annual equivalent yield to maturity or interpolated maturity (on a day count basis) of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date.

"**Trustee**" means UMB Bank, N.A.

"**U.S. Government Obligations**" means obligations issued or directly and fully guaranteed or insured by the United States of America or by any agent or instrumentality thereof, *provided* that the full faith and credit of the United States of America is pledged in support thereof.

"**Unqualified Initial Public Offering**" means an Equity Offering other than a Qualified Initial Public Offering, *provided that* the sale of Capital Stock under such Equity Offering will be made at Fair Market Value as determined at the time of the pricing of such Equity Offering.

"**Unrestricted Subsidiary**" means:

(1) any Subsidiary of the Company that at the time of determination shall be designated an Unrestricted Subsidiary by the management of the Company in the manner provided below; and

(2) any Subsidiary of an Unrestricted Subsidiary.

The management of the Company may designate any Restricted Subsidiary of the Company (including any newly-acquired or newly-formed Subsidiary of the Company) to be an Unrestricted Subsidiary pursuant to clause (1) above unless such Subsidiary or any of its Subsidiaries owns any Capital Stock or Debt of, or owns or holds any Lien on any property of, the Company or any Restricted Subsidiary of the Company that is not a Subsidiary of the Subsidiary to be so designated; *provided, however*, that (a) such Investment and designation would be permitted under "*—Restrictive Covenants—Limitation on Restricted Payments*," (b) any transaction of the Company or any Restricted Subsidiary and such Subsidiary are in compliance with *"—Restrictive Covenants—Limitation on Transactions with Affiliates*" and (c) no Default or Event of Default has occurred or is continuing at the time of or after giving effect to such designation.

The management of the Company may designate any Unrestricted Subsidiary to be a Restricted Subsidiary; *provided, however*, that immediately after giving effect to such designation:

(i) such designation shall be deemed an Incurrence of Debt by a Restricted Subsidiary and such designation shall only be permitted if such Incurrence is permitted under "*Certain Covenants—Limitation on Debt*"; and

(ii) no Event of Default shall have occurred and be continuing.

Any such designation of a Subsidiary as a Restricted Subsidiary, and any such designation of a Subsidiary as an Unrestricted Subsidiary pursuant to the provisions above, by the management of the Company shall be evidenced to the Trustee by promptly filing with the Trustee an Officer's Certificate certifying that such designation complied with the foregoing provisions.

"**Voting Stock**" means, with respect to any Person, Capital Stock of any class or kind ordinarily having the power to vote for the election of directors, managers or other voting members of the governing body of such Person.

"**Wholly-Owned**" means, with respect to any Restricted Subsidiary, a Restricted Subsidiary all of the outstanding Capital Stock of which (other than any director's qualifying shares) is owned by the Company and one or more Wholly-Owned Restricted Subsidiaries (or a combination thereof).

TAXATION

The following summary contains a description of certain Luxembourg, Brazilian and U.S. federal income tax consequences of the acquisition, ownership and disposition of the Notes, but it does not purport to be a comprehensive description of all the tax considerations that may be relevant to a decision to purchase the Notes and does not address tax treatment of holders of the Notes under the laws of other countries or taxing jurisdictions. The summary is based upon the tax laws of Luxembourg, Brazil and the United States and regulations thereunder as in effect on the date of this Offering Memorandum, all of which are subject to change, possibly with retroactive effect. Prospective purchasers of the Notes should consult their own tax advisors as to the tax consequences of the acquisition, ownership and disposition of the Notes.

Certain Luxembourg Tax Considerations

This summary is based on the tax law of Luxembourg (unpublished case law not included) as it stands at the date of this Offering Memorandum. The tax law upon which this summary is based, is subject to changes, possibly with retroactive effect. Any such change may invalidate the contents of this summary, which will not be updated to reflect such change.

It is expected that holders of the Notes will be resident for tax purposes in different countries. Consequently, no attempt is made in this section to summarize the tax consequences for each holder of the Notes for subscribing, purchasing, owning or disposing of the Notes. These consequences will vary in accordance with the law and practice currently in force in the holders' country of citizenship, residence, domicile or incorporation and with their personal circumstances.

Tax Residency

Holders of the Notes will not become resident, nor be deemed to be resident, domiciled or carrying on business in Luxembourg solely by reason of holding, execution, performance, delivery, exchange and/or enforcement of the Notes.

Withholding Tax

Luxembourg Non-Residents

Under current Luxembourg tax law, there is no withholding tax on payments of interest (paid or accrued) made to a Luxembourg non-resident holder of the Notes. There is also no Luxembourg withholding tax upon disposal, redemption or repurchase of the Notes held by a Luxembourg non-resident holder of the Notes.

Luxembourg Residents

Under the amended Luxembourg law of 23 December 2005 (the "Relibi Law"), a 20% Luxembourg withholding tax is levied on interest or similar payments made by Luxembourg paying agents to or for the immediate benefit of an individual beneficial owner who is resident in Luxembourg. This withholding tax also applies on accrued or capitalized interest received upon disposal, redemption or repurchase of the Notes. Such withholding tax is in full discharge of income tax if the beneficial owner is an individual acting in the course of the management of his/her private wealth. Responsibility for collecting the withholding tax is assumed by the Luxembourg paying agent.

Further, Luxembourg resident individuals acting in the course of the management of their private wealth, who are the beneficial owners of interest or similar payments made by a paying agent established outside Luxembourg in a Member State of the European Union or of the European Economic Area, may opt for a final 20% levy. In such case, the 20% levy is calculated on the same amounts as for the payments made by Luxembourg paying agents. The option for the 20% final levy must cover all interest payments made by such foreign paying agents to the Luxembourg resident beneficial owner during the entire civil year. Responsibility for the declaration and payment of the 20% levy is assumed by the Luxembourg resident individual beneficial owner of the payment.

Income Tax

Luxembourg Non-Residents

Non-resident holders of the Notes that have neither a permanent establishment nor a permanent representative in Luxembourg to which or whom the Notes are attributable, are generally not liable to any income tax in Luxembourg on interest (accrued or paid), redemption premium or issue discounts under the Notes, and on gains realized upon redemption, repurchase, sale, disposal or exchange, in any form whatsoever, of the Notes.

Non-resident holders of the Notes that have a permanent establishment or a permanent representative in Luxembourg to which or whom the Notes are attributable, must include any interest (received or accrued), redemption premium or issue discounts and capital gains realized upon the disposal, in any form whatsoever, of the Notes in their taxable income for Luxembourg income tax assessment purposes.

Taxable gains are determined as being the difference between the sale, repurchase or redemption price (including accrued but unpaid interest) and the lower of the cost or book value of the Notes sold or redeemed.

Luxembourg Resident Individuals

A resident individual holder of the Notes, who acts in the course of the management of his/her private wealth, is subject to personal income tax in respect of interest received, redemption premiums or issue discounts under the Notes, except if a final withholding tax has been levied on such payments in accordance with the Relibi Law.

Gains realized upon the disposal of the Notes by a resident individual holder of the Notes, who acts in the course of the management of his/her private wealth, are not subject to personal income tax provided that the disposal takes place more than 6 (six) months after the acquisition of the Notes. A resident individual holder of the Notes, who acts in the course of the management of his/her private wealth, must further include the portion of the gain corresponding to accrued but unpaid income in respect of the Notes in his/her taxable income, insofar as the accrued but unpaid interest is indicated separately in the agreement, except if a final withholding tax has been levied on such payments in accordance with the Relibi Law.

A resident individual holder of the Notes, who acts in the course of the management of a professional or business undertaking to which the Notes are attributable, must include any interest received or accrued, as well as any gain realized on the disposal of the Notes, in any form whatsoever, in its taxable income for Luxembourg income tax assessment purposes. If applicable, the tax levied in accordance with the Relibi Law will be credited against the final tax liability of the holder of the Notes.

Taxable gains are determined as being the difference between the sale, repurchase or redemption price (including accrued but unpaid interest) and the lower of the cost or book value of the Notes sold or redeemed.

Luxembourg Resident Corporations

Luxembourg resident corporate holders of the Notes which are fully taxable companies must include any interest received or accrued, redemption premium or issue discounts under the Notes, as well as any gain realized on the disposal, in any form whatsoever, of the Notes, in their taxable income for Luxembourg income tax assessment purposes.

Taxable gains are determined as being the difference between the sale, repurchase or redemption price (including accrued but unpaid interest) and the lower of the cost or book value of the Notes sold or redeemed.

Luxembourg Residents Benefiting from a Special Tax Regime

Luxembourg resident corporate holders of the Notes which benefit from a special tax regime, such as (i) specialized investment funds subject to the amended law of 13 February 2007, (ii) family wealth management companies subject to the amended law of 11 May 2007, (iii) undertakings for collective investment subject to the amended law of 17 December 2010, or (iv) reserved alternative investment funds treated as a specialized investment

fund for Luxembourg tax purposes and subject to the law of 23 July 2016, are exempt from income taxes in Luxembourg and profits derived from the Notes are thus not subject to Luxembourg income taxes.

Net Wealth Tax

Luxembourg resident holders of the Notes as well as non-resident holders of the Notes who have a permanent establishment or a permanent representative in Luxembourg to which or whom the Notes are attributable, are subject to Luxembourg net wealth tax on such Notes, except if such holder of the Notes is (i) an individual taxpayer, (ii) a securitization vehicle subject to the amended law of 22 March 2004, (iii) a venture capital company subject to the amended law of 15 June 2004, (iv) a professional pension institution subject to the amended law of 13 July 2005, (v) a specialized investment fund subject to the amended law of 13 February 2007, (vi) a family wealth management company subject to the amended law of 11 May 2007, (vii) an undertaking for collective investment subject to the amended law of 17 December 2010, or (viii) a reserved alternative investment fund subject to the law of 23 July 2016.

However, (i) a securitization company subject to the amended law of 22 March 2004, (ii) an opaque venture capital company subject to the amended law of 15 June 2004, (iii) a professional pension institution subject to the amended law of 13 July 2005, and (iv) an opaque reserved alternative investment fund treated as a venture capital vehicle for Luxembourg tax purposes and subject to the law of 23 July 2016 remain subject to the minimum net wealth tax.

Other Taxes

Under current Luxembourg tax law, where an individual holder of the Notes is a resident of Luxembourg for inheritance tax purposes at the time of his/her death, the Notes are included in his/her taxable base for inheritance tax purposes. On the contrary, no inheritance tax is levied on the transfer of the Notes upon death of an individual holder of the Notes in cases where the deceased was not a resident of Luxembourg for inheritance tax purposes at the time of his/her death.

Gift tax may be due on a gift or donation of the Notes if the gift is recorded in a Luxembourg notarial deed or otherwise registered in Luxembourg.

No stamp duty or other tax is generally payable in Luxembourg by the holders of the Notes in connection with the issuance, transfer, redemption or repurchase of the Notes, unless such issuance, transfer, redemption or repurchase is (i) voluntarily presented before the *Administration de l'enregistrement, des domaines et de la TVA* in Luxembourg, (ii) appended to a compulsory registrable deed under Luxembourg law (*acte obligatoirement enregistrable*) or (iii) deposited with the official records of a notary (*déposé au rang des minutes d'un notaire*).

Foreign Account Tax Compliance Act, or FATCA

FATCA was enacted into U.S. law in March 2010 as part of the Hiring Incentives to Restore Employment Act. FATCA aims at reducing tax evasion by U.S. citizens and requires, among other things, foreign financial institutions outside the U.S. ("FFIs") to provide information about financial accounts held, directly or indirectly, by specified U.S. persons or face a 30% U.S. federal withholding tax imposed on certain U.S.-source payments ("FATCA Withholding").

To implement FATCA in Luxembourg, Luxembourg entered into a so-called Model 1 Intergovernmental Agreement (the "IGA") with the U.S., and a memorandum of understanding in respect thereof, on March 28, 2014. The IGA was implemented under Luxembourg domestic law by Law of July 24, 2015, or the Luxembourg FATCA Law. Luxembourg FFIs that comply with the requirements of the IGA and the Luxembourg FATCA Law will not be subject to FATCA Withholding.

Under the IGA and the Luxembourg FATCA Law, Luxembourg FFIs are required to perform certain necessary due diligence and monitoring of investors, and to report to the Luxembourg tax authorities on an annual basis information about financial accounts held by (a) specified U.S. investors, (b) certain U.S.-controlled entity investors

and (c) non-U.S. financial institution investors that do not comply with FATCA. Such information will subsequently be remitted by the Luxembourg tax authorities to the U.S. Internal Revenue Service.

Holders of the Notes may be required to provide information to the Issuer to ensure the Issuer's compliance with the IGA and the Luxembourg FATCA Law. In the event that a holder of the Notes does not provide the required information, the Issuer may need to report financial account information of the holder of the Notes to Luxembourg tax authorities.

Under relevant Luxembourg rules, failure to comply with the above mentioned legislation may lead to fines amounting (i) up to EUR 250,000.00 where the reporting obligations are not fulfilled, (ii) up to 0.5% of the amounts that should have been reported where the financial institution has not reported or reported incompletely reportable accounts and (iii) to a lump sum fine of EUR 10,000 in the event of absence or late reporting for FATCA purposes.

Holders of the Notes should consult with their own tax advisers regarding the effects of the IGA and the Luxembourg FATCA Law on their investment in the Notes.

Common Reporting Standard, or CRS

CRS aims to implement automatic exchange of financial account information among participating countries. Luxembourg is a signatory jurisdiction to the CRS and has conducted its first exchange of information with tax authorities of other signatory jurisdictions in September 2017, as regards reportable financial information gathered in relation to fiscal year 2016. The CRS has been implemented in Luxembourg via the law dated December 18, 2015 concerning the automatic exchange of information on financial accounts and tax matters and implementing the EU Directive 2014/107/EU.

The regulations may impose obligations on the Issuer and the holder of the Notes, if the Issuer is considered as a reporting financial institution (*e.g.*, an investment entity) under the CRS, so that the latter could be required to conduct due diligence and obtain (among other things) confirmation of the tax residency, tax identification number and CRS classification of the holder of the Notes in order to fulfill its own legal obligations.

Under relevant Luxembourg rules, failure to comply with the above mentioned legislation may lead to fines amounting (i) up to EUR 250,000.00 where the reporting obligations are not fulfilled, (ii) up to 0.5% of the amounts that should have been reported where the financial institution has not reported or reported incompletely reportable accounts and (iii) to a lump sum fine of EUR 10,000 in the event of absence or late reporting for CRS purposes.

Holders of the Notes should consult with their own tax advisers regarding the effects of the implementation of CRS on their investment in the Notes.

DAC 6

DAC 6 refers to the Council Directive (EU) 2018/822 on administrative cooperation in the field of taxation, which introduces mandatory disclosure rules for cross border tax arrangements.

DAC 6 was adopted on May 25, 2018 by the EU Council, and introduces an obligation on a wide range of intermediaries to disclose cross-border tax arrangements to their relevant tax authorities. The new measures aim at capturing all cross-border arrangements considered by the EU as potentially aggressive and, therefore, likely to represent a risk of tax avoidance.

The directive describes the transactions in the scope of a potential reporting as reportable cross-border arrangements. This means that any cross-border arrangement that contains at least one or several hallmarks foreseen by DAC 6, which refer to characteristics, features and examples of cross-border arrangements that present an indication of potential risk of tax avoidance, would fall within the scope of DAC 6. In principle, a cross-border arrangement becomes reportable if it meets one or more hallmarks, while certain hallmarks can only be taken into account if the main benefit test is also satisfied.

The law introducing DAC 6 into Luxembourg law has been adopted on March 25, 2020 and was effective as from July 1, 2020 (the "DAC 6 Law"). In its final version, the DAC 6 Law remains very close to the initial wording of the directive so that no additional provisions have been implemented. The hallmarks act as tools to identify transactions that could potentially present a risk of tax avoidance. Some of them work together with the main benefit test. That test will be satisfied if it can be established that the main benefit or one of the main benefits which, having regard to all relevant facts and circumstances, a person may reasonably expect to derive from an arrangement is the obtaining of a tax advantage.

Under the DAC 6 Law, failure to file information, late or incomplete filing may lead to a fine not exceeding EUR 250,000.00. The above section does not include any advice concerning whether or not an investment in the Notes should be reportable under DAC 6.

Holders of the Notes should consult their own tax advisers on the potential tax consequences with respect to DAC 6.

Pillar 2

On December 22, 2022, the EU Council adopted the Pillar 2 Directive, establishing a global minimum level of taxation for MNE groups and large-scale domestic groups in the EU. Luxembourg implemented this directive through the Pillar 2 Law on December 20, 2023, effective as from fiscal years starting on or after December 31, 2023. The Pillar 2 Law targets entities that are part of an MNE group with an annual consolidated revenue of EUR 750 million or more, enforcing a minimum effective taxation of 15% on the MNE groups through several measures. For more details on Pillar 2, see *"Risk Factors—Risks Related to the Issuer—Transposition of the Pillar 2 Directive in Luxembourg law may adversely affect us."* of this Offering Memorandum for more details on Pillar 2.

Holders of the Notes should consult their own tax advisers on the potential tax consequences with respect to Pillar 2.

ATAD III Proposal

On December 22, 2021 the European Commission released a proposal for a directive "laying down rules to prevent the misuse of shell entities for improper tax purposes and amending Directive 2011/16/EU" (the "ATAD III Proposal"). The ATAD III Proposal introduces reporting requirements for EU tax-resident undertakings – irrespective of their legal form – with inadequate operational substance in a cross-border context. In cases of inadequate substance, the benefit of tax treaties and EU Directives may be denied, which may result in an increased tax burden as well as potential administrative pecuniary penalties for failure to report or incorrect reporting (at least 5% of the undertaking's turnover in the relevant tax year). Information may further be automatically exchanged among Member States.

Once the ATAD III Proposal is adopted, the EU Member States will need to implement the proposed measures into their domestic tax legislation. The ATAD III Proposal was originally intended to be implemented by EU Member States before June 30, 2023 and to apply as from January 1, 2024. However, given the negotiations underway between certain Member States, notably under the Spanish presidency, it is still uncertain when the ATAD III Proposal will be adopted by the EU Council. On December 12, 2023, the European Parliament called on the EU Council to continue negotiations without further delay. As the gateways of the ATAD III Proposal use a reference period of the two preceding years, an undertaking's position as of January 1, 2022 may already be a reference point.

At this stage, the ATAD III Proposal is still in a draft version and in absence of additional guidance, many aspects of the proposed regime remain unclear and could be subject to interpretation.

Holders of the Notes should consult their own tax advisers on the potential tax consequences with respect to the ATAD III Proposal.

Certain Material Brazilian Tax Considerations

The following discussion summarizes the principal Brazilian tax consequences of the acquisition, ownership and disposition of the Notes by a holder that is not domiciled or resident in Brazil for Brazilian tax purposes, or a Non-Resident Holder. This discussion does not purport to be a comprehensive description of all the tax considerations that may be relevant to a decision to purchase the Notes. This summary also does not address any tax consequences under the tax laws of any state or municipality of Brazil. The present description is based on Brazilian tax law and regulations as currently applied on the date of this Offering Memorandum, which are subject to change and to differing interpretations. Any change in applicable Brazilian laws and regulations may impact the consequences described below. Each prospective purchaser of the Notes is urged to consult their own tax advisors about the particular Brazilian tax consequences of an investment in the Notes.

Payments Related to the Notes

Generally, a Non-Resident Holder is taxed in Brazil only when income derives from Brazilian sources or when the transaction giving rise to income involves assets located in Brazil. Given that the Issuer is a company incorporated under the laws of Luxembourg and is not registered to conduct business in Brazil, it would not qualify as a Brazilian resident for purposes of the Brazilian tax legislation.

Therefore, as the Issuer is considered for tax purposes as domiciled abroad, any income paid by it in respect of the Notes to a Non-Resident Holder (including interest) should not be subject to withholding or deduction in respect of Brazilian income tax or any other taxes, duties, assessments or governmental charges in Brazil, provided that such payments are made with funds held by the Issuer outside of Brazil.

If the Issuer is not successfully qualified as a non-resident of Brazil and the above position does not prevail in the event of a tax dispute, the amounts remitted abroad could be subject to Brazilian withholding income tax, or WHT, at a rate of up to 25%, *plus* interest and fines.

Gains Realized from the Sale or Other Disposition of the Notes

Capital gains realized on the sale or disposition of assets located in Brazil by a Non-Resident Holder are subject to taxation in Brazil regardless of whether the acquirer is resident or domiciled in Brazil, according to Section 26 of Law No. 10,833, enacted on December 29, 2003, and Section 18 of Law No. 9,249, enacted on December 26, 1995. Based on the fact that the Notes are issued and registered abroad, the Notes should not fall within the definition of assets located in Brazil for purposes of Law No. 10,833. Hence, gains arising from the sale or other disposition of the Notes (which for the purposes of this paragraph includes any deemed income on the difference between the issue price of the Notes and the price at which the Notes are redeemed, or "original discount") made outside Brazil by a Non-Resident Holder to another non-Brazilian resident should not be subject to Brazilian taxes.

However, considering the general and unclear scope of Law No. 10,833 and Law No. 9,249 and the absence of judicial guidance in respect thereof, we cannot assure prospective investors that such interpretation will prevail in the courts of Brazil.

As a result, in case the Notes are deemed to be assets located in Brazil, gains recognized by a Non-Resident Holder from their sale or other disposition to a non-resident or a resident in Brazil may be subject to income tax in Brazil at progressive rates, as provided for by Law No. 13,259, applicable as from January 1, 2017, that may vary from 15.0% to 22.5% depending on the amount of the gain: (i) 15% for the part of the gain up to R$5 million, (ii) 17.5% for the part of the gain that exceeds R$5 million but does not exceed R$10 million, (iii) 20% for the part of the gain that exceeds R$10 million but does not exceed R$30 million, and (iv) 22.5% for the part of the gain that exceeds R$30 million. Lower rates may be applicable to such gains as provided for in an applicable tax treaty entered into between Brazil and the country where the Non-Resident Holder is resident. In case the Non-Resident Holder making the sale or disposition is located in a Favorable Tax Jurisdiction (as defined below), the gains will be subject to a flat 25% rate. See "*—Discussion on the Concept of Favorable Tax Jurisdictions and Privileged Tax Regimes*" below.

In certain circumstances, if there is no collection of WHT on a given transaction and tax authorities take the position that the WHT should have been levied, tax authorities may increase the taxable basis of the WHT, as if the amount actually received by the Non-Resident Holder had already been reduced by the applicable WHT (gross-up).

Payments Made by the Guarantors

If, by any chance, a Brazilian source is required, as a Guarantor (a "Brazilian Guarantor"), to assume the obligation to pay any amount in connection with the Notes to a Non-Resident Holder (including principal, interest or any other amount that may be due and payable in respect of the Notes), Brazilian tax authorities could attempt to impose WHT upon such payments.

Should a Brazilian Guarantor be obligated to pay interest to a Non-Resident Holder in connection with the Notes, WHT at the rate of 15% or 25% may apply, depending on the nature of the payment and the location of the Non-Resident Holder (see "*—Discussion on the Concept of Favorable Tax Jurisdictions and Privileged Tax Regimes*" below). Lower rates may be applicable if provided for in an applicable tax treaty entered into between Brazil and the country where the Non-Resident Holder is resident.

There is some uncertainty regarding the applicable tax treatment to payments of the principal amount by a Brazilian Guarantor to Non-Resident Holders. However, there are arguments to sustain that (a) payments made under the guarantee structure should be subject to imposition of the WHT according to the nature of the guaranteed payment, in which case only interest and fees should be subject to taxation at the rates of 15% or 25%, in cases of beneficiaries located in a Favorable Tax Jurisdiction; or (b) payments made under a guarantee by Brazilian sources to non-resident beneficiaries should not be subject to WHT, to the extent that they should qualify as a credit transaction by the Brazilian party to the borrower. This is, however, a controversial issue that is still not decided by the Brazilian courts.

Furthermore, depending on the nature of the transaction (to be discussed and confirmed based on a case-by-case analysis), certain fees and commissions payable by a Brazilian source may also be subject to the following tax impacts in Brazil: (i) WHT at a rate of up to 25%; (ii) contribution of intervention in the economic domain (*Contribuição de Intervenção no Domínio Econômico* - CIDE) at a 10% rate; (iii) contribution to the social integration program (*Contribuição ao Programa de Integração Social* - PIS) and contribution to social security financing (*Contribuição para o Financiamento da Seguridade Social* - COFINS) at the total rate of 9.25%; and (iv) Tax on Services (ISS) at rates which may vary from 2% to 5%. Please note that different rates may apply if a tax treaty between the country of residence of the Non-Resident Holder and Brazil sets forth a lower rate.

Foreclosure of Collateral

The sale of assets sourced in Brazil as a result of foreclosure of any security interest may be subject to income tax in Brazil. If the seller is a non-Brazilian resident that is not in a Favorable Tax Jurisdiction, income tax on gains realized on the sale or disposal of assets located in Brazil will be subject to rates ranging from 15% to 22.5%, according to the amount of the gain, whereas if the seller is a non-Brazilian resident that is in a Favorable Tax Jurisdiction, income tax will be due at a 25% flat rate. Such income tax will be withheld from the purchase price of the secured assets and therefore may reduce the net proceeds available for the payment of the secured obligation.

Discussion on the Concept of Favorable Tax Jurisdictions and Privileged Tax Regimes

Under Brazilian tax law, a Favorable Tax Jurisdiction is defined as a country or location that (i) does not impose taxation on income, (ii) imposes income tax at a maximum rate lower than 20%, or 17% in certain cases as detailed below, or (iii) imposes restrictions on the disclosure of shareholding composition, investment ownership or the identity of the beneficial owners of earnings that are attributed to a non-resident.

On June 23, 2008, Law No. 11,727 introduced the concept of Privileged Tax Regimes, in connection with transactions subject to Brazilian transfer pricing rules and also applicable to thin capitalization/cross border interest deductibility rules. Pursuant to Law No. 11,727, a jurisdiction will be considered a Privileged Tax Regime if it (i) does not tax income or taxes it at a maximum rate lower than 20%, or 17% in certain cases as detailed below; (ii) grants tax advantages to a non-resident entity or individual (a) without the need to carry out a substantial economic

activity in the country or in the territory or (b) conditioned to the non-exercise of a substantial economic activity in the country or in the territory; (iii) does not tax or taxes foreign sourced income at a maximum rate lower than 20%, or 17% in certain cases as detailed below; or (iv) restricts the ownership disclosure of assets and ownership rights or restricts disclosure about economic transactions carried out.

On June 4, 2010, Brazilian tax authorities enacted Normative Instruction No. 1,037 ("IN 1,037/10") listing (1) the countries and jurisdictions considered as Favorable Tax Jurisdictions; and (2) Privileged Tax Regimes. This is an exhaustive list.

On November 28, 2014, the Ministry of Finance issued Ordinance No. 488 narrowing the concept of Favorable Tax Jurisdictions and Privileged Tax Regimes to those that impose taxation on income at a maximum rate lower than 17%, if the relevant jurisdiction is committed to adopt international standards on tax transparency. Under Brazilian law, the aforementioned commitment is present if the relevant jurisdiction (i) has entered into (or concluded the negotiation of) an agreement or convention authorizing the exchange of information for tax purposes with Brazil and (ii) is committed to the actions discussed in international forums on tax evasion in which Brazil has been participating, such as the Global Forum on Transparency and Exchange of Information.

Although we believe that the best interpretation of the current tax legislation could lead to the conclusion that the above-mentioned concept of Privileged Tax Regime should apply solely for purposes of Brazilian tax rules related to transfer pricing and thin capitalization rules, stricter deductibility rules and other specific situations for specific taxpayers, one cannot assure that subsequent legislation or interpretations by the Brazilian tax authorities regarding the definition of a Privileged Tax Regime provided by Law No. 11,727 will not also apply for purposes of the imposition of Brazilian WHT on payments of interest to a Non-Resident Holder. Currently, the understanding of the Brazilian tax authorities is that only payments to countries deemed Favorable Tax Jurisdictions by IN 1,037/10 would be subject to withholding tax at a 25% rate. (Answer to Advance Tax Ruling Request COSIT n. 575, of December 20, 2017).

In any case, if Brazilian tax authorities determine that payments made to a Non-Resident Holder under a Privileged Tax Regime are subject to the same rules applicable to payments made to Non-Resident Holders located in a Favorable Tax Jurisdiction, the WHT applicable to such payments could be assessed at a rate up to 25%.

We recommend that prospective investors consult their own tax advisors from time to time to verify any possible tax consequences arising of IN 1,037/10, as amended, and Law No. 11,727.

Other Brazilian Tax Considerations

Pursuant to Decree No. 6,306, of December 14, 2007, as amended, conversions of foreign currency into Brazilian currency or vice versa are subject to the Tax on Foreign Exchange Transactions (*Imposto sobre Operações de Crédito, Câmbio e Seguro, ou relativas a Títulos de Valores Mobiliários* – "IOF Exchange"), including potential foreign exchange transactions in connection with payments made by a Guarantor under a Note Guarantee to Non-Resident Holders. As of the date of this Offering Memorandum, the IOF/Exchange rate is 0.38% for most foreign exchange transactions, which would potentially apply to foreign exchange transactions in connection with payments under a Note Guarantee by a Brazilian Guarantor to Non-Resident Holders.

In addition, in the event payments by a Brazilian Guarantor made under its Note Guarantee are qualified as credit transactions between the Brazilian Guarantor and the Issuer, Brazilian tax authorities could impose the "IOF/Credit," which also applies to credit transactions in general, which may include the performance of guaranteed transactions between a guarantor and a guaranteed party. IOF/Credit is not levied on foreign credit transactions in which the creditor is domiciled outside Brazil, in which case IOF/Exchange will apply. IOF/Credit levied on credit transactions is usually assessed at a daily rate of 0.0041% when the debtor is a legal entity or at a daily rate of 0.0082% when the debtor is an individual, up to a limit of 365 days. Additionally, an IOF/Credit surtax of 0.38% is applicable to most of the credit transactions, regardless of the term to maturity for the transaction.

Despite the above, in any case, the Brazilian government is allowed to reduce the IOF/Exchange rate at any time down to 0% or increase the IOF/Exchange rate at any time up to 25%, but only with respect to future foreign exchange transactions.

Stamp, Transfer or Similar Taxes

Generally, there are no stamp, transfer or other similar taxes in Brazil applicable to the transfer, assignment or sale of the Notes outside Brazil, nor any federal inheritance, donation or succession tax applicable to the ownership, transfer or disposition of the Notes, except for donation and inheritance taxes imposed by some states of Brazil on gifts and bequests by a Non-Resident Holder to individuals or entities domiciled or residing within such Brazilian states.

The above description is not intended to constitute a complete analysis of all Brazilian tax consequences relating to the ownership of Notes. Prospective purchasers of Notes should consult their own tax advisors concerning the tax consequences of their particular situations.

Certain U.S. Federal Income Tax Considerations

The following is a general discussion, based upon present law, of certain U.S. federal income tax considerations for prospective purchasers of the Notes. The discussion addresses only persons that purchase Notes in the original offering at their "issue price" (*i.e.*, the first price at which a substantial amount of the Notes is sold to the public for cash, excluding sales to bond houses, brokers or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers), hold the Notes as capital assets, and, in the case of U.S. Holders (as defined below), use the U.S. dollar as their functional currency. The discussion does not consider the circumstances of particular purchasers, some of which (such as financial institutions, insurance companies, regulated investment companies, real estate investment trusts, tax exempt organizations, dealers in securities, traders in securities who elect to mark their securities to market, persons required to accelerate the recognition of any item of gross income as a result of such income being recognized on an "applicable financial statement," and persons holding the Notes as part of a hedge, straddle, conversion, constructive sale or integrated transaction) are subject to special tax regimes. The discussion does not address any U.S. state, local or non-U.S. taxes, U.S. federal estate or gift taxes, the Medicare contribution tax on net investment income or any alternative minimum tax. Prospective investors should note that no rulings have been, or are expected to be, sought from the U.S. Internal Revenue Service (the "IRS") with respect to any of the U.S. federal income tax consequences discussed below, and we cannot assure you that the IRS or a court will not take contrary positions.

EACH PROSPECTIVE PURCHASER IS URGED TO CONSULT ITS OWN TAX ADVISOR ABOUT THE TAX CONSEQUENCES OF AN INVESTMENT IN THE NOTES UNDER THE FEDERAL, STATE AND LOCAL LAWS OF THE UNITED STATES AND THE LAWS OF ANY OTHER JURISDICTION WHERE THE PURCHASER MAY BE SUBJECT TO TAXATION.

For purposes of this discussion, "U.S. Holder" means a beneficial owner of a Note that for U.S. federal income tax purposes is:

- a citizen or individual resident of the United States;
- a corporation organized in or under the laws of the United States, any state thereof or the District of Columbia;
- a trust subject to the control of one or more U.S. persons and the primary supervision of a U.S. court or that has validly elected to be treated as a U.S. person; or
- an estate the income of which is subject to U.S. federal income taxation regardless of its source.

"Non-U.S. Holder" means a person that is a beneficial owner of a Note that is neither a partnership (or any other entity or arrangement treated as a partnership for U.S. federal income tax purposes) nor a U.S. Holder.

The treatment of a partnership (or any other entity or arrangement treated as a partnership for U.S. federal income tax purposes), or partners in such a partnership (or other entity or arrangement), that owns Notes may depend on the status of such partners and the status and activities of the partnership. Such partnerships or partners should consult their own tax advisors about the consequences of an investment in the Notes.

Potential Contingent Payment Debt Instrument Treatment

In certain circumstances, the Issuer may be required to make payments with respect to a Note that would change the yield of the Note. See "*Description of Notes—Repurchase of Notes upon a Change of Control that results in a Rating Decline*" and "*Description of Notes—Optional Redemption.*" This obligation may implicate the provisions of Treasury regulations relating to contingent payment debt instruments ("CPDIs"). According to the applicable Treasury regulations, certain contingencies will not cause a debt instrument to be treated as a CPDI if such contingencies, as of the date of issuance, are "remote or incidental" or certain other circumstances apply. The Issuer intends to take the position that the Notes are not CPDIs. This determination, however, is not binding on the IRS and if the IRS were to challenge this determination, a U.S. Holder may be required to accrue income on the Notes that such holder owns in excess of stated interest, and to treat as ordinary income rather than capital gain any income realized on the taxable disposition of such Notes before the resolution of the contingencies. If the Notes are not CPDIs, but such contingent payments were required to be made, such payments would affect the amount and timing of the income that a U.S. Holder recognizes. U.S. Holders are urged to consult their own tax advisors regarding the potential application to the Notes of the CPDI rules and the consequences thereof. The remainder of this discussion assumes that the Notes will not be treated as CPDIs.

Effect of Substitution of the Issuer

In the event that the Issuer is replaced as principal debtor in respect of the Notes as a result of the provisions described under "*Description of Notes—Substitution of the Issuer,*" such substitution could result in a deemed exchange of the Notes as in place prior to such substitution for "new" Notes as in place after such substitution (the "New Notes") for U.S. federal income tax purposes. If such substitution results in a deemed exchange for U.S. federal income tax purposes, it would generally be treated as a taxable transaction for U.S. federal income tax purposes in which U.S. Holders would be required to recognize any gain or loss (although any loss could be disallowed). Furthermore, for U.S. federal income tax purposes, the New Notes deemed issued in such a deemed exchange could be treated as issued with original issue discount. In such event, U.S. Holders would be required to include such original issue discount in their income as it accrues, in advance of the receipt of cash corresponding to such income, regardless of their regular method of tax accounting. In addition, the determination of whether the New Notes are treated as CPDIs as a result of the possibility of additional payments, as further described above under "*—Potential Contingent Payment Debt Instrument Treatment,*" would be made at the time of the substitution. U.S. Holders should consult their own tax advisors as to the U.S. federal income tax considerations relating to the potential deemed exchange of the Notes in connection with a substitution of the Issuer.

Interest

Stated interest paid to a U.S. Holder, and any Additional Amounts with respect to withholding tax on the Notes (including the amount of tax withheld from payments of interest and Additional Amounts), will be includible in the U.S. Holder's gross income as ordinary interest income at the time the interest and Additional Amounts are received or accrued in accordance with the U.S. Holder's regular method of tax accounting for U.S. federal income tax purposes. It is expected, and the remainder of this discussion assumes, that the Notes will not be issued with original issue discount for U.S. federal income tax purposes.

Interest on the Notes generally will be treated as foreign source income for U.S. federal income tax purposes and generally will constitute "passive category" income for most U.S. Holders. Subject to generally applicable restrictions and conditions (including a minimum holding period requirement and requirement that the withholding tax constitutes a "covered withholding tax" under Treasury regulations), a U.S. Holder generally will be entitled to a foreign tax credit in respect of any foreign income taxes withheld on interest payments on the Notes. Alternatively, a U.S. Holder may be able to deduct such taxes in computing taxable income for U.S. federal income tax purposes, provided that, in the case of any "covered withholding tax," the U.S. Holder has elected to deduct all foreign income taxes paid or accrued for the relevant taxable year. The rules governing the foreign tax credit are complex and Treasury regulations have imposed additional requirements that must be met for a foreign tax to be creditable including requirements that a "covered withholding tax" be imposed on nonresidents in lieu of a generally applicable tax that satisfies the regulatory definition of an "income tax," which may be unclear or difficult to determine (although a recent IRS notice provides temporary relief from certain of these requirements if the notice is applied consistently to all foreign taxes paid during the relevant taxable year until the date that a notice or other

guidance withdrawing or modifying the temporary relief is issued (or any later date specified in such notice or other guidance)). U.S. Holders are urged to consult their tax advisors regarding the availability of the foreign tax credit or a deduction for foreign taxes paid under their particular circumstances.

Sale, Exchange or Other Taxable Disposition

Upon the sale, exchange or other taxable disposition (including redemption) of a Note, a U.S. Holder generally will recognize taxable gain or loss equal to the difference, if any, between the amount realized on the sale, exchange or other taxable disposition (other than amounts attributable to accrued but unpaid interest, which will be taxable as interest as described above to the extent not previously included in income) and the U.S. Holder's adjusted tax basis in the Note. A U.S. Holder's adjusted tax basis in a Note generally will be equal to the amount that the U.S. Holder paid for the Note. Any such gain or loss generally will be capital gain or loss and generally will be long-term capital gain or loss if the Note has been held for more than one year at the time of its sale, exchange or other taxable disposition. Certain non-corporate U.S. Holders (including individuals) may be eligible for preferential rates of U.S. federal income tax in respect of long-term capital gains. The deductibility of capital losses is subject to limitations.

Any gain or loss realized on the sale, exchange or other taxable disposition of a Note generally will be treated as U.S. source gain or loss, as the case may be. If any gain from the sale, exchange or other taxable disposition of a Note is subject to foreign tax, U.S. Holders may not be able to credit such tax against their U.S. federal income tax liability under the U.S. foreign tax credit limitations. Under Treasury regulations, foreign tax imposed on such U.S. source gain may not constitute a creditable tax if certain requirements are not met for a foreign tax to be creditable including requirements that a "covered withholding tax" be imposed on nonresidents in lieu of a generally applicable tax that satisfies the regulatory definition of an "income tax," which may be unclear or difficult to determine (although a recent IRS notice provides temporary relief from certain of these requirements if the notice is applied consistently to all foreign taxes paid during the relevant taxable year until the date that a notice or other guidance withdrawing or modifying the temporary relief is issued (or any later date specified in such notice or other guidance)). Moreover, even if the foreign tax is a creditable tax, in the case of a gain from the disposition of a Note that is subject to foreign income tax, the U.S. Holder may be unable to benefit from the foreign tax credit for that foreign income tax unless such tax can be credited (subject to applicable limitations) against U.S. federal income tax due on other income that is treated as derived from foreign sources. Alternatively, the U.S. Holder may take a deduction for the foreign income tax, provided that if such foreign tax is a "covered withholding tax," the U.S. Holder does not elect to claim a foreign tax credit with respect to any foreign income taxes paid or accrued during the relevant taxable year and elects to deduct all foreign income taxes paid or accrued for the relevant taxable year. The rules governing the foreign tax credit are complex. U.S. Holders are urged to consult their tax advisors regarding the availability of the foreign tax credit under their particular circumstances.

Non-U.S. Holders

Subject to the discussion of backup withholding below, a non-U.S. Holder generally will not be subject to U.S. federal withholding tax on interest (including Additional Amounts) on, or gain with respect to, the Notes. A non-U.S. Holder also generally will not be subject to U.S. federal income tax with respect to interest (including Additional Amounts) received in respect of the Notes or gain realized on the sale, exchange or other taxable disposition (including redemption) of the Notes, unless (i) the interest or gain is effectively connected with the conduct by the non-U.S. Holder of a trade or business within the United States (and, if required by an applicable tax treaty, is attributable to a permanent establishment or fixed base in the United States) or (ii) in the case of gain realized by an individual Non-U.S. Holder, the non-U.S. Holder is present in the United States for 183 days or more in the taxable year of the disposition and certain other conditions are met.

Backup Withholding and Information Reporting

Information reporting generally will apply to payments of principal of, and interest on, Notes (including Additional Amounts), and to proceeds from the sale, exchange or other taxable disposition (including redemption) of Notes within the United States, or paid by a U.S. payor or U.S. middleman, to a U.S. Holder (other than an exempt recipient). Backup withholding may be required on reportable payments if the holder fails to furnish its correct taxpayer identification number or otherwise fails to comply with, or establish an exemption from, information reporting and backup withholding requirements. Non-U.S. Holders may be required to comply with applicable

certification procedures to establish that they are not U.S. Holders in order to avoid the application of information reporting and backup withholding. Backup withholding is not an additional tax. A holder of Notes generally will be entitled to credit any amounts withheld under the backup withholding rules against its U.S. federal income tax liability or to obtain a refund of the amounts withheld, provided the required information is furnished to the IRS in a timely manner.

"Specified Foreign Financial Asset" Reporting

Owners of "specified foreign financial assets" with an aggregate value in excess of U.S.$50,000 (and in some circumstances, a higher threshold) may be required to file an information statement with respect to such assets with their U.S. federal income tax returns, currently on IRS Form 8938. The Notes generally are expected to constitute "specified foreign financial assets" unless they are held in accounts maintained by financial institutions. U.S. Holders are urged to consult their tax advisors regarding the application of this legislation to their ownership of the Notes.

THE ABOVE DESCRIPTION IS NOT INTENDED TO CONSTITUTE A COMPLETE ANALYSIS OF ALL TAX CONSEQUENCES RELATING TO THE OWNERSHIP OF THE NOTES. PROSPECTIVE PURCHASERS OF NOTES SHOULD CONSULT THEIR OWN TAX ADVISORS CONCERNING THE TAX CONSEQUENCES OF THEIR PARTICULAR SITUATIONS.

ERISA AND CERTAIN OTHER CONSIDERATIONS

The United States Employee Retirement Income Security Act of 1974, as amended, which we refer to as "ERISA," imposes certain requirements on "employee benefit plans" (as defined in Section 3(3) of ERISA) subject to ERISA, including entities such as collective investment funds and separate accounts whose underlying assets include the assets of such plans (collectively, the ERISA plans) and on those persons who are fiduciaries with respect to ERISA plans. Investments by ERISA plans are subject to ERISA's general fiduciary requirements, including, but not limited to, the requirement of investment prudence and diversification and the requirement that an ERISA plan's investments be made in accordance with the documents governing the ERISA plan.

Section 406 of ERISA and Section 4975 of the Internal Revenue Code of 1986, as amended, which we refer to as the "Code," prohibit certain transactions involving the assets of an ERISA plan as well as those plans that are not subject to ERISA but which are subject to Section 4975 of the Code, such as individual retirement accounts (together with ERISA plans, the Plans) and certain persons (referred to as "parties in interest" for purposes of ERISA or "disqualified persons" for purposes of the Code) having certain relationships to such Plans, unless a statutory or administrative exemption is applicable to the transaction. A party in interest or disqualified person who engages in a prohibited transaction may be subject to excise taxes and other penalties and liabilities under ERISA and the Code.

Governmental plans, non-U.S. plans and certain church and other plans, while not subject to the fiduciary responsibility provisions of ERISA or the prohibited transaction provisions of Section 406 of ERISA or Section 4975 of the Code, may nevertheless be subject to other federal, state, local or non-U.S. laws that are substantially similar to the foregoing provisions of ERISA and the Code. Fiduciaries of any such plans should consult with their counsel before purchasing any bonds.

The fiduciary of a Plan that proposes to purchase and hold any bonds should consider, among other things, whether such purchase and holding may involve (i) the direct or indirect extension of credit to a party in interest or a disqualified person, (ii) the sale or exchange of any property between a Plan and a party in interest or a disqualified person, or (iii) the transfer to, or use by or for the benefit of, a party in interest or disqualified person, of any Plan assets. Such parties in interest or disqualified persons could include, without limitation, the Company, the initial purchasers or any of their respective affiliates. Depending on the satisfaction of certain conditions which may include the identity of the Plan fiduciary making the decision to acquire or hold the bonds on behalf of a Plan, Section 408(b)(17) of ERISA or Prohibited Transaction Class Exemption ("PTCE") 84-14 (relating to transactions effected by a "qualified professional asset manager"), PTCE 90-1 (relating to investments by insurance company pooled separate accounts), PTCE 91-38 (relating to investments by bank collective investment funds), PTCE 95-60 (relating to investments by insurance company general accounts) or PTCE 96-23 (relating to transactions directed by an in-house asset manager) (collectively, the "Class Exemptions") could provide an exemption from the prohibited transaction provisions of ERISA and Section 4975 of the Code. Neither the Issuer nor the Guarantors can assure you that any exemption will be available with respect to any particular transaction involving the bonds, or, if available, that any particular exemption will cover all possible prohibited transactions. By its purchase of any bonds, the purchaser thereof, and any transferee thereof, will be deemed to have represented and agreed either that (a) it is not and for so long as it holds the bonds will not be an ERISA plan or other Plan, an entity whose underlying assets include the assets of any such ERISA Plan or other governmental plan, church plan or non-U.S. plan which is subject to any federal, state, local or non-U.S. law that is substantially similar to the provisions of Section 406 of ERISA or Section 4975 of the Code or (b) its purchase and holding of the bonds will not result in a prohibited transaction under Section 406 of ERISA or Section 4975 of the Code (or, in the case of a governmental plan, church plan or non-U.S. plan, any substantially similar federal, state, local or non-U.S. law) for which an exemption is not available.

Each purchaser and holder of any Note that is a Plan will be deemed to represent that none of the Issuer, the Guarantors and the Initial Purchasers or other persons that provide marketing services, or any of their affiliates (each, a "Transaction Party," and collectively, the "Transaction Parties") has provided any investment recommendation or investment advice on which it, or any fiduciary or other person investing the assets of the Plan ("Plan Fiduciary"), has relied in connection with its decision to invest in Notes, and they are not otherwise acting as a fiduciary, as defined in Section 3(21) of ERISA or Section 4975(e)(3) of the Code, to the Plan or the Plan Fiduciary in connection

with the Plan's acquisition of Notes; and (ii) the Plan Fiduciary is exercising its own independent judgment in evaluating the transaction.

The foregoing discussion is general in nature and not intended to be all inclusive. Any Plan fiduciary who proposes to cause a Plan to purchase any bonds should consult with its counsel regarding the applicability of the fiduciary responsibility and prohibited transaction provisions of ERISA and Section 4975 of the Code to such an investment, and to confirm that such investment will not constitute or result in a prohibited transaction or any other violation of an applicable requirement of ERISA.

The sale of bonds to a Plan is in no respect a representation by the Issuer, the Guarantors or the initial purchasers that such an investment meets all relevant requirements with respect to investments by Plans generally or any particular Plan, or that such an investment is appropriate for Plans generally or any particular Plan.

PLAN OF DISTRIBUTION

Subject to the terms and conditions in the purchase agreement among the Issuer, the Guarantors and Morgan Stanley & Co. LLC, Banco BTG Pactual S.A. – Cayman Branch, Citigroup Global Markets Inc., Deutsche Bank Securities Inc., HSBC Securities (USA) Inc., Itau BBA USA Securities, Inc., Santander US Capital Markets LLC and UBS Securities LLC as the Initial Purchasers, the Issuer has agreed to sell to the Initial Purchasers, and the Initial Purchasers have agreed to purchase from the Issuer, the principal amount of Notes set forth opposite the Initial Purchasers' names below:

Initial Purchasers	Principal Amount of Notes
Morgan Stanley & Co. LLC	U.S.$76,220,000
Banco BTG Pactual S.A. – Cayman Branch	U.S.$76,220,000
Citigroup Global Markets Inc.	U.S.$53,353,000
Deutsche Bank Securities Inc.	U.S.$53,353,000
HSBC Securities (USA) Inc.	U.S.$53,353,000
Itau BBA USA Securities, Inc.	U.S.$65,549,000
Santander US Capital Markets LLC	U.S.$56,403,000
UBS Securities LLC	U.S.$65,549,000
Total	**U.S.$500,000,000**

Banco BTG Pactual S.A. – Cayman Branch is not a broker-dealer registered with the U.S. Securities and Exchange Commission, or SEC, and therefore may not make sales of any Notes in the United States or to U.S. persons except in compliance with applicable U.S. laws and regulations. To the extent that Banco BTG Pactual S.A. – Cayman Branch intends to sell the Notes in the United States, it will do so only through BTG Pactual US Capital, LLC or one or more U.S. registered broker-dealers, or otherwise as permitted by applicable U.S. law.

Pursuant to the terms of the purchase agreement, the offering of the Notes by the Initial Purchasers is subject to, among other conditions, the delivery of certain certificates from our officers, legal opinions by our, the guarantors' and their legal counsel in Brazil, Luxembourg and in the United States and comfort letters from our independent auditors.

The Initial Purchasers initially propose to offer the Notes for resale at the issue price that appears on the cover of this Offering Memorandum. After the initial offering, the Initial Purchasers may change the offering price and any other selling terms. The Initial Purchasers may offer and sell Notes through certain of their affiliates.

The Initial Purchasers are offering the Notes subject to their acceptance of the Notes from us and subject to prior sale. The Initial Purchasers reserve the right to withdraw, cancel or modify offers to investors and to reject orders in whole or in part. In addition, the Initial Purchasers have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

No Sales of Similar Securities

In the purchase agreement, the Issuer and the Guarantors have agreed that:

- They will not offer or sell any of their debt securities (other than the Notes) for a period of 90 days after the date of this Offering Memorandum without the prior consent of the Initial Purchasers.
- They will indemnify the Initial Purchasers against certain liabilities, including liabilities under the Securities Act, or contribute to payments that the Initial Purchasers may be required to make in respect of those liabilities.

Notes Are Not Being Registered

The Notes (and the related Note Guarantees) have not been registered under the Securities Act or the securities laws of any other place. In the purchase agreement, the Initial Purchasers have agreed that:

- The Notes may not be offered or sold within the United States or to U.S. persons except pursuant to an exemption from the registration requirements of the Securities Act or in transactions not subject to those registration requirements.
- During the initial distribution of the Notes, it will offer or sell Notes only to qualified institutional buyers that are also qualified purchasers (as defined in Section 2(a)(51) of the Investment Company Act), in compliance with Rule 144A and outside the United States in compliance with Regulation S to persons that are not "U.S. persons" as defined in Regulation S.

New Issue of Notes

The Notes are a new issue of securities, and there is currently no established trading market for the Notes. In addition, the Notes are subject to certain restrictions on resale and transfer as described under "*Transfer Restrictions*." Application will be made for the listing of the Notes on the SGX-ST. There can be no assurance that the application will be approved, nor that such listing will be maintained. The offering and settlement of the Notes is not conditioned upon obtaining the listing. There can be no assurance that the prices at which the Notes will sell in the market after this offering will not be lower than the initial offering price or that an active trading market for the Notes after the completion of the offering will develop and continue after this offering. The Initial Purchasers may make a market in the Notes after completion of the offering, but will not be obligated to do so and may discontinue any market-making activities at any time without notice. No assurance can be given as to the liquidity of the trading market for the Notes or that an active public market for the Notes will develop. If an active trading market were to develop, the Notes could trade at prices that may be higher or lower than the initial offering price depending on many factors, including prevailing interest rates, our results of operations and financial condition, prospects for other companies in our industry, political and economic developments in and affecting Brazil, the risk associated with Brazilian and other issuers of similar securities, the ability (including as a result of regulatory requirements or developments such as the SEC's interpretation of Rule 15c2-11 and its application to debt securities) and interest of securities dealers in making a market for the Notes and the market for similar securities. If an active public trading market for the Notes does not develop, the market price and liquidity of the Notes may be adversely affected. If the Notes are traded, they may trade at a discount from their initial offering price, depending on prevailing interest rates, the market for similar securities, our operating performance and financial condition, general economic conditions and other factors.

You should be aware that the laws and practices of certain countries require investors to pay stamp taxes and other charges in connection with purchases of securities.

Selling Restrictions

Brazil

The Notes have not been, and will not be, registered with the CVM. This Offering Memorandum is not addressed to Brazilian residents and it should not be forwarded or distributed to, nor read or consulted by, acted on or relied upon by Brazilian residents. Any investment to which this Offering Memorandum relates is available only to non-Brazilian residents and will be engaged in only with non-Brazilian residents. If you are a Brazilian resident and received this Offering Memorandum, please destroy any copies.

Canada

The Notes may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Notes must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this Offering Memorandum (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the

time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 Underwriting Conflicts (NI 33-105), the Initial Purchasers are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Chile

The offer of the Notes will begin on January 22, 2024 and is subject to General Rule No. 336 dated June 27, 2017 of the Chilean Securities Commission, currently the Commission for the Financial Market (*Comisión para el Mercado Financiero*, or the "CMF"). The Notes being offered are not registered in the Securities Registry (*Registro de Valores*) or in the Foreign Securities Registry *(Registro de Valores Extranjeros*) of the CMF and, therefore, the Notes are not subject to the supervision of the CMF. As unregistered securities, we are not required to disclose public information about the Notes in Chile. The Notes may not be publicly offered in Chile unless they are registered in the corresponding securities registry.

La oferta de los valores comienza el 22 de enero de 2024 y está acogida a la Norma de Carácter General número 336, de fecha 27 de junio de 2012 de la Superintendencia de Valores y Seguros de Chile, hoy Comisión para el Mercado Financiero (la "CMF"). La oferta versa sobre valores no inscritos en el Registro de Valores o en el Registro de Valores Extranjeros que lleva la CMF, por lo que los valores no están sujetos a la fiscalización de dicho organismo. Por tratarse de valores no inscritos, no existe obligación por parte del emisor de entregar en Chile información pública respecto de los valores. Estos valores no pueden ser objeto de oferta pública, a menos que no sean inscritos en el registro de valores correspondiente.

European Economic Area

This Offering Memorandum has been prepared on the basis that any offer of the securities referred to herein in any Member State of the European Economic Area (the "EEA") will be made pursuant to an exemption under Regulation (EU) 2017/1129 (the "Prospectus Regulation") from the requirement to publish a prospectus for offers of the Notes. Accordingly, any person making or intending to make an offer in a Member State of Notes which are the subject of the offering contemplated in this Offering Memorandum may only do so in circumstances in which no obligation arises for the Issuer or any of the Initial Purchasers to publish a prospectus pursuant to Article 3 of the Prospectus Regulation, in each case, in relation to such offer. Neither the Issuer nor the Initial Purchasers have authorized, nor do they authorize, the making of any offer of Notes in circumstances in which an obligation arises for the Issuer or the joint bookrunners to publish a prospectus for such offer. This paragraph is subject to the paragraph below.

The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the EEA. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "MiFID II"); or (ii) a customer within the meaning of Directive (EU) 2016/97 (the "Insurance Distribution Directive"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II; or (iii) not a qualified investor as defined in the Prospectus Regulation. Consequently, no key information document required by Regulation (EU) No 1286/2014 (as amended, the "PRIIPs Regulation") for offering or selling the Notes or otherwise making them available to retail investors in the EEA or the United Kingdom has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the EEA or the United Kingdom may be unlawful under the PRIIPs Regulation.

Each of the Initial Purchasers has represented and agreed that it has not offered, sold, distributed or otherwise made available and will not offer, sell, distribute or otherwise make available any Notes to any retail investor in the EEA. The expression "an offer" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered so as to enable an investor to decide to purchase or subscribe for the Notes.

United Kingdom

This Offering Memorandum has been prepared on the basis that all offers of the Notes will be made in the United Kingdom (the "UK") pursuant to an exemption under Regulation (EU) 2017/1129, as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018 (the "EUWA") (the "UK Prospectus Regulation") from the requirement to produce a prospectus for offers of the Notes. Accordingly, any person making or intending to make any offer within the UK of the Notes, which are the subject of the placement contemplated in this Offering Memorandum, may only do so in circumstances in which no obligation arises for us or the Initial Purchasers to publish a prospectus pursuant to Article 3 of the UK Prospectus Regulation, in each case, in relation to such offer. Neither we nor the Initial Purchasers have authorized, nor do we or the Initial Purchasers authorize, the making of any offer of Notes through any financial intermediary, other than offers made by the Initial Purchasers, which constitute the final placement of the Notes contemplated in this Offering Memorandum. This paragraph is subject to the paragraph below.

The Notes are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the UK. For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of EUWA; (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 (the "FSMA") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA; or (iii) not a qualified investor as defined in Article 2 of Regulation (EU) 2017/1129 as it forms part of domestic law by virtue of the EUWA. Consequently, no key information document required by the UK PRIIPs Regulation for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

This Offering Memorandum is for distribution only to persons who (i) have professional experience in matters relating to investments falling within Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "Financial Promotion Order"), (ii) are persons falling within Article 49(2)(a) to (d) ("high net worth companies, unincorporated associations etc.") of the Financial Promotion Order, (iii) are outside the United Kingdom, or (iv) are persons to whom an invitation or inducement to engage in investment activity (within the meaning of section 21 of the FSMA) in connection with the issue or sale of any securities may otherwise lawfully be communicated or caused to be communicated (all such persons together being referred to as "relevant persons"). This Offering Memorandum is directed only at relevant persons and must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this Offering Memorandum relates is available only to relevant persons and will be engaged in only with relevant persons.

Hong Kong

This Offering Memorandum has not been approved by or registered with the Securities and Futures Commission of Hong Kong or the Registrar of Companies of Hong Kong. No person may offer or sell in Hong Kong, by means of any document, any Notes other than (i) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance, or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No person may issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

WARNING: The contents of this document have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended) (the "FIEA"). The securities may not be offered or sold directly or indirectly, in Japan or to or for the benefit of any resident of Japan (including any person resident in Japan or any corporation or other entity organized under the laws of Japan) or to others for reoffering or resale, directly or indirectly, in Japan or to or for the benefit of any resident of Japan, except pursuant to an exemption from the registration requirements of the FIEA and otherwise in compliance with any relevant laws and regulations of Japan.

Singapore

This Offering Memorandum has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this Offering Memorandum and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes may not be circulated or distributed, nor may the Notes be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the SFA) pursuant to Section 274 of the SFA or (ii) to an accredited investor (as defined in Section 4A of the SFA) pursuant to and in accordance with the conditions specified in Section 275 of the SFA and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018.

Notification under Section 309B of the SFA – The Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

Taiwan

The Notes have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the Notes in Taiwan.

Switzerland

This Offering Memorandum is not intended to constitute an offer or solicitation to purchase or invest in the Notes. The Notes may not be publicly offered, directly or indirectly, in Switzerland within the meaning of the Swiss Financial Services Act ("FinSA") and no application has or will be made to admit the Notes to trading on any trading venue (exchange or multilateral trading facility) in Switzerland. Neither this Offering Memorandum nor any other offering or marketing material relating to the Notes constitutes a prospectus pursuant to the FinSA, and neither this Offering Memorandum nor any other offering or marketing material relating to the Notes may be publicly distributed or otherwise made publicly available in Switzerland.

Price Stabilization and Short Positions

The Initial Purchasers have informed us that in connection with the offering of the Notes, the Initial Purchasers may engage in overallotment and stabilizing transactions. Stabilizing transactions may cause the price of the Notes to be higher than it would otherwise be in the absence of those transactions or to delay a decline in the price of the Notes. If the Initial Purchasers engage in stabilizing, it may discontinue them at any time.

The Initial Purchasers and/or their affiliates may enter into derivative and/or structured transactions with clients, at their request, in connection with the Notes, and the Initial Purchasers and/or their affiliates may also purchase some of the Notes to hedge their risk exposure in connection with such transactions. Also, the Initial Purchasers and/or their affiliates may acquire the Notes for their own proprietary accounts. Such acquisitions may have an effect on demand for and the price of the Notes.

Neither we nor the Initial Purchasers make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the Notes. The Initial Purchasers are not obligated to engage in these activities and, if commenced, any of the activities may be discontinued at any time.

Settlement

We expect that delivery of the Notes (including the Note Guarantees) will be made against payment therefore on or about the closing date specified on the cover page of this Offering Memorandum, which will be the fifth business day following the date of pricing of the Notes (this settlement cycle being referred to as "T+5"). Under Rule 15c6-1 of the SEC under the Exchange Act, as of September 5, 2017, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes any date that is more than two business days before delivery of the Notes will be required, by virtue of the fact that the Notes initially will settle in T+5, to specify an alternate settlement cycle at the time of any such trade to prevent a failed settlement. Purchasers of the Notes who wish to trade the Notes on any date prior to two business days before delivery of the Notes should consult their own advisor.

Electronic Distribution

An offering memorandum in electronic format may be made available by e-mail or through online services maintained by the Initial Purchasers or their affiliates. In those cases, prospective investors may view offering terms online and may be allowed to place orders online. The Initial Purchasers may agree with us to allocate a specific amount of Notes for sale to online account holders. Any such allocation for online distributions will be made by the Initial Purchasers on the same basis as other allocations. Other than the Offering Memorandum in electronic format, the information on the Initial Purchasers' web sites and any information contained in any other web site maintained by the Initial Purchasers is not part of this Offering Memorandum, has not been approved and/or endorsed by us or the Initial Purchasers and should not be relied upon by investors.

Other Relationships

The Initial Purchasers and certain of their affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The Initial Purchasers and certain of their affiliates have performed, and may in the future perform, various financial advisory, investment banking and commercial banking services from time to time for us, the Guarantors and our affiliates for which they have received or will receive customary fees. In the ordinary course of their various business activities, the Initial Purchasers and their affiliates, officers, directors and employees may purchase, sell or hold a broad array of investments and actively traded securities, derivatives, loans, commodities, currencies, credit default swaps and other financial instruments for their own account and for the accounts of their customers, and such investment and trading activities may involve or relate to assets, securities and/or instruments of the Issuer (directly, as collateral securing other obligations or otherwise) and/or persons and entities with relationships with the Issuer and the Guarantors. The Initial Purchasers and their affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such assets, securities or instruments and may at any time hold, or recommend to clients that they should acquire, long and/or short positions in such assets, securities and instruments.

We intend to use all or a substantial portion of our net proceeds from this offering to repay current indebtedness owed to affiliates of the Initial Purchasers. See "*Use of Proceeds*." As a result, affiliates of certain of the Initial Purchasers will receive a portion of the proceeds of this offering if consummated.

TRANSFER RESTRICTIONS

The Notes have not been and will not be registered under the Securities Act or any state securities laws, and the Notes may not be offered or sold except pursuant to an effective registration statement or pursuant to transactions exempt from, or not subject to, registration under the Securities Act. Accordingly, the Notes are being offered and sold only:

- in the United States to qualified institutional buyers (as defined in Rule 144A) ("QIBs") pursuant to Rule 144A that are also qualified purchasers (as defined in Section 2(a)(51) of the Investment Company Act) ("Qualified Purchasers"); and
- outside of the United States, to certain persons, other than U.S. persons, in offshore transactions meeting the requirements of Rule 903 of Regulation S under the Securities Act.

Purchasers' Representations and Restrictions on Resale and Transfer

Rule 144A Notes

Each purchaser of the Rule 144A Notes (including the registered holders and beneficial owners of the Rule 144A Notes as they exist from time to time, including as a result of transfers, in each case as of the time of purchase) will be deemed, by its acceptance or purchase thereof, to have represented and agreed on its own behalf and on behalf of each beneficial owner for whose account it is purchasing, as follows:

1. It is a QIB who is also a Qualified Purchaser; is aware the sale of the Notes to it is being made in reliance on Rule 144A; is acquiring such Notes for its own account or the account of a QIB who is also a Qualified Purchaser as to which the purchaser exercises sole investment discretion; and it and each such account:

(i) is not a broker-dealer which owns and invests on a discretionary basis less than $25,000,000 in securities of unaffiliated issuers;

(ii) is not formed for the purpose of investing in the Issuer;

(iii) will provide notice of the transfer restrictions described in these "Transfer Restrictions" to any subsequent transferees; and

(iv) acknowledges that the Issuer may receive a list of participants holding positions in the Rule 144A Global Notes from one or more book-entry depositaries.

2. It understands that if at any time the Issuer determines in good faith that a holder of the Notes (or of any beneficial interest therein) is in breach, at the time given, of any of the representations and agreements contained in these "Transfer Restrictions," the Issuer may require such holder to transfer such Notes (or beneficial interest therein) to a transferee acceptable to the Issuer who is able to and who does make all of the representations and agreements set forth in these "Transfer Restrictions." Pending such transfer, such holder will be deemed not to be the holder of such Notes for any purpose, including but not limited to receipt of principal and interest payments on such Notes, and such holder will be deemed to have no interest whatsoever in such Notes except as otherwise required to sell its interest therein as described in this paragraph.

3. It understands that the Issuer is not and will not be registered as an "investment company" under the Investment Company Act.

4. It understands and acknowledges that such Rule 144A Notes are being offered only in a transaction not involving any public offering in the United States, within the meaning of the Securities Act, and the Rule 144A Notes offered hereby have not been and will not be registered under the Securities Act or with any securities regulatory authority of any U.S. state or any other jurisdiction, and may not be offered, resold, pledged or otherwise transferred except (a) to the Issuer, (b) to a person who the seller reasonably believes is both a QIB and a Qualified Purchaser in a transaction meeting the requirements of Rule 144A, or (c) upon delivery of a written certification in

the form provided in the Indenture, in an offshore transaction in accordance with Rule 904 of Regulation S, in each case in accordance with all applicable securities laws of the states of the United States.

5. It understands and acknowledges that Rule 144A Notes (and any interest therein) may be purchased, sold, pledged or otherwise transferred only in minimum principal amounts of US$200,000 and integral multiples of US$1,000 in excess thereof.

6. It understands that each Rule 144A Global Note, and each definitive Note issued in exchange for all or part of a Rule 144A Global Note or an interest therein, will bear a legend to the following effect, unless the Issuer determines otherwise in compliance with applicable law:

THE NOTES MAY BE PURCHASED AND TRANSFERRED ONLY IN MINIMUM PRINCIPAL AMOUNTS OF $200,000 AND INTEGRAL MULTIPLES OF $1,000 IN EXCESS THEREOF. IF AT ANY TIME 3R LUX (THE "ISSUER") DETERMINES IN GOOD FAITH THAT A HOLDER OR BENEFICIAL OWNER OF THIS SECURITY OR ANY BENEFICIAL INTEREST HEREIN IS IN BREACH, AT THE TIME GIVEN, OF ANY OF THE TRANSFER RESTRICTIONS SET FORTH HEREIN AND IN THE INDENTURE, THE ISSUER MAY REQUIRE SUCH HOLDER TO TRANSFER THIS SECURITY (OR SUCH INTEREST HEREIN) TO A TRANSFEREE ACCEPTABLE TO THE ISSUER WHO IS ABLE TO AND WHO DOES SATISFY ALL OF THE REQUIREMENTS SET FORTH HEREIN AND IN THE INDENTURE. PENDING SUCH TRANSFER, SUCH HOLDER WILL BE DEEMED NOT TO BE THE HOLDER OF THIS SECURITY (OR SUCH INTEREST HEREIN) FOR ANY PURPOSE, INCLUDING BUT NOT LIMITED TO RECEIPT OF PRINCIPAL AND INTEREST PAYMENTS ON THE SECURITY, AND SUCH HOLDER WILL BE DEEMED TO HAVE NO INTEREST IN THE SECURITY EXCEPT AS OTHERWISE REQUIRED TO SELL ITS INTEREST THEREIN AS DESCRIBED HEREIN.

THE NOTES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY STATE SECURITIES LAWS. THE ISSUER OF THIS SECURITY HAS NOT BEEN AND WILL NOT BE REGISTERED AS AN INVESTMENT COMPANY UNDER THE U.S. INVESTMENT COMPANY ACT OF 1940, AS AMENDED (THE "INVESTMENT COMPANY ACT"). THE NOTES MAY NOT BE OFFERED, SOLD, PLEDGED OR OTHERWISE TRANSFERRED EXCEPT TO THE ISSUER OR (A)(1) TO A PERSON WHO IS BOTH A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) AND A "QUALIFIED PURCHASER" (AS DEFINED IN SECTION 2(A)(51) OF THE INVESTMENT COMPANY ACT AND RELATED RULES), IN EACH CASE PURCHASING FOR ITS OWN ACCOUNT OR FOR THE ACCOUNT OF A QUALIFIED INSTITUTIONAL BUYER WHO IS ALSO A QUALIFIED PURCHASER AS TO WHICH THE PURCHASER EXERCISES SOLE INVESTMENT DISCRETION, IN RELIANCE ON THE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT PROVIDED BY RULE 144A, AND PROVIDED THAT EACH SUCH PERSON AND ACCOUNT FOR WHICH SUCH PERSON IS PURCHASING (A) IS NOT A BROKER-DEALER THAT OWNS AND INVESTS ON A DISCRETIONARY BASIS LESS THAN U.S.$25,000,000 IN SECURITIES OF ISSUERS THAT ARE NOT ITS AFFILIATED PERSONS, (B) IS NOT FORMED FOR THE PURPOSE OF INVESTING IN THE ISSUER, (C) UNDERSTANDS THAT THE ISSUER MAY RECEIVE A LIST OF PARTICIPANTS HOLDING POSITIONS IN THIS SECURITY FROM ONE OR MORE BOOK-ENTRY DEPOSITARIES AND (D) MUST BE ABLE TO AND WILL BE DEEMED TO REPRESENT THAT IT AGREES TO COMPLY WITH THE APPLICABLE TRANSFER RESTRICTIONS, AND WILL NOT TRANSFER THIS SECURITY OR ANY BENEFICIAL INTERESTS HEREIN EXCEPT (1) TO A PURCHASER WHO CAN MAKE THE SAME REPRESENTATIONS AND AGREEMENTS ON BEHALF OF ITSELF AND EACH ACCOUNT FOR WHICH IT IS PURCHASING OR (2) UPON DELIVERY OF A WRITTEN CERTIFICATION IN THE FORM PROVIDED IN THE INDENTURE, IN AN OFFSHORE TRANSACTION IN ACCORDANCE WITH RULE 904 OF REGULATION S UNDER THE SECURITIES ACT, AND IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS OF THE STATES OF THE UNITED STATES, PROVIDED THAT, AS A CONDITION TO THE REGISTRATION OF THE TRANSFER THEREOF, THE ISSUER OR THE TRUSTEE MAY REQUIRE THE DELIVERY OF ANY DOCUMENTS, INCLUDING AN OPINION OF COUNSEL, THAT THE ISSUER, IN ITS SOLE DISCRETION, MAY DEEM NECESSARY OR APPROPRIATE TO EVIDENCE COMPLIANCE WITH SUCH EXEMPTION. THE HOLDER HEREOF, BY PURCHASING OR ACCEPTING

THIS NOTE, REPRESENTS AND AGREES FOR THE BENEFIT OF THE ISSUER THAT IT WILL NOTIFY ANY PURCHASER OF THIS NOTE FROM THE HOLDER OF THE RESALE RESTRICTIONS REFERRED TO ABOVE.

THE FOREGOING LEGENDS MAY BE REMOVED FROM THIS NOTE ONLY ON THE CONDITIONS SPECIFIED IN THE INDENTURE REFERRED TO HEREIN.

7. It understands that no representation can be made as to the availability of the exemption provided by Rule 144 for resales of the Notes offered hereby.

8. It acknowledges that the trustee, registrar, paying agent or transfer agent for the Notes will not be required to accept for registration of transfer any Notes, except upon presentation of evidence satisfactory to the Issuer and the trustee, registrar, paying agent or transfer agent that the restrictions set forth herein have been complied with.

9. It acknowledges that the Issuer, the Guarantors, the Initial Purchasers and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations and agreements, and agrees that if any of the acknowledgments, representations or agreements deemed to have been made by it by its purchase of the Notes are no longer accurate, it shall promptly notify the Issuer and the Initial Purchasers. If it is acquiring any Notes as a fiduciary or agent for one or more investor accounts, it represents that it has sole investment discretion with respect to each such account and it has full power to make the foregoing acknowledgments, representations and agreements on behalf of each such account.

10. If it, or any other person for which it is acting, is an investment company exempted from the Investment Company Act pursuant to Section 3(c)(1) or Section 3(c)(7) thereof (or a foreign investment company under Section 7(d) thereof relying on Section 3(c)(1) or Section 3(c)(7) with respect to its holders that are U.S. persons) and was formed on or before April 30, 1996, it has received consent of the beneficial owners who acquired their interest on or before April 30, 1996, with respect to its treatment as a qualified purchaser in the manner required by Section 2(a)(51)(C) of the Investment Company Act and the rules promulgated thereunder.

Regulation S Notes

Each purchaser of Regulation S Notes must be able to and will be deemed to have represented and agreed as follows:

1. It is a not a U.S. person, as defined in Regulation S, and is acquiring such Regulation S Notes outside the United States.

2. It understands that such Regulation S Notes are being offered only outside the United States to non-U.S. persons in offshore transactions in reliance on Regulation S and that the Regulation S Notes offered hereby have not been and will not be registered under the Securities Act or with any securities regulatory authority of any U.S. state or any other jurisdiction, and may not be offered, resold, pledged or transferred within the United States or to, or for the account or benefit of, U.S. persons except as permitted by the legend set forth in paragraph (4) below.

3. It agrees that it will deliver to each person to whom it transfers the Regulation S Notes notice of any restrictions on transfer of such Regulation S Notes.

4. It understands that each Regulation S Global Note, and each definitive note issued in exchange for all or part of a Regulation S Global Note or interest therein, will bear a legend to the following effect, unless the Issuer determines otherwise in compliance with applicable law:

This Note has not been registered under the U.S. Securities Act of 1933, as amended (the “Securities Act”), or any state securities laws. The holder hereof, by purchasing this Note, agrees that, prior to the expiration of the 40-day distribution compliance period (as defined in Regulation S under the Securities Act), neither this Note nor any interest or participation herein may be offered, resold, pledged or otherwise transferred within the United States or to, or for the account or benefit of, a U.S. person (as defined in Regulation S under the Securities Act), except to a person who the seller reasonably believes is a “qualified institutional buyer” (as defined in Rule 144A under the

Securities Act) in accordance with Rule 144A, and who is also a qualified purchaser (as defined in Section 2(a)(51) of the Investment Company Act), in a transaction meeting the requirements of the Indenture.

THE FOREGOING LEGEND MAY BE REMOVED FROM THIS NOTE ONLY ON THE CONDITIONS SPECIFIED IN THE INDENTURE REFERRED TO HEREIN.

5. It acknowledges that the trustee, registrar, paying agent or transfer agent for the Notes will not be required to accept for registration of transfer any Notes, except upon presentation of evidence satisfactory to the Issuer and the trustee, registrar, paying agent or transfer agent that the restrictions set forth herein have been complied with.

6. It acknowledges that the Issuer, the Guarantors, the Initial Purchasers and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations and agreements, and agrees that if any of the acknowledgments, representations or agreements deemed to have been made by it by its purchase of the Notes are no longer accurate, it shall promptly notify the Issuer and the Initial Purchasers. If it is acquiring any Notes as a fiduciary or agent for one or more investor accounts, it represents that it has sole investment discretion with respect to each such account and it has full power to make the foregoing acknowledgments, representations and agreements on behalf of each such account.

Other Jurisdictions

The distribution of this Offering Memorandum and the offer and sale or resale of the Notes may be restricted by law in certain jurisdictions. Persons into whose possession this Offering Memorandum comes are required by us and the Initial Purchaser to inform themselves about and to observe any such restrictions.

LISTING AND GENERAL INFORMATION

We expect that the Notes will be delivered in book-entry form through DTC, and its direct and indirect participants, including Clearstream and Euroclear, on February 5, 2024. The CUSIP and ISIN numbers for the Notes are as follows:

	Rule 144A Global Note	Regulation S Global Note
CUSIP	88563P AA6	L9R621 AA9
ISIN	US88563PAA66	USL9R621AA97

Copies of our latest unaudited interim financial information and of our audited financial statements, and copy of 3R's bylaws (*estatuto social*), as well as the Indenture (including the forms of the Notes) and the Guarantee, will be available for inspection at the offices of any paying agent.

Application will be made for the listing and quotation of the Notes on the SGX-ST. The SGX-ST assumes no responsibility for the correctness of any of the statements made, opinions expressed or reports contained in this Offering Memorandum. Approval in-principle for the listing and quotation of the Notes on the SGX-ST is not to be taken as an indication of the merits of the Issuer, the Guarantors or any of their affiliates, the Notes or the Guarantee. For so long as the Notes are listed on the SGX-ST and the rules of the SGX-ST so require, the Issuer will appoint and maintain a paying agent in Singapore, where the Notes may be presented or surrendered for payment or redemption, in the event that a global security is exchanged for definitive Notes. In addition, in the event that a global security is exchanged for definitive Notes, an announcement of such exchange will be made by the Issuer or on its behalf through the SGX-ST and such announcement will include all material information with respect to the delivery of the definitive Notes, including details of the paying agent in Singapore. The Notes will be traded on the SGX-ST in a minimum board lot size of US$200,000 for so long as the Notes are listed on the SGX-ST.

Except as disclosed in this Offering Memorandum, there has been no material adverse change in our financial position since September 30, 2023, the date of our latest unaudited interim financial information included in this Offering Memorandum.

The issuance of the Notes and the Guarantee was authorized by our board of directors on January 29, 2024. The issuance of the Notes was authorized by the Issuer's board of managers on January 24, 2024.

FORM OF NOTES, CLEARING AND SETTLEMENT

The Notes are being offered and sold only:

- to qualified institutional buyers in reliance on Rule 144A (the "Rule 144A Notes") that are also qualified purchasers (as defined in Section 2(a)(51) of the Investment Company Act); or
- in offshore transactions in reliance on Regulation S (the "Regulation S Notes").

The Notes will be issued in fully registered global form in minimum denominations of U.S.$200,000 and integral multiples of U.S.$1,000 in excess thereof. Rule 144A Notes will initially be represented by a single permanent global certificate (which may be subdivided) without interest coupons (the "Rule 144A Global Note"). Regulation S Notes initially will be represented by a single permanent global certificate (which may be subdivided) without interest coupons (the "Regulation S Global Note" and, together with the Rule 144A Global Note, the "Global Notes").

The Global Notes will be deposited upon issuance with the Trustee as custodian for The Depository Trust Company, or DTC, in New York, New York, and registered in the name of DTC or its nominee for credit to an account of direct or indirect participants in DTC, including Euroclear Bank S.A., and Clearstream société anonyme ("Clearstream"), as described below under "*—Depositary Procedures*."

Except as set forth below, the Global Notes may be transferred, in whole and not in part, only to another nominee of DTC or to a successor of DTC or its nominee. Beneficial interests in the Global Notes may not be exchanged for Notes in certificated form except in the limited circumstances described below under "*—Exchange of Global Notes for Certificated Notes*."

The notes will be subject to certain restrictions on transfer and will bear a restrictive legend as described under "*Transfer Restrictions*" in this Offering Memorandum. In addition, transfers of beneficial interests in the Global Notes will be subject to the applicable rules and procedures of DTC and its direct or indirect participants (including, if applicable, those of Euroclear and Clearstream), which may change from time to time.

Depositary Procedures

The following description of the operations and procedures of DTC, Euroclear and Clearstream are provided solely as a matter of convenience. These operations and procedures are solely within the control of the respective settlement systems and are subject to changes by them. We take no responsibility for these operations and procedures and urge investors to contact the systems or their participants directly to discuss these matters.

DTC is a limited-purpose trust company created to hold securities for its participating organizations (collectively, the "Participants") and facilitate the clearance and settlement of transactions in those securities between Participants through electronic book-entry changes in accounts of its Participants. The Participants include securities brokers and dealers (including the initial purchasers), banks, trust companies, clearing corporations and certain other organizations. Access to DTC's system is also available to other entities such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a Participant, either directly or indirectly (collectively, the "Indirect Participants"). Persons who are not Participants may beneficially own securities held by or on behalf of DTC only through Participants or Indirect Participants. DTC has no knowledge of the identity of beneficial owners of securities held by or on behalf of DTC. DTC's records reflect only the identity of Participants to whose accounts securities are credited. The ownership interests and transfer of ownership interests of each beneficial owner of each security held by or on behalf of DTC are recorded on the records of the Participants and Indirect Participants.

Pursuant to procedures established by DTC:

- upon deposit of the Global Notes, DTC will credit the accounts of Participants designated by the initial purchasers with portions of the principal amount of the Global Notes; and

- ownership of such interests in the Global Notes will be maintained by DTC (with respect to the Participants) or by the Participants and the Indirect Participants (with respect to other owners of beneficial interests in the Global Notes).

Investors in the Global Notes may hold their interests therein directly through DTC, if they are Participants in such system, or indirectly through organizations (including Euroclear and Clearstream) that are Participants or Indirect Participants in such system. Euroclear and Clearstream will hold interests in the Notes on behalf of their participants through customers' securities accounts in their respective names on the books of their respective depositaries. The depositaries, in turn, will hold interests in the Notes in customers' securities accounts in the depositaries' names on the books of DTC.

All interests in a Global Note, including those held through Euroclear or Clearstream, will be subject to the procedures and requirements of DTC. Those interests held through Euroclear or Clearstream will also be subject to the procedures and requirements of those systems.

The laws of some states require that certain persons take physical delivery of certificates evidencing securities they own. Consequently, the ability to transfer beneficial interests in a Global Note to such persons will be limited to that extent. Because DTC can act only on behalf of Participants, which in turn act on behalf of Indirect Participants, the ability of beneficial owners of interests in a Global Note to pledge such interests to persons or entities that do not participate in the DTC system, or otherwise take actions in respect of such interests, may be affected by the lack of a physical certificate evidencing such interests. For certain other restrictions on the transferability of the Notes, see "*—Exchange of Global Notes for Certificated Notes*" below.

Except as described below, owners of interests in the Global Notes will not have notes registered in their names, will not receive physical delivery of notes in certificated form and will not be considered the registered owners or holders thereof under the indenture for any purpose.

Payments in respect of the principal of and premium, if any, and interest on a Global Note registered in the name of DTC or its nominee will be remitted by the Trustee (or the Paying Agents if other than the Trustee) to DTC in its capacity as the registered holder under the indenture. The Issuer, the Registrar, the Paying Agent and the Trustee will treat the persons in whose names the Notes, including the Global Notes, are registered as the owners thereof for the purpose of receiving such payments and for any and all other purposes whatsoever. Consequently, none of the Issuer, the Registrar, the Paying Agent, the Trustee or any agent of the Issuer, the Registrar, the Paying Agent or the Trustee has or will have any responsibility or liability for:

- any aspect of DTC's records or any Participant's or Indirect Participant's records relating to or payments made on account of beneficial ownership interests in the Global Notes, or for maintaining, supervising or reviewing any of DTC's records or any Participant's or Indirect Participant's records relating to the beneficial ownership interests in the Global Notes; or
- any other matter relating to the actions and practices of DTC or any of its Participants or Indirect Participants.

DTC has advised the Issuer that its current practice is to credit the accounts of the relevant Participants with the payment on the payment date in amounts proportionate to their respective holdings in the principal amount of the relevant security as shown on the records of DTC, unless DTC has reason to believe it will not receive payment on such payment date. Payments by the Participants and the Indirect Participants to the beneficial owners of Notes will be governed by standing instructions and customary practices and will be the responsibility of the Participants or the Indirect Participants and will not be the responsibility of DTC, the Trustee, the Registrar, the Paying Agent or the Issuer. None of the Issuer, the Registrar, the Paying Agent, the Trustee or any agent of the Issuer, the Registrar, the Paying Agent or the Trustee will be liable for any delay by DTC or any of its Participants in identifying the beneficial owners of the Notes, and the Issuer, the Registrar, the Paying Agent and the Trustee and their respective agents may conclusively rely on and will be protected in relying on instructions from DTC or its nominee for all purposes.

Subject to the transfer restrictions described under "*Transfer Restrictions*" in this Offering Memorandum, cross-market transfers between Participants in DTC, on the one hand, and Euroclear or Clearstream participants, on the

other hand, will be effected through DTC in accordance with DTC's rules on behalf of Euroclear or Clearstream, as the case may be, by their depositaries. Cross-market transactions will require delivery of instructions to Euroclear or Clearstream, as the ease may be, by the counterparty in that system in accordance with the rules and procedures and within the established deadlines (Brussels time) of that system. Euroclear or Clearstream, as the case may be, will, if the transaction meets its settlement requirements, deliver instructions to its respective depositaries to take action to effect final settlement on its behalf by delivering or receiving interests in the relevant Global Note in DTC, and making or receiving payment in accordance with normal procedures applicable to DTC. Euroclear and Clearstream participants may not deliver instructions directly to the depositaries for Euroclear or Clearstream.

Because of time zone differences, the securities account of a Euroclear or Clearstream participant purchasing an interest in a Global Note from a Participant in DTC will be credited and reported to the relevant Euroclear or Clearstream participant, during the securities settlement processing day (which must be a business day for Euroclear and Clearstream) immediately following the settlement date of DTC. DTC has advised the Company that cash received in Euroclear or Clearstream as a result of sales of interests in a Global Note by or through a Euroclear or Clearstream participant to a Participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

DTC has advised the Issuer that it will take any action permitted to be taken by a holder of Notes only at the direction of one or more Participants to whose account with DTC interests in the Global Notes are credited and only in respect of such portion of the aggregate principal amount of the Notes as to which such Participant or Participants has or have given such direction.

Although DTC, Euroclear and Clearstream have agreed to the foregoing procedures to facilitate transfers of interests in the Global Notes among participants in DTC, Euroclear and Clearstream, they are under no obligation to perform or to continue to perform such procedures, and the procedures may be discontinued at any time. None of the Issuer, the Registrar, the Paying Agent or the Trustee will have any responsibility for the performance by DTC, Euroclear or Clearstream or their respective participants or indirect participants of their respective obligations under the rules and procedures governing their operations.

The information in this section concerning DTC, Euroclear and Clearstream and their book-entry systems has been obtained from sources that the Issuer believes to be reliable, but the Issuer takes no responsibility for the accuracy thereof.

Exchange of Global Notes for Certificated Notes

A Global Note is exchangeable for definitive Notes in registered certificated form ("Certificated Notes") if:

- DTC (a) notifies the Issuer that it is unwilling or unable to continue as depositary for the Global Notes and DTC fails to appoint a successor depositary or (b) has ceased to be a clearing agency registered under the Exchange Act;
- the Issuer, at its option, notifies the Trustee in writing that it has elected to cause the issuance of the Certificated Notes; or
- there has occurred and is continuing a default or event of default with respect to the Notes.

In addition, beneficial interests in a Global Note may be exchanged for Certificated Notes upon prior written notice given to the Trustee by or on behalf of DTC in accordance with the Indenture. In all cases, Certificated Notes delivered in exchange for any Global Note or beneficial interests in Global Notes will be registered in the names, and issued in any approved denominations, requested by or on behalf of the depositary (in accordance with its customary procedures) and will bear the applicable restrictive legend referred to in "Transfer Restrictions," unless that legend is not required by applicable law.

Exchange of Certificated Notes for Global Notes

Certificated Notes may not be exchanged for beneficial interests in any Global Note unless the transferor first delivers to the Trustee a written certificate (in the form provided in the Indenture) to the effect that such transfer will comply with the appropriate transfer restrictions applicable to such Notes. See "*Transfer Restrictions*."

Exchanges Between Regulation S Notes and Rule l44A Notes

Beneficial interests in the Regulation S Global Notes may be exchanged for beneficial interests in the Rule 144A Global Notes only if:

- such exchange occurs in connection with a transfer of the Notes pursuant to Rule 144A; and
- the transferor first delivers to the Trustee a written certificate (in the form provided in the Indenture) to the effect that the Notes are being transferred to a person:

  (A) who the transferor reasonably believes to be a qualified institutional buyer within the meaning of Rule 144A and a qualified purchaser within the meaning of Section 2(a)(51) of the Investment Company Act;

  (B) purchasing for its own account or the account of a qualified institutional buyer that is also a qualified purchaser (as defined in Section 2(a)(51) of the Investment Company Act) in a transaction meeting the requirements of Rule 144A; and

  (C) in accordance with all applicable securities laws of the states of the United States and other jurisdictions.

A beneficial interest in a Rule 144A Global Note may be transferred to a person who takes delivery in the form of a beneficial interest in the Regulation S Global Note, whether before or after the expiration of the restricted period, only if the transferor first delivers to the Trustee a written certificate (in the form provided in the Indenture) to the effect that such transfer is being made in accordance with Rule 903 or Rule 904 of Regulation S.

Transfers involving exchanges of beneficial interests between the Regulation S Global Notes and the Rule 144A Global Notes will be effected in DTC by means of an instruction originated by the DTC participant that is effecting such exchange and approved by the Trustee through the DTC Deposit/Withdraw at Custodian system. Accordingly, in connection with any such transfer, appropriate adjustments will be made to reflect a decrease in the principal amount of the Regulation S Global Note and a corresponding increase in the principal amount of the Rule 144A Global Note or vice versa, as applicable. Any beneficial interest in one of the Global Notes that is transferred to a person who takes delivery in the form of an interest in the other Global Note will, upon transfer, cease to be an interest in such Global Note and will become an interest in the other Global Note and, accordingly, will thereafter be subject to all transfer restrictions and other procedures applicable to beneficial interest in such other Global Note for so long as it remains such an interest. The policies and practices of DTC may prohibit transfers of beneficial interests in the Regulation S Global Note prior to the expiration of the restricted period.

Same Day Settlement and Payment

The Indenture will require that payments in respect of the Notes represented by the Global Notes (including principal, interest and additional amounts, if any) be made by wire transfer of immediately available funds in such coin or currency of the United States as at the time of payment will be legal tender for the payment of public and private debts, to the accounts specified by holders of the Global Notes. With respect to Certificated Notes, the Issuer will make all payments by wire transfer of immediately available funds to the accounts specified by the holders thereof or, if no such account is specified, by mailing a check to each holder's registered address.

The Notes represented by the Global Notes are expected to be eligible to trade in DTC's Same-Day Funds Settlement System, and any permitted secondary market trading activity in such Notes will, therefore, be required by DTC to be settled in immediately available funds. The Issuer expects that secondary trading in any Certificated Notes will also be settled in immediately available funds.

Because of time zone differences, the securities account of a Euroclear or Clearstream participant purchasing an interest in a Global Note from a participant in DTC will be credited, and any such crediting will be reported to the relevant Euroclear or Clearstream participant, during the securities settlement process (which must be a business day for Euroclear and Clearstream) immediately following the settlement date of DTC. DTC has advised us that cash received in Euroclear or Clearstream as a result of sales of interest in a Global Note by or through a Euroclear or Clearstream participant to a participant in DTC will be received with value on the settlement date of DTC but will be available in the relevant Euroclear or Clearstream cash account only as of the business day for Euroclear or Clearstream following DTC's settlement date.

SERVICE OF PROCESS AND ENFORCEMENT OF JUDGMENTS

Enforcement of Judgments in Luxembourg

The Issuer is a company incorporated and existing under the laws of the Grand Duchy of Luxembourg under the form of a private limited liability company (*société à responsabilité limitée*) and its management body is protected by the corporate veil, except under certain circumstances. It may be difficult for you to obtain or enforce judgments against it or its managers in the United States.

Most of the Issuer's assets are located outside the United States. Furthermore, none of the Issuer's managers reside in the United States. As a result, investors may find it difficult to effect service of process within the United States upon the Issuer or these persons or to enforce outside the United States judgments obtained against the Issuer or these persons in U.S. courts, including judgments in actions predicated upon the civil liability provisions of the U.S. federal securities laws. Likewise, it may also be difficult for an investor to enforce in U.S. courts judgments obtained against us or these persons in courts located in jurisdictions outside the United States, including actions predicated upon the civil liability provisions of the U.S. federal securities laws. It may also be difficult for an investor to bring an original action in a Luxembourg court predicated upon the civil liability provisions of the U.S. federal securities laws against the Issuer or these persons. Luxembourg law, furthermore, does not recognize a shareholder's right to bring a derivative action on behalf of the Issuer. It may be possible for investors to effect service of process within Luxembourg upon the Issuer provided that The Hague Convention on the Service Abroad of Judicial and Extrajudicial Documents in Civil or Commercial Matters of November 15, 1965 is complied with.

As there is no treaty in force governing the reciprocal recognition and enforcement of judgments (other than arbitral awards) in civil and commercial matters between the United States and the Grand Duchy of Luxembourg, courts in Luxembourg will not automatically recognize and enforce a final judgment rendered by a U.S. court.

A valid final, non-appealable and conclusive judgment with respect to the Notes, obtained against a company formed and existing in Luxembourg from a court of competent jurisdiction in the United States, remains in full force and effect after all available appeals in the relevant State or Federal jurisdiction have been taken and may be entered and enforced through a court of competent jurisdiction of Luxembourg in compliance with the enforcement (*exequatur*) procedures set out at Articles 678 et seq. of the Luxembourg New Code of Civil Procedure (*Nouveau Code de Procédure Civile*) and Luxembourg case-law, being:

- the U.S. court has applied the substantive law as designated by the Luxembourg conflict of laws rules or, at least, the foreign judgment must not have contravened the principles underlying these rules (based on case law and legal doctrine, it is not certain that this condition would still be required for an exequatur to be granted by a Luxembourg court);
- the U.S. court has acted in accordance with its own procedural laws;
- the U.S. court order or judgment must not result from an evasion/fraud of Luxembourg law (*fraude à la loi*);
- the U.S. court awarding the judgment has jurisdiction to adjudicate the respective matter under its applicable laws, and such jurisdiction is recognized by Luxembourg private international and local law and Luxembourg conflict of jurisdiction rules;
- the judgment is enforceable (*exécutoire*) in the jurisdiction where the decision has been rendered;
- the judgment was granted following proceedings in accordance with the rights of defense, where the defendant had the opportunity to appear, was granted the necessary time to prepare its case and, if it appeared, could present a defense; and
- the considerations of the foreign order as well as the judgment do not contravene international public policy as understood under the laws of Luxembourg or has been given in proceedings of a criminal or tax nature.

In practice, Luxembourg courts currently tend not to review the merits of U.S. judgments even though there is no statutory prohibition of such review.

In case of court proceedings in a Luxembourg court, the Luxembourg court may require that the judgment obtained in a U.S. court and the enforcement of which is sought in Luxembourg be translated into French or German.

If an original action is brought in Luxembourg, a court of competent jurisdiction may refuse to apply the designated law if its application contravenes Luxembourg's international public policy and, if such action is brought on the basis of U.S. Federal or State securities laws, may not have the requisite power to grant the remedies sought. Also, an *exequatur* may be refused in respect of a foreign judgment granting punitive damages.

Further, in the event of any proceedings being brought in a Luxembourg court in respect of a monetary obligation expressed to be payable in a currency other than euro, a Luxembourg court would have power to give a judgment expressed as an order to pay a currency other than euro. However, enforcement of the judgment against any party in Luxembourg would be available only in euro and for such purposes all claims or debts would be converted into euro.

Under Luxembourg law, contractual provisions allowing the service of process against a party to a service agent could be overridden by Luxembourg statutory provisions allowing the valid serving of process against a party in accordance with applicable laws at the domicile of the party.

Insolvency Proceedings in Luxembourg

The Issuer is incorporated under the laws of Luxembourg. As such, any insolvency proceedings applicable to the Issuer should in principle be governed by Luxembourg law.

The insolvency laws of Luxembourg may not be as favorable to the noteholder's interests as creditors as the laws of the United States or other jurisdictions with which noteholder may be familiar.

The following is a brief description of certain aspects of the reorganization and insolvency legal framework in Luxembourg.

In the event that the Issuer experiences financial difficulty, it is not possible to predict with certainty in which jurisdiction or jurisdictions insolvency or similar proceedings would be commenced, or the outcome of such proceedings.

The Issuer is incorporated under the laws of Luxembourg and has its registered office in Luxembourg. Luxembourg courts should have, in principle, jurisdiction to open main insolvency proceedings with respect to the Issuer, as an entity having its registered office and, for the purposes of and as used in the Regulation (EU) 2015/848 of the European Parliament and of the Council of 20 May 2015 on insolvency proceedings (recast), as amended (the "EU Insolvency Regulation"), its center of main interest ("COMI"), in Luxembourg, such proceedings to be governed by Luxembourg insolvency laws.

According to, and for the purposes of, the EU Insolvency Regulation, there is a rebuttable presumption that a company has its COMI in the jurisdiction in which it has the place of its registered office. As a result, there is a rebuttable presumption that the COMI of the Issuer is in Luxembourg and consequently that any "main insolvency proceedings" (as defined in the EU Insolvency Regulation) would be opened by a Luxembourg court and be governed by Luxembourg law.

However, the determination of where the Issuer has its COMI, for the purposes of the EU Insolvency Regulation, depends on the fact pattern, which may change from time to time. Article 3 of the EU Insolvency Regulation states that the COMI of a debtor should correspond to the place where the debtor conducts the administration of its interests on a regular basis, and which is ascertainable by third parties.

Today, there are a few different insolvency regimes and restructuring procedures under Luxembourg law.

The Insolvency Modernization Law and the new reorganization measures

The Luxembourg law of 7 August 2023 on business continuity and modernization of bankruptcy law and transposing Directive 2019/1023 on restructuring and insolvency proceedings (the "Insolvency Modernization

Law"), modernized the Luxembourg legal framework for insolvency and restructuring procedures and has introduced a wide range of measures for the prevention and detection of financial difficulties of companies, as well as several out of court and judicial reorganization measures.

It is worth noting that noting that (i) the reorganization measures do not yet figure in the annex to the EU Insolvency Regulation and (ii) the Insolvency Modernization Law is new is unclear on some points and is generally untested. For guidance, the Luxembourg courts may turn to Belgian case law and recent legislative changes in the Belgian regime (given that the Insolvency Modernization Law was modelled upon the Belgian regime), noting that, on some important points, the Belgian law has also recently amended (which entered into force in September 2023) so that there are also very few precedents.

All judicial reorganisation measures consist in an agreement between the debtor and its creditors for the purpose of the reorganisation of all or part of the company's assets. Only the debtor can request the opening of a reorganisation procedure (except for a transfer of assets, which can also be requested by the Public Prosecutor, creditors or third parties interested in acquiring the business).

The out-of-court voluntary mutual arrangement with creditors (*accord amiable*) is a procedure where a debtor may propose to its creditors (at least two of them) an arrangement with the purpose of reorganizing all or part of its assets or activities. This arrangement executed outside of legal proceedings then needs to be approved by a court. This voluntary mutual arrangement is confidential (not subject to any publication or notification and third parties may have access to its contents only with the express consent of the debtor).

Alternatively, a judicial reorganization (*réorganisation judiciaire*) may be pursued by the debtor. Such a measure may have three different objectives (which may vary for different segments of the business and may change during the course of the procedure), specifically:

- obtaining a moratorium (*sursis*) during a period of four months (which can be extended) to enable an out-of-court arrangement to be reached with creditors. During the standstill, no enforcement of the debtor's claims may be pursued or exercised against its assets, no seizure may be carried out and the debtor may suspend the performance of his contractual obligations if the restructuring so requires (except for employment contracts and contracts for successive performance);
- obtaining the agreement of creditors on a restructuring plan for a maximum period of five years. Creditors will vote on the plan which will then have to be approved by a court; or
- enabling any part of the assets or business of the distressed debtor to be transferred by a court-appointed agent who will organize and complete the transfer of the assets or business.

The court is actively involved, not only for granting executory force to the parties' agreement but also for assessing the viability of the measures which will be implemented. A delegated judge (*juge délégué*) overseeing the reorganisation is appointed and the Public Prosecutor is also informed of the opening of the proceedings. Tthe court can also appoint a judicial officer (*mandataire de justice*) to work alongside the debtor's management or, in case of gross and qualified failure of the debtor or one of its (corporate) bodies, replace (temporarily) the management with a temporary administrator (*administrateur provisoire*).

According to Article 18 of the Insolvency Modernization Law, during the period between the filing of the reorganisation application and the court's judgment, (i) the debtor cannot be declared bankrupt (unless it makes the filing itself but it is not obliged to), nor can it be subject to a judicial dissolution (save limited exceptions) or be subject to an administrative dissolution without liquidation, and (ii) no realisation of movable or immovable property of the debtor may take place following the exercise of an enforcement procedure. By way of exception, the stay does not preclude the voluntary payment of claims by the debtor if such payment is necessary for ensuring the continuity of the business (Article 27 of the Insolvency Modernization Law). Secured creditors holding a security governed by the Luxembourg law of 2005 on financial collateral arrangements ("Financial Collateral Law") should not be impacted.

During a reorganisation procedure, contractual clauses and remedies and their performance, the payment of damages or the application of penalty clauses, may be affected, suspended or deemed without any effect, upon the

request or the commencement of a judicial reorganisation (*réorganisation judiciaire*) and the granting of a moratorium (*sursis*) by a Luxembourg court, under the Insolvency Modernization Law.

Traditional insolvency measures

The suspension of payments (*sursis de paiement*) is a corporate rescue procedure, whereby one or more commissioners is/are appointed by the court to oversee the management of the company during the suspension of payments period.

At all times, a Luxembourg company can be declared bankrupt (*en faillite*) by a Luxembourg court, if two cumulative conditions are met at the time the Luxembourg court renders its judgment: (i) the cessation of payments (*cessation des paiements)* and (ii) the loss of creditworthiness (*ébranlement de crédit*). If the conditions are met, bankruptcy may be declared (i) upon a filing (*aveu*) made by the managers on behalf of the company, (ii) at the request of a creditor (*assignation*) or (iii) on the court's own motion, after having received information with respect to the company's financial situation.

From the date of the judgment up to the date of the closing of the bankruptcy proceedings, the managers of a bankrupt company are divested from all their powers of management and representation, which are transferred to one or more bankruptcy receivers (*curateurs*). Bankruptcy receivers are discretionarily chosen and appointed, and can be replaced by the court. The receivers are always individuals, most often lawyers or auditors. Based on the complexity of the proceedings, one or more receivers can be appointed by the court.

Two other corporate rescue procedures, (i) controlled management (*gestion contrôlée*) and (ii) moratorium (*concordat préventif de la faillite*), were abolished by the Insolvency Modernization Law.

Bankruptcy proceedings (*faillite*) are primarily designed to liquidate and distribute the assets of a debtor to its creditors. A judgment in bankruptcy proceedings (*faillite*) has also the effect of stopping all attachment or garnishment proceedings brought by unsecured or non-privileged creditors. However, this type of judgment has no effect on creditors holding certain forms of security, such as pledges on certain types of assets, especially those subject to the Financial Collateral Law. A secured creditor holding a pledge can retain possession of the pledged assets or can enforce its security interest if an event of default has occurred under the security agreement. Similarly, the procedure of suspension of payments (*sursis de paiement*) and the judicial reorganization (*réorganisation judiciaire*), once approved, have no effect on creditors who, having secured claims, did not participate in the proceedings and did not, therefore, waive their rights or priority, mortgages or pledges. These creditors may continue to act against the debtor in order to obtain payment of their claims and they may enforce their rights, obtain attachments and obtain the sale of the assets securing their claims.

During the proceeding, the receiver may elect to continue the business of the company, provided they obtain the authorization of the court, and such continuation does not cause any prejudice to the creditors. Two exceptions apply:

- the parties to an agreement may contractually agree that the occurrence of a bankruptcy constitutes an early termination or acceleration event; and
- *intuitu personae* contracts (i.e., contracts whereby the identity of the other party constitutes an essential element upon the signing of the contract) are automatically terminated as of the bankruptcy judgment since the debtor is no longer responsible for the management of the company. Parties can agree to continue to perform under such contracts.

The assets of the company are generally liquidated, and the proceeds distributed to its creditors on the basis of the relative claims of those creditors and their ranking, and certain parties (such as secured creditors) will have special rights that may adversely affect the interests of holders of the Notes. The claim of a creditor may be limited depending on the date the claim becomes due and payable in accordance with its terms. Each of these claims will have to be resubmitted to the receiver to be verified by them.

For the allocation of the proceeds, a distinction is made between the debts owed to post-bankruptcy creditors (*créanciers de la masse*) and those owed to pre-bankruptcy creditors (*créanciers dans la masse*). The post-bankruptcy debts, which are generally arising from the management of the bankruptcy estate are super-preferred and

are paid before any other debts. Such debts generally fall generally in one of the following categories: expenses for maintaining the value of the assets (*frais de conservation*) - such as rents, insurance, security, maintenance, etc. - or liquidation expenses (*frais de réalisation du passif*) – such as of fees experts involved in the sales of assets, fees of lawyers from other jurisdictions, tax applicable to the sale, etc.

The claims of certain preferred creditors (including any statutory liens mandatorily preferred by law) may rank senior to the claims of holders of Notes. The Issuer's liabilities in respect of the Notes will, in the event of a liquidation of the Issuer following bankruptcy or judicial liquidation proceedings, rank after the cost of liquidation (including any debt incurred for the purpose of such liquidation) and those of the concerned obligor's debts that are entitled to priority under Luxembourg law.

For example, preferential debts under Luxembourg law include, among others:

- certain amounts owed to the Luxembourg tax authorities;
- value added tax and other taxes and duties owed to the Luxembourg Customs and Excise;
- social security contributions; and
- remuneration owed to employees.

For the avoidance of doubt, the above list is not exhaustive.

Assets in the form of shares or receivables over which a security interest has been granted and perfected will in principle not be available for distribution to unsecured creditors (except after enforcement and to the extent a surplus is realized), and subject to application of the relevant priority rule and liens and privileges arising mandatorily by law. During a bankruptcy proceedings, all enforcement measures by unsecured creditors are suspended.

Luxembourg insolvency laws may also affect transactions entered into or payments made by Luxembourg issuers during the period before bankruptcy, the so-called "suspect period" (*période suspecte*), which is a maximum of six months, as from the date on which the court formally adjudicates a company bankrupt, and, as for specific payments and transactions, during an additional period of ten days before the commencement of such period preceding the judgment declaring bankruptcy, except that in certain specific situations the court may set the start of the suspect period at an earlier date, if the bankruptcy judgment was preceded by another insolvency proceedings (e.g., a suspension of payments or controlled management proceedings) under Luxembourg law.

In particular:

- pursuant to article 445 of the Luxembourg Code of Commerce, specified transactions (such as, in particular, the granting of a security interest for antecedent debts; the payment of debts which have not fallen due, whether payment is made in cash or by way of assignment, sale, set-off or by any other means; the payment of debts which have fallen due by any means other than in cash or by bill of exchange; the sale of assets or entering into transactions generally without consideration or with substantially inadequate consideration) entered into during the suspect period (or the 10 days preceding it) will be set aside or declared null and void, if so requested by the insolvency receiver;
- pursuant to article 446 of the Luxembourg Code of Commerce, payments made for matured debts for considerations, as well as other transactions concluded during the suspect period, are subject to cancellation by the court upon proceedings instituted by the insolvency receiver if they were concluded with the knowledge of the bankrupt's cessation of payments; and
- regardless of the suspect period, article 448 of the Luxembourg code of commerce and article 1167 of the Luxembourg Civil Code (*action paulienne*) give any creditor the right to challenge any fraudulent payments and transactions made prior to the bankruptcy.

After having converted all available assets of the company into cash and after having determined all the company's liabilities, the receiver will distribute the proceeds of the sale to the creditors further to their priority

ranking as set forth by law, after deduction of the receiver fees and the bankruptcy administration costs. As of the date of adjudication of bankruptcy, no interest on any unsecured claim will accrue vis-à-vis the bankruptcy estate.

Any dispute as to the valuation of claims will be subject to court proceedings. These verification procedures could cause holders of the Notes to recover less than the principal amount of their Notes or less than they could recover in a liquidation governed by the laws of another jurisdiction. Such verification procedures could also cause payments to the holders of the Notes to be delayed compared with holders of undisputed claims.

A recovery under Luxembourg law, therefore, could involve a sale of the assets of the debtor in a manner that does not reflect the going concern value of the debtor. Consequently, Luxembourg insolvency laws could preclude or inhibit the ability of the holders of the Notes to affect a restructuring of the Issuer and could reduce their recovery in a Luxembourg insolvency proceeding.

Judicial liquidation

In addition to these proceedings, your ability to receive payment on the Notes may be affected by a decision of a Luxembourg court to put the Issuer into judicial liquidation (*liquidation judiciaire*). Judicial winding up proceedings may be opened at the request of the public prosecutor against companies pursuing an activity violating criminal laws or seriously breaching the laws governing commercial companies. The management of such winding up proceedings will generally follow the rules of bankruptcy proceedings.

Registration in Luxembourg

The registration of the Notes, the security interests agreements, the Indenture and the transaction documents (and any document in connection therewith) with the *Administration de l'Enregistrement, des Domaines et de la TVA* in Luxembourg may be required in the case that the Notes, the security interest agreements, the Indenture, and the transaction documents (and any document in connection therewith) are either (i) attached as an annex to an act (*annexés à un acte*) that itself is subject to mandatory registration or (ii) lodged with the notary's records (*déposés au rang des minutes d'un notaire*) or (iii) registered on a voluntary basis. In such cases either a nominal registration duty or an *ad valorem* duty may be payable depending on the nature of the document to be registered, or in the case of voluntary registration.

The Luxembourg courts or the official Luxembourg authority may require (when these are presented before them) that the Notes and the Note Guarantees, the security interests agreements, the Indenture and the transaction documents (and any document in connection therewith) and any judgment obtained in a foreign court be translated into French or German.

Enforcement of Judgements in Brazil

We have been advised by our Brazilian counsel that, subject to the specific requirements described below, a final conclusive judgment for civil liabilities rendered by any New York state or federal court sitting in New York City in respect of the Notes would be recognized in the courts of Brazil (to the extent that Brazilian courts may have jurisdiction) and such courts would enforce such judgment without reconsideration of the merits of the original action only upon recognition of that judgment by the Brazilian Superior Court of Justice (*Superior Tribunal de Justiça*, or STJ). That recognition will occur, according to Article 961, Article 963 and Article 964 of the Brazilian Code of Civil Procedure (*Código de Processo Civil*), only if the foreign judgment:

- is issued by a competent court and/or authority, after proper service of process is made on the parties, which service must comply with Brazilian law if made in Brazil, or after sufficient evidence of the parties' absence (revelia) has been given, pursuant to applicable law;
- fulfills all formalities for enforceability and is effective in the jurisdiction where it was issued;
- is not rendered in an action upon which Brazilian courts have exclusive jurisdiction, pursuant to the provisions of Article 23 of the Brazilian Code of Civil Procedure;
- is final and binding and, therefore, not subject to appeal in the jurisdiction in which it was issued;

- does not conflict with a previous final and unappealable decision issued by a Brazilian court on the same matter and involving the same parties (res judicata);
- is authenticated by a Brazilian consular office in the country where the foreign judgment is issued, except if it is apostilled by a competent authority of the country in which the decision was issued, according to the Hague Convention Abolishing the Requirement of Legalization for Foreign Public Documents of 5 October 1961;
- is translated into Portuguese by a certified translator, unless an exemption is provided by an international treaty to which Brazil is a signatory; and
- is not against Brazilian public policy, national sovereignty or good morals.

Notwithstanding the foregoing, no assurance can be given that such recognition would be obtained, that the process described above could be conducted in a timely manner or that a Brazilian court would enforce a monetary judgment for violation of the United States securities laws with respect to the Notes.

Brazilian law admits the exequatur of interlocutory decisions via letter rogatory. Additionally, it is possible to confirm a final and unappealable judicial decision, as well as a non-judicial decision of a jurisdictional nature under Brazilian law. The foreign decision may be partially confirmed.

The judicial recognition process may be time-consuming and may also give rise to difficulties in enforcing the foreign judgment in Brazil. Thus, we cannot assure you that the foreign award will be recognized, that the recognition process described above will be conducted in a timely manner or that a Brazilian court will enforce a monetary judgment, including for violation of the securities laws of countries other than Brazil, including the U.S. securities laws.

We have been further advised by our Brazilian counsel that:

- original actions may be brought in connection with this Offering Memorandum predicated solely on the federal securities laws of the United States in Brazilian courts and that, subject to applicable law, Brazilian courts may enforce liabilities in such actions against us or the directors and officers and certain advisors named herein (provided that provisions of the federal securities laws of the United States do not contravene Brazilian public policy, good morals or national sovereignty, and provided further that Brazilian courts can assert jurisdiction over the particular action). However, the application of a foreign body of law by Brazilian courts may be troublesome, as Brazilian courts consistently base their decisions on domestic law, or refrain from applying a foreign body of law for a number of reasons. Although remote, there is a risk that Brazilian courts, considering a relevant case-by-case rationale, may dismiss a petition to apply a foreign body of law and may adopt Brazilian laws to adjudicate the case. In any case, we cannot assure that Brazilian courts will confirm their jurisdiction to rule on such matter, which will depend on the connection of the case to Brazil and, therefore, must be analyzed on a case-by-case basis; and
- the ability of a creditor or other persons named above to satisfy a judgment by attaching certain of our assets, respectively, is limited by provisions of Brazilian law, to the extent that assets are located in Brazil.

A plaintiff (whether Brazilian or non-Brazilian) who resides outside Brazil during the course of litigation in Brazil must provide a bond to guarantee court costs and legal fees if the plaintiff owns no real property in Brazil that may ensure such payment. This bond must have a value sufficient to satisfy the payment of court fees and defendant's attorneys' fees, as determined by the Brazilian judge. This requirement will not apply (i) when an exemption is provided by an international agreement or treaty that Brazil is a signatory to; (ii) in the case of claims for collection on an instrument which may be enforced in Brazilian courts without a review on the merits (título executivo extrajudicial), in the case of enforcement of awards, including foreign judgments and arbitral awards that have been duly recognized by the STJ; or (iii) counterclaims as established, according to the Article 83 of the Brazilian Code of Civil Procedure.

If proceedings are brought in the courts of Brazil seeking to enforce our obligations under our Notes, payment shall be made in Brazilian reais. Any judgment rendered in Brazilian courts in respect of any payment obligations under our Notes would be expressed in Brazilian reais.

LEGAL MATTERS

Mattos Filho, Veiga Filho, Marrey Jr. e Quiroga Advogados, our Brazilian counsel, has advised us in connection with this offering and will pass on the validity of the Notes. Milbank LLP, our U.S. counsel, will pass on certain legal matters for us. Tauil & Chequer Advogados in association with Mayer Brown LLP, acting as Brazilian counsel to the Initial Purchasers, and White & Case LLP, acting as U.S. counsel to the Initial Purchasers, will pass on certain legal matters for Initial Purchasers. Certain Luxembourg legal matters relating to the Notes will be passed upon for the Issuer by DLA Piper Luxembourg.

INDEPENDENT AUDITORS

With respect to our unaudited parent company and consolidated condensed interim financial information as of September 30, 2023, and for the nine-month periods ended September 30, 2023 and 2022, included herein, KPMG Auditores Independentes Ltda. has reported that they applied limited procedures in accordance with professional standards for a review of such information. However, their separate report on the unaudited condensed interim financial information as of September 30, 2023 and for the nine-month periods ended September 30, 2023 and 2022, included herein states that they did not audit and they do not express an opinion on those condensed interim financial information. Accordingly, the degree of reliance on such information should be restricted in light of the limited nature of the review procedures applied.

The parent company and consolidated financial statements of 3R. as of December 31, 2022 and 2021 and for the years then ended, included in this Offering Memorandum, have been audited by KPMG Auditores Independentes Ltda., independent auditors, as stated in their report appearing herein, which includes an “other matters” paragraph stating that the parent company and consolidated statements of added value presented as supplementary information for IFRS purposes were subject to audit procedures carried out jointly with the audit of our financial statements.

The parent company and consolidated financial statements of 3R, as of December 31, 2021 and 2020 and for the years then ended, included in this Offering Memorandum, have been audited by KPMG Auditores Independentes Ltda., independent auditors, as stated in their report appearing herein, which includes an “other matters” paragraph stating that the parent company and consolidated statements of added value presented as supplementary information for IFRS purposes were subject to audit procedures carried out jointly with the audit of our financial statements.

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Consolidated condensed interim financial information as at September, 2023

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The accompanying notes are an integral part of condensed interim financial information.

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Independent Auditors' Report on Review of Condensed Interim Financial Information

To the Shareholders, Board and Management of
3R Petroleum Óleo e Gás S.A.
Rio de Janeiro - RJ

Introduction
We have reviewed the accompanying parent company and consolidated condensed interim financial information of 3R Petroleum Óleo e Gás S.A. ("Company"), identified as Parent Company and Consolidated, respectively, which comprises the statement of financial position as of September 30, 2023 and the respective statements of profit or loss and comprehensive income (loss) for the three and nine-month periods then ended, and changes in equity and cash flows for the nine-month period then ended and the notes to the interim financial information.

Management is responsible for the preparation and presentation of this parent company and consolidated condensed interim financial information in accordance with CPC 21(R1) and with international standard IAS 34 - Interim Financial Reporting, issued by the International Accounting Standards Board - IASB. Our responsibility is to express our conclusion on this condensed interim financial information based on our review.

Scope of the review
We conducted our review in accordance with the Brazilian and International Standards for Reviews of Interim Financial Information (NBC TR 2410 - Review of Interim Information Performed by the Auditor of the Entity and ISRE 2410 - Review of Interim Financial Information Performed by the Independent Auditor of the Entity, respectively). A review of interim financial information consists of making inquiries, primarily of management responsible for financial and accounting matters, and applying analytical procedures and other review procedures. The scope of a review is substantially less than an audit conducted in accordance with auditing standards and consequently, it did not enable us to obtain assurance that we would become aware of all significant matters that might be identified in an audit. Accordingly, we do not express an audit opinion.

KPMG Auditores Independentes Ltda., uma sociedade simples brasileira, de responsabilidade limitada e firma-membro da organização global KPMG de firmas-membro independentes licenciadas da KPMG International Limited, uma empresa inglesa privada de responsabilidade limitada.

KPMG Auditores Independentes Ltda., a Brazilian limited liability company and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

Conclusion on the parent company and consolidated condensed interim financial information

Based on our review, nothing has come to our attention that cause us to believe that the accompanying parent company and consolidated condensed interim financial information above mentioned is not prepared, in all material respects, in accordance with the CPC 21 (R1) and IAS 34, issued by IASB.

Other matters - Statement of added value

The aforementioned condensed interim financial information includes the statements of added value (DVA), parent company and consolidated, for the nine-months period ended September 30, 2023, prepared under the responsibility of the Company's management, presented as supplementary information for the purposes of IAS 34. These statements were submitted to the same review procedures followed together with the review of the Company's condesend interim financial information, in order to form our conclusion whether these statements are reconciled to interim financial information and to the accounting records, as applicable, and whether their form and content are in accordance with the criteria set on the Technical Pronouncement CPC 09 - Statement of Added Value. Based on our review, nothing has come to our attention that causes us to believe that the accompanying statements of added value were not prepared, in all material respects, according to the criteria defined in this standard and consistently in accordance with the parent company and consolidated condensed interim financial information taken as a whole.

Rio de Janeiro, November 8, 2023

KPMG Auditores Independentes Ltda.
CRC SP-014428/O-6 F-RJ

Thiago Ferreira Nunes
Accountant CRC RJ-112066/O-0

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Condensed Interim Statement of Financial Position

(In thousands of Brazilian Reais)

	Note	Parent company		Consolidated	
		September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Current					
Assets					
Cash and cash equivalents	4	147,947	86,942	781,980	800,442
Securities	4.1	-	-	14,515	31,353
Restricted cash	4.2	-	-	221,481	-
Trade account receivables	5	-	-	533,087	223,252
Accounts receivable from related parties	20	10,204	14,749	-	-
Inventories	7	-	-	654,654	187,472
Advances	6	496	3,274	59,778	193,011
Dividends receivable	20	-	225,868	-	-
Income tax and social contribution assets	8.1	1,802	11,402	25,538	32,488
Other recoverable taxes	8.2	5,313	2,510	123,803	8,533
Derivative financial instruments	32	-	-	7,239	15,934
Prepaid expenses		3,897	3,562	124,453	77,378
Debentures from related parties	20	325,977	12,613	-	-
Other assets		-	187	9,167	837
Total current assets		**495,636**	**361,107**	**2,555,695**	**1,570,700**
Noncurrent assets					
Securities	4.1	-	-	2,520,500	-
Restricted cash	4.2	192	130	24,497	14,985
Debentures from related parties	20	413,360	620,000	-	-
Court deposits		6,248	3,206	8,201	4,591
Income tax and social contribution assets	8.1	-	-	-	2,442
Deferred tax assets	9	-	-	627,087	500,225
Others recoverable taxes	8.2	6	-	126	-
Derivative financial instruments	32	-	-	39,652	7,613
Other assets		1	192	4,791	2,568
		419,807	**623,528**	**3,224,854**	**532,424**
Advances for acquisition of assets	10	-	-	1,600	593,549
Investments	11	5,455,082	4,317,122	-	-
Property, plant and equipment	12	17,898	17,861	6,372,701	2,228,071
Intangible assets	13	17,084	9,800	7,080,285	2,997,516
Right-of-use	23	9,131	17,222	40,921	48,875
Total noncurrent assets		**5,919,002**	**4,985,533**	**16,720,361**	**6,400,435**
Total assets		**6,414,638**	**5,346,640**	**19,276,056**	**7,971,135**

The accompanying notes are an integral part of condensed interim financial information.

Condensed Interim Statement of Financial Position

(In thousands of Brazilian Reais)

	Note	Parent company		Consolidated	
		September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Current					
Liabilities					
Trade payables	14	5,823	6,219	644,683	246,668
Loans and financing	15	52,468	-	138,988	108,223
Leases	23	3,110	3,839	14,953	12,748
Labor obligations		49,637	27,526	106,512	55,946
Accounts payable to related parties	20	50,000	12,605	-	-
Accounts payable for assets acquisitions	18	36,465	-	808,943	299,089
Income tax and social contribution payable	17.1	-	-	68,865	6,317
Other taxes payable	17.2	1,878	2,783	73,230	50,984
Provision for royalty payments		-	-	46,427	15,066
Debentures	16	396,845	17,717	457,390	39,234
Debentures - Related parties	20	-	-	16,865	-
Derivative financial instruments	32	-	-	96,243	32,734
Other liabilities	19	1,880	1,663	24,953	24,476
Total current liabilities		**598,106**	**72,352**	**2,498,052**	**891,485**
Noncurrent liabilities					
Loans and financing	15	63,333	-	2,509,810	-
Derivative financial instruments	32	-	-	91,360	-
Leases	23	7,262	14,305	29,472	37,818
Deferred tax assets	9	-	-	69,840	79,430
Provision for legal and administrative proceedings	22	3,517	3,589	3,667	4,013
Accounts payable for assets acquisitions	18	-	32,184	1,098,200	533,816
Provision for abandonment (ARO)	21	-	-	2,234,565	1,112,985
Debentures	16	508,396	882,868	5,411,918	904,085
Debentures - Related parties	20	-	-	21,429	-
Other liabilities	19	48,616	58,903	51,680	66,228
Total noncurrent Liabilities		**631,124**	**991,849**	**11,521,941**	**2,738,375**
Equity	24				
Capital		5,055,783	4,154,406	5,055,783	4,154,406
Capital reserve		44,506	37,136	44,506	37,136
Accumulated translation adjustment		94,386	106,383	94,386	106,383
Accumulated loss		(9,267)	(15,486)	(9,267)	(15,486)
Equity attributable to shareholders of the parent company		**5,185,408**	**4,282,439**	**5,185,408**	**4,282,439**
Equity attributable to non-controlling interest		-	-	70,655	58,836
Total equity		**5,185,408**	**4,282,439**	**5,256,063**	**4,341,275**
Total liabilities and equity		**6,414,638**	**5,346,640**	**19,276,056**	**7,971,135**

The accompanying notes are an integral part of condensed interim financial information.

Condensed Interim Statement of Profit or Loss

In thousands of Brazilian Reais, except per-share data

	Note	Parent company				Consolidated			
		Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Net Revenue	26	-	-	-	-	2,360,259	502,374	3,770,539	1,277,292
Cost of products sold	27	-	-	-	-	(1,624,045)	(271,736)	(2,591,441)	(548,503)
Gross profit		**-**	**-**	**-**	**-**	**736,214**	**230,638**	**1,179,098**	**728,789**
General and administrative expense (G&A)	28	(52,510)	(53,156)	(156,951)	(146,384)	(123,080)	(91,991)	(353,792)	(252,897)
Other operating (expenses)/revenues	29	(528)	2,980	(893)	(6,077)	(5,942)	(30,492)	(44,030)	(63,008)
Impairment loss	29.1	-	-	-	-	-	-	(26,500)	-
		(53,038)	**(50,176)**	**(157,844)**	**(152,461)**	**(129,022)**	**(122,483)**	**(424,322)**	**(315,905)**
Share of profit (loss) of subsidiary	11	(32,700)	487,663	187,406	521,242	-	-	-	-
Income (loss) before financial income (expenses)		**(85,738)**	**437,487**	**29,562**	**368,781**	**607,192**	**108,155**	**754,776**	**412,884**
Financial income	30	48,101	5,896	113,840	79,261	81,102	348,666	430,211	253,154
Financial expenses	30	(45,851)	(11,527)	(137,183)	(255,472)	(800,078)	(162,695)	(1,142,048)	(632,772)
		2,250	**(5,631)**	**(23,343)**	**(176,211)**	**(718,976)**	**185,971**	**(711,837)**	**(379,618)**
Net Income (loss) before income tax and social contribution		**(83,488)**	**431,856**	**6,219**	**192,570**	**(111,784)**	**294,126**	**42,939**	**33,266**
Current income tax and social contribution	9	-	-	-	-	(107,766)	3,476	(161,353)	(52,113)
Deferred income tax and social contribution	9	-	-	-	-	142,097	172,172	136,452	185,534
Net income (loss) for the period		**(83,488)**	**431,856**	**6,219**	**192,570**	**(77,453)**	**469,774**	**18,038**	**166,687**
Net income (loss) attributed to:									
Shareholders of the parent company		(83,488)	431,856	6,219	192,570	(83,488)	431,856	6,219	192,570
Non-controlling interest		-	-	-	-	6,035	37,918	11,819	(25,883)
Net income (loss) for the period		**(83,488)**	**431,856**	**6,219**	**192,570**	**(77,453)**	**469,774**	**18,038**	**166,687**
Basic earnings (loss) per share - R$	31	**(0.38)**	**2.13**	**0.03**	**0.95**	**(0.38)**	**2.13**	**0.03**	**0.95**
Diluted earnings (loss) per share - R$	31	**(0.38)**	**2.11**	**0.03**	**0.94**	**(0.38)**	**2.11**	**0.03**	**0.94**

The accompanying notes are an integral part of condensed interim financial information.

Condensed Interim Statement of Comprehensive Income Loss

In thousands of Brazilian Reais

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Se 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Net Income (loss) of the period	(83,488)	431,856	6,219	192,570	(77,453)	469,774	18,038	166,687
Items that can subsequently be reclassified to profit or loss:								
Accumulated translation adjustment	11,146	1,073	(11,997)	(10,052)	11,146	1,073	(11,997)	(10,052)
Total comprehensive for the period	**(72,342)**	**432,929**	**(5,778)**	**182,518**	**(66,307)**	**470,847**	**6,041**	**156,635**

The accompanying notes are an integral part of condensed interim financial information.

Condensed Interim Statement of Changes in Equity

In thousands of Brazilian Reais

	Note	Capital	Capital reserve	Accumulated income losses	Accumulated translation adjustment	Total	Non-controlling interest	Total equity
Balances as of January 01, 2022		**4,146,616**	**114,976**	**(269,554)**	**115,852**	**4,107,890**	**67,555**	**4,175,445**
Net income (loss) for the period	31	-	-	192,570	-	192,570	(25,883)	166,687
Absorption of loss	24	-	(111,633)	111,633	-	-	-	-
Capital increase		-	-	-	-	-	6,000	6,000
Share-based payment transactions		-	35,509	-	-	35,509	-	35,509
Capital transactions		-	-	(7,134)	-	(7,134)	7,134	-
Accumulated translation adjustment		-	-	-	(10,052)	(10,052)	-	(10,052)
Balances as of September 30, 2022		**4,146,616**	**38,852**	**27,515**	**105,800**	**4,318,783**	**54,806**	**4,373,589**
Balances as of January 01, 2023		**4,154,406**	**37,136**	**(15,486)**	**106,383**	**4,282,439**	**58,836**	**4,341,275**
Net income for the period	31	-	-	6,219	-	6,219	11,819	18,038
Capital increase	24	900,000	-	-	-	900,000	-	900,000
Share-based payment transactions	24	1,377	7,370	-	-	8,747	-	8,747
Accumulated translation adjustment	24	-	-	-	(11,997)	(11,997)	-	(11,997)
Balances as of September 30, 2023		**5,055,783**	**44,506**	**(9,267)**	**94,386**	**5,185,408**	**70,655**	**5,256,063**

The accompanying notes are an integral part of condensed interim financial information.

Condensed Interim Statement of Cash Flows

In thousands of Brazilian Reais

	Note	Parent company		Consolidated	
		Jan-Sep 2023	Jan-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Cash flows from operating activities					
Net income for the period	31	**6,219**	**192,570**	**18,038**	**166,687**
Adjusted by:					
Share loss of subsidiary	11	(187,406)	(521,242)	-	-
Unrealized interest from securities		(16,487)	149,999	(148,283)	136,362
Unrealized interest in court deposits	30	(11)	(10)	(13)	(87)
Interest on leases	30	1,383	999	4,656	1,828
Unrealized interest on loans and accounts payable for acquisitions		8,268	228	200,536	44,028
Interest on debentures	30	107,571	6,209	285,642	8,695
Present value adjustment		(10,942)	1,437	14,558	8,432
Unrealized exchange rate variation on loans and financing		-	-	(6,096)	9,378
Unrealized losses on derivative financial instruments		-	-	140,976	155,896
Unrealized exchange rate variation		(1,489)	801	(315,905)	(25,191)
Provisions for contingencies / (reversal)		(72)	1,538	(346)	1,264
Impairment loss	29.1	-	-	26,500	-
Write-off of property, plant and equipment	12	4	30	142	1,069
Exchange rate variation - debentures		-	-	85,815	(2,242)
Measurement of present value of provision for asset retirement obligation		-	-	66,431	27,610
Income of interest from debentures - related parties	20	(83,560)	-	-	-
Depreciation of property, plant and equipment	12	1,323	564	196,540	62,870
Amortization of intangible assets		2,105	212	205,157	112,788
Amortization right-of-use asset	23	2,722	1,753	11,414	3,327
Prepaid expenses appropriated in the period		6,710	-	70,561	-
Debentures costs appropriated	16	4,818	528	13,546	528
Deferred income tax and social contribution	9	-	-	(136,452)	(185,534)
Share-based payment transaction	24	7,370	35,509	7,370	35,509
		(151,474)	**(128,875)**	**740,787**	**563,217**
Changes in assets and liabilities					
Trade accounts receivable		-	-	(309,835)	(139,062)
Income tax and social contribution recoverable taxes		9,600	-	9,392	-
Other recoverable taxes		(2,809)	-	(115,396)	-
Inventories		-	-	(458,834)	-
Other assets		379	1,618	(10,551)	(11,351)
Income tax and social contribution recoverable taxes		-	(3,013)	161,242	57,757
Other recoverable taxes		(905)	6,631	22,246	19,599
Advances		2,778	(599)	133,233	(91,848)
Suppliers		(396)	3,783	398,015	120,428
Amounts payable to the operator		-	(1,585)	-	(1,071)
Court deposits		(3,030)	(13)	(3,597)	(208)
Prepaid expenses		(7,045)	(546)	(117,636)	(44,050)
Labor obligations		22,111	28,250	50,566	37,104
Royalties		-	-	31,361	5,210
Settlement and reimbursement of abandonment cost		-	-	2,948	(3,056)
Derivative financial instruments		-	-	(9,451)	(279,730)
Related parties		(8,060)	(23,330)	-	-
Other liabilities		6,093	(542)	(28,631)	(16,643)
Cash provided by (used in) operating activities		**(132,758)**	**(118,221)**	**495,859**	**216,296**
Taxes paid on profit		-	-	(98,694)	(73,572)
Net cash provided by (used in) operating activities		**(132,758)**	**(118,221)**	**397,165**	**142,724**
Cash flows from investing activities					
Securities		16,487	2,088,100	(2,220,231)	2,221,873
Increase in paid-in capital at subsidiary		(922,527)	(2,053,472)	-	-
Advances for assignment of assets		-	-	-	(591,949)
Acquisition of property, plant and equipment (fixed assets)		(1,364)	(13,244)	(755,682)	(407,710)
Acquisition of intangible assets		(9,389)	(3,389)	(53,349)	(1,145,182)
Restricted cash		(62)	(540)	(233,544)	(5,454)
Issue of debentures from related parties	20	(140,000)	-	-	-
Interest received of debentures to related parties		79,335	-	-	-
Payment of principal on debentures from a related company	20	37,500	-	-	-
Acquisition of oil and gas assets	13	-	-	(5,214,643)	(7,253)
Payment of principal on loans received from a related company		-	(2,250)	-	-
Receipt from a related company		-	40,000	-	-
Dividends received		235,844	32,833	-	-
Loans granted to related parties		-	(25,000)	-	-
Net cash generated (used) in investing activities		**(704,176)**	**63,038**	**(8,477,449)**	**64,325**
Cash flows from financing activities					
Transaction costs		-	(19,008)	(223,727)	(19,008)
Interest paid on debentures	16	(107,733)	-	(247,713)	(2,819)
Payment of lease liabilities	23	(3,786)	(2,110)	(14,257)	(4,339)
Issuance of debentures	16	-	900,000	5,107,850	900,000
Issuance of debentures related parties	20	-	-	37,500	
Payment of loans interests	15	(1,903)	-	(85,473)	-
Payment of principal - Loans	15	-	-	(99,830)	-
Payment of principal - debentures	16	-	-	(17,658)	-
Capital Increase	24	901,377	-	901,377	-
Loans received	15	110,000	-	2,708,737	100,000
Net Cash provided by financing activities		**897,955**	**878,882**	**8,066,806**	**973,834**
Net increase (decrease) in cash and cash equivalents		**61,021**	**823,699**	**(13,478)**	**1,180,883**
Cash and cash equivalents at beginning of period	4	86,942	1,529	800,442	118,725
Effect of exchange variation on cash and cash equivalents		(16)	(1,989)	(4,984)	(4,540)
Cash and cash equivalents at end of period	4	147,947	823,239	781,980	1,295,068
Net increase (decrease) in cash and cash equivalents		**61,021**	**823,699**	**(13,478)**	**1,180,883**

The accompanying notes are an integral part of condensed interim financial information.

Condensed Interim Statement of Added Value

In thousands of Brazilian Reais

	Parent company		Consolidated	
	Jan-Sep 2023	Jan-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Net revenues	-	-	**3,770,539**	**1,277,330**
Sales of oil and gas	-	-	1,984,089	1,277,292
Oil derivatives revenues	-	-	1,734,803	-
Other revenues	-	-	51,647	38
Inputs acquired from third parties	**(44,442)**	**(39,768)**	**(2,339,044)**	**(471,070)**
Cost of products, merchandise and services sold	-	-	(1,170,497)	(150,190)
Materials, power, outsourced services and other supplies	(44,442)	(39,768)	(1,142,047)	(320,880)
Impairment loss	-	-	(26,500)	-
Gross value added	**(44,442)**	**(39,768)**	**1,431,495**	**806,260**
Depreciation and amortization	(6,150)	(2,529)	(413,111)	(178,985)
Net value added produced by the Company	**(50,592)**	**(42,297)**	**1,018,384**	**627,275**
Value added received in transfer				
Share of profit of subsidiary	187,406	521,242	-	-
Financial income	113,840	79,261	430,211	253,154
Total value added for distribution	**250,654**	**558,206**	**1,448,595**	**880,429**
Distribution of value added	**250,654**	**558,206**	**1,448,595**	**880,429**
Personnel	**80,751**	**99,551**	**188,839**	**174,142**
Direct remuneration	62,311	95,773	143,154	150,996
Benefits	11,413	1,089	29,536	16,487
Severance pay accrual	7,027	2,689	16,149	6,659
Taxes, fees and contributions	**24,391**	**9,878**	**74,995**	**(111,306)**
Federal	24,391	9,860	74,320	(111,536)
State	-	-	654	-
Municipal	-	18	21	230
Remuneration of third-party capital	**139,293**	**256,207**	**1,166,723**	**650,906**
Interest	122,061	8,367	505,170	32,692
Rentals	898	735	22,119	15,502
Other remuneration	16,334	247,105	639,434	602,712
Remuneration of Company capital invested	**6,219**	**192,570**	**18,038**	**166,687**
Net income for the period	6,219	192,570	18,038	166,687

The accompanying notes are an integral part of condensed interim financial information.

1 . Operations

3R Petroleum Óleo e Gás S.A. ("Company" or "3R OG") is a publicly traded joint stock corporation under Brazilian law, founded on June 17, 2010. The Company's registered offices are located at Praia de Botafogo, 186, 16º floor, in the Botafogo district of the City of Rio de Janeiro, State of Rio de Janeiro (RJ). 3R OG operates in the oil and gas industry and focuses on redevelopment of mature fields located onshore, in shallow waters and offshore. It is qualified as a Grade A operator by the Brazilian National Petroleum, Natural Gas & Biofuels Agency - ANP.

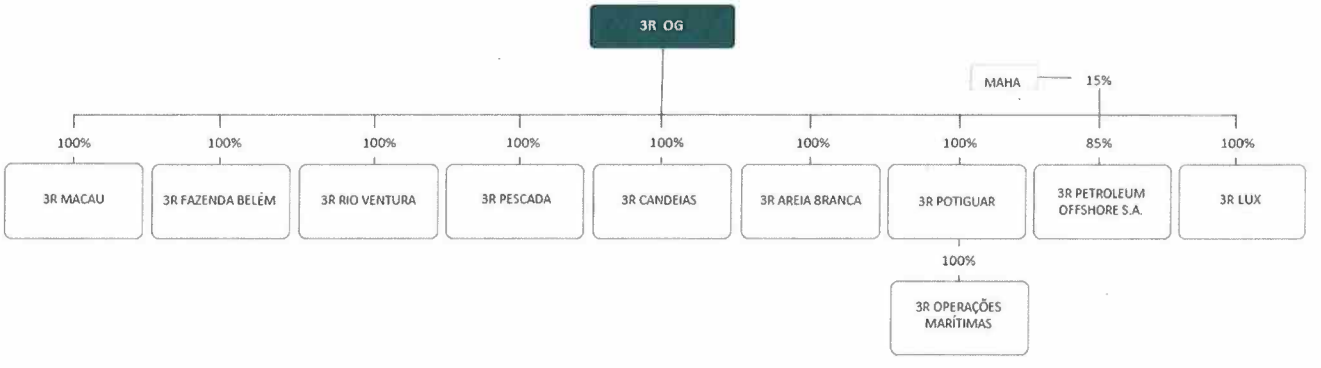
The Company's stated corporate objects are to: (a) explore, produce and refine oil and its by-products, natural gas and other hydrocarbon fluids, including, without limitation, the Brazilian sedimentary basins that the ANP has granted licenses for, as well as sedimentary basins located overseas; (b) carry out the importation and exportation of oil and any by-products thus produced; and (c) hold equity interests in other companies as partner, stockholder or shareholder, both in Brazil and abroad, that operate in activities related to the Company's corporate objectives.

The Group believes that its operations are not of a seasonal nature and, therefore, did not provide additional information in the notes to the consolidated condensed interim financial information.

Corporate structure

As at September 30, 2023, 3R OG holds 100% of the direct and indirect share capital of the following companies: (together the "Group") 3R Macau S.A. ("3R Macau"), 3R Fazenda Belém S.A. ("3R FZB"), 3R Rio Ventura S.A. ("3R RV"), 3R Candeias S.A. ("3R Candeias"), 3R Pescada S.A. ("3R Pescada"), 3R Areia Branca S.A. ("3R Areia Branca"), 3R Potiguar S.A. ("3R Potiguar"), 3R Operações Marítimas S.A. ("3R OP"), and 3R Lux ("3R Lux"). Additionally, 3R OG holds 85% of the share capital of 3R Petroleum Offshore S.A. ("3R Offshore").

The current corporate structure is shown in the following organization chart:



3R OG

The Company has 100% interest in the block known as BAR-M-387, located in the Barreirinhas basin in the Northeast State of Maranhão, acquired in the 11th round of ANP competitive public bidding processes, having paid R$ 778 by way of subscription bonus. As of September 30, 2022, the Company had completed 98% of the Minimum Exploratory Program ("PEM") for such block.

3R Macau (Macau Cluster)

The Macau Cluster comprises 5 onshore fields: Macau, Salina Cristal, Lagoa Aroeira, Porto Carão and Sanhaçu, located in the Potiguar basin, in the State of Rio Grande de Norte. 3R Macau has been operating with a 100% interest in all concessions since May 28, 2020.

3R RV (Rio Ventura Cluster)

The Rio Ventura Cluster is comprised of 8 onshore fields: Água Grande, Bonsucesso, Fazenda Alto das Pedras, Pedrinhas, Pojuca, Rio Pojuca, Tapiranga and Tapiranga Norte, in the Recôncavo Basin in the Northeast Brazilian State of Bahia (BA). 3R RV is the operator with 100% equity interest in this fields since July 15, 2021.

3R Candeias (Recôncavo Cluster)

The Recôncavo Cluster encompasses the fields: of Aratu, Ilha de Bimbarra, Mapele, Massuí, Candeias, Cexis, Socorro, Dom João, Dom João Mar, Pariri, Socorro Extensão, São Domingos, Cambacica and Guanambi, in the Recôncavo Basin in the Brazilian State of Bahia (BA). 3R Candeias is the operator of these fields with 100% interests in these concessions, with the exception of Cambacica and Guanambi, in which 3R Candeias holds an interest of 75% (25% held by Sonangol Hidrocarbonetos Brasil Ltda.) and 80% (20% held by Sonangol Guanambi Exploracao and Producao de Petroleo Ltda.), respectively.

3R Pescada (Pescada and Arabaiana)

This subsidiary holds a 35% interest in the fields known as Pescada, Arabaiana and Dentão. The Pescada and Arabaiana fields, located on the continental shelf of the State of Rio Grande do Norte (RN), in the Potiguar basin, are already in the production phase and are operated by Petrobras, which has 65% of participation.

On July 9, 2020, the subsidiary 3R Pescada signed a contract for the acquisition of 65% of the remaining interest from Petrobras in the Pescada, Arabaiana and Dentão fields, however, this transaction has not yet closed, the acquisition is in the process of approval of the transfer of concession contracts. – refer to note 33 (b).

3R Offshore (Peroá and Papa-Terra)

On July 9, 2021, 3R Offshore signed an agreement for acquisition of the 62.5% interest held by Petrobras in the Papa-Terra Cluster and the remainder is held by Nova Técnica Energy Ltda ("NTE"). The Papa-Terra cluster is in deep waters of the Campos Basin in the State of Rio de Janeiro.

On August 2, 2022, the Company through the subsidiary 3R Offshore, concluded the acquisition of the production fields of Peroá and Cangoá and Block BM-ES-21 (Malombe), jointly called Cluster Peroá, from Petrobras, after approval of the transfer of contracts concession by the ANP. It should be noted that the Company is qualified as a Grade A operator by ANP being able to operate blocks and concessions on land (onshore) and at sea (offshore), including in ultra-deep waters.

On December 23, 2022, 3R Offshore concluded the acquisition of the 62.5% interest in the concession rights over the Papa Terra production field from Petrobras, after approval of the transfer of concession contracts by the ANP.

The asset acquired was not identified as business combination, and the Company recognized the transaction as an asset acquisition.

The Papa-Terra Cluster is in deep waters in the Campos Basin, approximately 100km off the coast of the State of Rio de Janeiro. Its discovery took place in 2003 and the start of its production in November 2013. The field comprises the FPSO (3R-3) and the TLWP-type platform (3R-2).

In addition to the operations above, 3R Offshore holds a 100% interest in the Camarão field from block BM-CAL-4.

3R Areia Branca (Ponta do Mel and Redonda)

3R Areia Branca holds 100% of the concession and is the operator of the onshore production fields of Ponta do Mel, Redonda and Carcará, all located in the township of Areia Branca, in the Potiguar Basin, in the Northeast State of Rio Grande do Norte (RN); it also holds 100% of the Crejoá concession, in the Southeast State of Espírito Santo.

3R FZB (Fazenda Belém Cluster)

On August 6, 2022 the Company, through the subsidiary 3R FZB, concluded the acquisition of the Fazenda Belém Cluster, owned by Petrobras, after approval of the transfer of concession contracts by the ANP. The asset acquired was not identified as business combination, and the Company recognized the transaction as an asset acquisition.

This cluster consists of the onshore fields of Fazenda Belém and Icapuí, located in the Potiguar Basin in the Northeast Brazilian State of Ceará (CE). 3R FZB holds 100% of the concession and is the operator of the cluster.

3R Potiguar (Potiguar Cluster)

On January 31, 2022, the Company, through its subsidiary 3R Potiguar, signed a purchase agreement with Petrobras for its 100% interest in the Potiguar Cluster, in the Potiguar Basin, in the Northeast State of Rio Grande do Norte (RN).

The acquisition of Potiguar Cluster contemplates (i) the assignment of concession contracts for a set of 22 fields of oil and gas, and the entire infrastructure and pipeline systems that support the operation, in (ii) the transfer of all the installations of the Guamaré industrial asset ("AIG"), which includes processing units of natural gas (UPGNs), the Clara Camarão refinery and the Guamaré waterway terminal (terminal for private use), with storage capacity and systems that allow the export, import and cabotage of oil and derivatives.

The Potiguar Cluster comprises three sub-clusters of concessions: (i) Canto do Amaro, which comprises twelve onshore production concessions; (ii) Alto do Rodrigues, which comprises seven onshore production concessions; and (iii) Ubarana, which comprises three concessions located in shallow waters, between 10 and 22 km from the coast of the municipality of Guamaré. All oil and gas production is transported through pipelines to the processing facilities located at AIG.

On June 8, 2023, 3R Potiguar completed the transfer of 100% of the concession rights over Petrobras Clusters Potiguar production field, after approval of the transfer of concession contracts by the ANP. The value of the transaction was US$ 1.5 billion (R$ 7,233,827), divided into (i) US$ 110 million (R$ 591,948), paid upon signing of the acquisition agreement, in January 2022; (ii) US$ 1.1 billion (R$ 5,407,889) referring to the final closing installment, paid in June 23 and (iii) US$ 251 million (R$ 1,233,990), divided into 4 annual installments of US$ 62.8 million, as per explanatory notes 12 and 13.

The asset acquired was not identified as business combination, and the Company recognized the transaction as an asset acquisition.

3R Operações Marítimas

Established on April 1, 2022, 3R Operações Marítimas is directly and wholly controlled by 3R Potiguar and indirectly by 3R OG with the purpose of providing port services to its Parent Company.

3R Lux

Established on June 13, 2022, 3R Lux is directly and wholly controlled by 3R OG for the purpose of acquiring interests, managing businesses and negotiate financial resources in internal and external markets.

Reservation Certification Report

On the first quarter of 2023, the Company concluded, through the independent international certifier DeGolyer and MacNaughton, the reassessment of reserves, base date December 31, 2022, of the assets grouped by basin, namely: (i) Potiguar, comprising the Clusters: Macau, Areia Branca, Fazenda Belém, Pescada and Potiguar; (ii) Recôncavo, comprising the Rio Ventura and Recôncavo Clusters; (iii) Campos composed by the Papa Terra Cluster; and (iv) Espírito Santo, composed by the Peroá Cluster.

Considering the Consolidated portfolio, the Company now has 516.0 million barrels of oil equivalent of proven most probable reserves (2P), of which 367.2 million barrels (or 71%) are proven reserves (1P) and 29 % of 2P reserves are classified as proved reserves developed in production (PDP). Of the total 2P reserves, 12% represent natural gas reserves. The previous reserve certification had a total of 523.7 million barrels of oil equivalent of proven most probable reserves (2P), of which 376.6 million barrels (or 72%) were proven reserves (1P) and 28% of 2P reserves were classified as proved developed-to-production (PDP) reserves.

2 . Company's Subsidiaries

As of September 30, 2023, and December 31, 2022, the Company held the following equity interests directly and indirectly:

	September 30, 2023	December 31, 2022
3R Macau	100%	100%
3R FZB	100%	100%
3R RV	100%	100%
3R Candeias	100%	100%
3R Offshore	85%	85%
3R Pescada	100%	100%
3R Areia Branca	100%	100%
3R Potiguar	100%	100%
3R Operações Marítimas	100%	100%
3R Lux	100%	100%

3 . Basis for Preparation of the Financial Statements

3.1. Declaration of conformity

The Company's condensed interim parent company and consolidated financial statements was prepared in accordance with technical pronouncement CPC 21 (R1) (Interim Financial Reporting) and in accordance with the international standard IAS 34 Interim Financial Reporting issued by the International Accounting Standards Board (IASB).

Management authorized publication of the Company's quarterly parent company and consolidated financial information on November 08, 2023.

All the relevant financial information and only such information, is being disclosed and corresponds to the financial information being evidenced and it corresponds to the information used by Management in the running of the Group.

3.2 Basis for consolidation

The parent company and consolidated financial information of subsidiaries are included in the consolidated financial information from the date on which control begins until the date on which control ceases. The accounting policies of the subsidiaries are in line with the policies adopted by Parent Company. In Parent Company's individual financial statements, the financial information of subsidiaries is recognized using the equity method. Intergroup balances and transactions, and any income or expenses arising from intergroup transactions, are eliminated in preparing the consolidated financial statements. Unrealized gains arising from transactions with the subsidiary recorded using the equity method are eliminated against the investment in proportion to the Company's interest in the subsidiaries. Unrealized results are eliminated in the same way as unrealized gains are eliminated, but only to the extent that there is no evidence of an impairment loss.

3.3 Accounting policies adopted

These condensed interim financial information have been prepared following principles, practices and criteria consisted with those adopted in preparation of the annual financial statements as of and for the year ended December 31, 2021. As permitted by BR GAAP standard CPC 21 (R1) and IAS 34, Management has elected not to disclose once again the details of the accounting policies adopted by the Company. Accordingly, these condensed interim financial information should be read jointly with the Company's above-cited annual financial statements as of and for the years ended December 31, 2021, as approved by the 3R OG Executive Officers Committee on March 8, 2023.

4. Cash and cash equivalents

As of September 30, 2023, and December 31, 2022, the amounts refer to the following:

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
In Brazil:				
Cash and cash equivalents				
Cash and banks	15	2	218	41
Financial investments	147,826	86,818	778,917	794,175
Abroad:				
Cash and cash equivalents				
Cash and banks	106	122	2,845	6,226
	147,947	**86,942**	**781,980**	**800,442**

Cash and cash equivalents consist of amounts held in a bank account, with immediate liquidity, maintained mainly through Bank Deposit Certificates ("CDB") and Fixed Income, with yields linked to the CDI (the Brazilian inter-bank overnight deposit rate). The financial resources will be used mainly as working capital and for the settlement of obligations assumed by the Company.

4.1. Securities

	Indexers	Parent company		Consolidated	
		September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
In Brazil:					
Exchange investment fund (a)	USD (Ptax)	-	-	5,079	19,685
Multimarket mutual fund (a)	CDI	-	-	9,436	11,668
		-	-	**14,515**	**31,353**
Foreign:					
Total Return swap – TRS (b)	SOFR + 6,25 p.a.	-	-	2,520,500	-
		-	-	**2,520,500**	-
Total of securities		-	-	**2,535,015**	**31,353**
Current assets		-	-	**14,515**	**31,353**
Noncurrent assets		-	-	**2,520,500**	-

(a) The Company's marketable securities are comprised of a foreign exchange investment fund set up for investment purposes and not for use to cover working capital needs.

(b) Refers to resources applied at Santander Cayman Branch bank in the modality TRS, as per explanatory note 16.

4.2. Restricted cash

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Reserve account (a)	-	-	221,481	-
Restricted cash (b)	192	130	24,497	14,985
	192	**130**	**245,978**	**14,985**
Current assets	-	-	221,481	-
Noncurrent assets	192	130	24,497	14,985

(a) Refers to the escrow, as per explanatory notes 15 (c) and 16.

(b) As of September 30, 2023, in the Consolidated, the amount of R$ 92 (R$ 223 as of December 31, 2022) refers to the security deposits, the amount of R$ 19,851 (R$ 10,612 as of December 31, 2022) refers to payments made to land leaseholders with documentary regularization pending to receive the amount and R$ 4,554 (R$ 4,150 as of December 31, 2022) for bank surety to ensure the suspension of debt enforceability before the National Treasury regarding social employer contributions.

5. Trade accounts receivable

	Consolidated	
	September 30, 2023	December 31, 2022
Crude oil	347,045	126,541
Oil derivates	86,805	-
Gas	66,121	94,686
Services provided	33,116	2,025
Total	**533,087**	**223,252**
Internal market	465,323	223,252
Foreign market	67,764	-

With the conclusion of the acquision of the Potiguar cluster and the begin of the refiny of oil, the portfolio of clients of the Company's customer portfolio now consists of several customers operating in the oil and gas market.. The Management evaluate that the risk of defaulting on its trade account receivables is low. On September 30, 2023 and December 31, 2022, there were no overdue amounts in accounts receivable and Management assessed the expected loss and defined that any provision for expected credit losses would be immaterial. On September 30, 2023, the average period for receipt of Trade account receivables parties is 37 days.

6. Advances

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Advances to suppliers (a)	496	446	59,777	82,140
Others advances (b)	-	2,828	1	110,871
	496	**3,274**	**59,778**	**193,011**

a) As of September 30, 2023 it refers mainly to structuring services necessary for the start of operations at the Papa-Terra Cluster, belonging to 3R Offshore, in the amount of R$ 25,847 (R$ 67,809 on the December 31, 2022), and advances to suppliers for structuring services necessary to start the operations of other clusters in the amount of R$ 33,080.

(b) As of December 31, 2022, mainly refers to advances made to enable funding, through a loan and financing agreement which were reclassified to loans and financing after completion of the funding process, used to the acquisition of Potiguar cluster.

7. Inventories

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Oil (a)			107,272	123,675
Oil derivates (b)			256,914	-
Material for use and consumption - Warehouse (c)	-	-	290,468	63,797
Inventories total	**-**	**-**	**654,654**	**187,472**

(a) Refers to the inventories of oil produced by the Papa-terra field worth R$ 59,377 (R$ 123,675 in December 31, 2022) and crude oil belonging to 3R Potiguar worth R$ 47,895.

(b) Refers to the inventories of oil derivative products processed at the Clara Camarão refinery.

(c) Refers to the inventories of materials and inputs for use in the operation and maintenance of equipment in all the Company's Clusters.

8. Recoverable taxes

8.1. Income tax and social contribution assets

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Income Tax (IRPJ) and social contribution (CSLL) (a)	1,802	11,402	25,538	34,930
	1,802	**11,402**	**25,538**	**34,930**
Current Assets	1,802	11,402	25,538	32,488
Noncurent Assets	-	-	-	2,442

(a) Comprised of negative IRPJ and negative CSLL results from prior years and prepayments made during the respective years.

8.2. Other recoverable taxes

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Federal withholding tax (IRRF)	5,313	2,504	10,365	3,627
State Value-Added Tax on Goods and Services (ICMS)	-	-	69,165	3,542
Federal Social Integration Program (PIS) and Social Security Finance (Cofins) contributions	6	6	36,430	1,154
Other taxes	-	-	7,969	210
	5,319	**2,510**	**123,929**	**8,533**
Current Assets	5,313	2,510	123,803	8,533
Noncurent Assets	6	-	126	-

9. Deferred income tax and social contribution

The Company and its subsidiaries recognize deferred tax assets related to temporary differences, and carry-forward tax losses. On September 30, 2023, after the start of operations of the Potiguar cluster, 3R Potiguar recorded these tax assets as it considers their realization probable.

As of January 1, 2023, with the amendments arising from CPC 32/IAS 12, related to deferred taxes arising from a single transaction, the Company and its subsidiaries began to recognize deferred taxes on leases and liabilities for disassembly and removal of segregated form between deferred tax assets and liabilities.

Prior to the updates required by the aforementioned standard, the Company and its subsidiaries already recognized the deferred tax taxes constituted on leases and liabilities for dismantling and removal in a net form.

Deferred tax assets and liabilities comprise:

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Deferred tax assets on temporary differences	-	-	433,990	115,420
Deferred tax assets on carry-forward tax losses	-	-	367,757	384,805
Total deferred tax assets	**-**	**-**	**801,747**	**500,225**
Deferred tax liabilities on temporary differences	-	-	(174,660)	(5,535)
Deferred tax liabilities on fair value adjustments of assets in acquisition of 3R Areia Branca	-	-	(69,840)	(73,895)
Total deferred tax liabilities	**-**	**-**	**(244,500)**	**(79,430)**
Deferred tax assets, net	-	-	627,087	500,225
Deferred tax liabilities, net	-	-	(69,840)	(79,430)
Net deferred taxes	**-**	**-**	**557,247**	**420,795**

Management's expectation for the use of the deferred tax assets as of September 30, 2023 and December 31, 2022 is based on taxable income projections considering business financial assumptions. The balance of deferred tax assets has the following expected realization:

Year	Consolidated	
	September 30, 2023	December 31, 2022
2023	405,451	172,908
2024	209,795	96,095
2025	11,841	105,749
2026	-	111,967
2027	-	9,548
From 2028	-	3,958
	627,087	**500,225**

Amounts recognized in results

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Current IRPJ and CSLL expenses	-	-	-	-	**(107,766)**	**3,476**	**(161,353)**	**(52,113)**
Current expenses of the period	-	-	-	-	(107,766)	3,476	(161,353)	(52,113)
Deferred IRPJ and CSLL expenses	-	-	-	-	**142,097**	**172,172**	**136,452**	**185,534**
Temporary differences	-	-	-	-	155,956	(66,452)	120,525	(30,832)
Carry-forward tax losses	-	-	-	-	(13,859)	238,624	15,927	216,366
Total tax expenses	-	-	-	-	**34,331**	**175,648**	**(24,901)**	**133,421**

Reconciliation of effective tax rate

Reconciliation of the expense calculated through application of the currently effective combined statutory rates and the IRPJ and CSLL expense calculated in results is broken down as follows:

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Net income (loss) before IRPJ and CSLL	**(83,488)**	**431,856**	**6,219**	**192,570**	**(111,784)**	**294,126**	**42,939**	**33,266**
Currently effective statutory rate	34%	34%	34%	34%	34%	34%	34%	34%
IRPJ and CSLL calculated at statutory rates	**28,386**	**(146,831)**	**(2,114)**	**(65,474)**	**38,007**	**(100,003)**	**(14,599)**	**(11,310)**
Effect of (additions) exclusions in tax calculations	**(28,386)**	**146,831**	**2,114**	**65,474**	**(3,676)**	**275,651**	**(10,302)**	**144,732**
Permanent differences	(24)	1,401	(255)	(5,797)	279	3,248	1,001	(5,840)
Share of profit (loss) of subsidiary	(11,119)	165,805	63,717	177,222	-	-	-	-
Temporary differences for which no deferred tax assets have been recognized	1,170	(6,012)	(925)	(17,561)	1,169	36,241	(925)	(17,671)
Recognition of deferred IRPJ/CSLL from previous years	-	-	-	-	-	170,265	8,514	170,265
Tax losses for which no deferred tax assets have been recognized	(18,413)	(14,363)	(60,423)	(88,390)	(29,434)	13,704	(78,452)	(92,017)
Tax incentive - profit from exploration (a)	-	-	-	-	24,310	52,193	59,560	89,995
IRPJ and CSLL benefit / (expense)	-	-	-	-	**34,331**	**175,648**	**(24,901)**	**133,421**
Current income tax and social contribution	-	-	-	-	(107,766)	3,476	(161,353)	(52,113)
Deferred income tax and social contribution	-	-	-	-	142,097	172,172	136,452	185,534
Effective rates	**0%**	**0%**	**0%**	**0%**	**31%**	**-60%**	**58%**	**(401%)**

(a) The calculation of income tax on profit is influenced by the tax incentive granted by the Superintendence for the Development of the Northeast – ("SUDENE"), in the subsidiaries 3R Macau, 3R Rio Ventura, 3R Areia Branca, 3R Offshore and 3R Candeias, providing the tax benefit of reduction of 75 % of IRPJ, calculated on the basis of operating profit.

10 . Advances for Acquisition of Assets

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
3R Pescada (a)	-	-	1,600	1,600
3R Potiguar (b)	-	-	-	591,949
	-	-	**1,600**	**593,549**

(a) On July 9, 2020, subsidiary 3R Pescada signed an agreement for acquisition of 65% of the interest held by Petrobras in the Pescada, Arabaiana and Dentão fields. The amount of the transaction was US$ 1.5 million, to be paid in two installments, wich US$ 300 thousand, equivalent to R$ 1,600 upon agreement signing, and US$ 1.2 million upon transaction closing. The closing of the transaction is subjected to the compliance with precedent conditions, such as the approval of ANP.

(b) The advance balance for the assignment of 3R Potiguar blocks was carried out throughout 2023 at the time of the closing of this operation, as per explanatory note 1.

11. Investments

	Direct stake	Parent company	
		September 30, 2023	December 31, 2022
3R Offshore	85%	400,377	333,402
3R Pescada	100%	125,507	151,328
3R Candeias	100%	1,431,313	1,370,643
3R Macau	100%	1,338,094	1,200,452
3R RV	100%	279,506	251,525
3R FZB	100%	145,001	80,978
3R Areia Branca	100%	277,638	272,970
3R Potiguar	100%	1,180,063	575,648
3R Lux	100%	277,583	80,176
		5,455,082	**4,317,122**

Changes in the balances of investments in the period ended September 30, 2023 and December 31, 2022, as follows:

	3R Offshore	3R Pescada	3R Candeias	3R Macau	3R RV	3R FZB	3R Areia Branca	3R Potiguar	3R Lux	Total
Balances as of January 1, 2022	**157,629**	**159,969**	**87,450**	**983,538**	**195,321**	**48,801**	**282,331**	**1,000**	**-**	**1,916,039**
Capital increase	114,000	-	1,250,000	-	-	50,000	-	600,000	79,827	2,093,827
Relative stake – non controlling interest	(7,134)	-	-	-	-	-	-	-	-	(7,134)
Dividends declared	-	(32,833)	-	(225,868)	-	-	-	-	-	(258,701)
Share of profit (loss) of subsidiary	68,907	33,661	33,193	442,782	56,204	(17,823)	(9,361)	(25,352)	349	582,560
Accumulated translation adjustment	-	(9,469)	-	-	-	-	-	-	-	(9,469)
Balances as of December 31, 2022	**333,402**	**151,328**	**1,370,643**	**1,200,452**	**251,525**	**80,978**	**272,970**	**575,648**	**80,176**	**4,317,122**
Capital increase	-	-	70,000	-	-	80,000	-	600,000	222,527	972,527
Share of profit (loss) of subsidiary	66,975	(14,798)	(9,330)	137,642	32,175	(15,977)	4,668	4,415	(18,364)	187,406
Dividends declared	-	(5,782)	-	-	(4,194)	-	-	-	-	(9,976)
Accumulated translation adjustment	-	(5,241)	-	-	-	-	-	-	(6,756)	(11,997)
Balance as of September 30, 2023	**400,377**	**125,507**	**1,431,313**	**1,338,094**	**279,506**	**145,001**	**277,638**	**1,180,063**	**277,583**	**5,455,082**

Summary financial information on the subsidiaries as of September 30, 2023 and December 31, 2022 is as set out below:

	September 30, 2023							
	Equity interest	Current assets	Noncurrent assets	Current liabilities	Noncurrent liabilities	Shareholders' equity	Added value in the acquisition of 3R Areia Branca	Income (loss)
3R Offshore	85%	517,255	1,248,680	616,568	748,990	400,377	-	66,975
3R Pescada	100%	65,200	160,592	5,873	94,412	125,507	-	(14,798)
Candeias	100%	72,947	1,556,877	64,293	134,218	1,431,313	-	(9,330)
3R Macau	100%	388,788	1,412,817	198,732	264,779	1,338,094	-	137,642
3R RV	100%	55,696	779,680	281,460	274,410	279,506	-	32,175
3R FZB	100%	43,428	336,191	17,260	217,358	145,001	-	(15,977)
3R Areia Branca	100%	44,947	173,542	39,976	36,449	142,064	135,574	4,668
3R Potiguar	100%	1,120,397	8,223,391	967,058	7,196,667	1,180,063	-	4,415
3R Lux	100%	150,287	2,520,500	83,664	2,309,540	277,583	-	(18,364)
		2,458,945	**16,412,270**	**2,274,884**	**11,276,823**	**5,319,508**	**135,574**	**187,406**

	December 31, 2022							
	Equity interest	Current assets	Noncurrent assets	Current liabilities	Noncurrent liabilities	Shareholders' equity	Added value in the acquisition of 3R Areia Branca	Income (loss)
3R Offshore	85%	354,417	1,269,695	416,646	874,064	333,402	-	68,907
3R Pescada	100%	91,331	165,952	12,031	93,924	151,328	-	33,661
3R Candeias	100%	101,618	1,488,833	70,363	149,445	1,370,643	-	33,193
3R Macau	100%	495,414	1,144,563	319,864	119,661	1,200,452	-	442,782
3R RV	100%	118,567	693,798	73,545	487,295	251,525	-	56,204
3R FZB	100%	38,218	407,150	81,295	283,095	80,978	-	(17,823)
3R Areia Branca	100%	69,956	146,933	33,787	53,574	129,528	143,442	(9,361)
3R Potiguar	100%	62,573	596,986	13,911	70,000	575,648	-	(25,352)
3R Lux	100%	80,184	-	8	-	80,176	-	349
		1,412,278	**5,913,910**	**1,021,450**	**2,131,058**	**4,173,680**	**143,442**	**582,560**

12 . Property, plant and equipment

Parent company

	Useful life (year)	Balances as of January 01, 2022	Addition	Write-off	Balances as of December, 31, 2022	Addition	Write-off	Transfer	Balances as of September 30, 2023
Cost									
Machine and equipment	8 - 30	-	-	-	-	25	-	63	88
Administrative property, plant and equipment	10 - 20	2,121	6,495	(29)	8,587	867	(4)	117	9,567
Installations	15 - 25	2,543	6,940	-	9,483	294	-	201	9,978
Property, plant and equipment in progress	-	-	1,138	-	1,138	178	-	(381)	935
		4,664	**14,573**	**(29)**	**19,208**	**1,364**	**(4)**	**-**	**20,568**
Depreciation									
Administrative property, plant and equipment		(189)	(1,003)	-	(1,192)	(1,112)	-	-	(2,304)
Installations		-	(155)	-	(155)	(211)	-	-	(366)
		(189)	**(1,158)**	**-**	**(1,347)**	**(1,323)**	**-**	**-**	**(2,670)**
Total		**4,475**	**13,415**	**(29)**	**17,861**	**41**	**(4)**	**-**	**17,898**

Consolidated

	Useful life (year)	Balances as of January 01, 2022	Addition	Reversal	Provision for ARO	Revision to ARO	Impairment	Added-Value	Translated adjustment	Balances as of December 31, 2022	Addition	Transfers	Disposals	Provision for ARO	Impairment	ARO Adjustment	Added-Value	Translated adjustment	Balances as of September 30, 2023
Cost																			
Installations	15 - 25	8,690	42,398	-	-	-	-	-	-	51,088	435,721	7,607	-	-	-	-	-	-	494,416
Machine and equipment	15 - 30	136,685	263,377	-	-	-	-	-	-	400,062	1,456,768	12,336	(292)	-	-	-	-	16	1,868,890
Administrative property, plant and equipment	10 - 20	16,653	14,325	(306)	-	-	-	-	(3)	30,669	133,140	3,735	(7)	-	-	-	-	75	167,612
Wells	UOP (a)	608,090	158,283	-	-	-	-	-	(35,598)	730,775	761,306	17,197	(2,285)	-	-	-	-	(34,594)	1,472,399
Platforms	UOP (a)	-	252,364	-	-	-	-	-	-	252,364	22,530	(2,697)	-	-	-	-	-	-	272,197
Facilities	UOP (a)	595,185	3,901	(68)	-	-	-	-	(29,285)	569,733	2,893	27	-	-	-	-	-	(6,930)	565,723
Vehicles	5	961	264	-	-	-	-	-	-	1,225	775	-	(320)	-	-	-	-	-	1,680
Grounds	-	16,908	-	-	-	-	-	-	-	16,908	-	-	-	-	-	-	-	-	16,908
Assets retirement	UOP (a)	317,394	-	-	760,304	(72,558)	-	-	(3,040)	1,002,100	-	-	-	1,245,552	-	(189,268)	-	(1,870)	2,056,514
Property, plant and equipment in progress	-	249,697	117,816	(1,122)	-	-	(123,318)	-	(162)	242,911	516,792	(38,205)	-	-	(26,500)	-	-	3,399	698,397
		1,950,263	852,728	(1,496)	760,304	(72,558)	(123,318)	-	(68,088)	3,297,835	3,329,925	-	(2,904)	1,245,552	(26,500)	(189,268)	-	(39,904)	7,614,736
Depreciation																			
Installations		(1,295)	(993)	-	-	-	-	(59)	-	(2,347)	(5,705)	-	-	-	-	-	(44)	(12)	(8,108)
Machine and equipment		(8,377)	(21,773)	-	-	-	-	(1,534)	-	(31,684)	(50,161)	-	22	-	-	-	(1,150)	(66)	(83,039)
Administrative property, plant and equipment		(5,611)	(3,518)	308	-	-	-	(30)	4	(8,847)	(3,206)	-	-	-	-	-	(22)	91	(11,984)
Wells		(467,938)	(11,014)	-	-	-	-	-	31,162	(447,790)	(26,610)	-	2,421	-	-	-	-	28,333	(443,646)
Platforms		-	(6,886)	-	-	-	-	-	-	(6,886)	(38,443)	-	-	-	-	-	-	-	(45,329)
Facilities		(451,142)	(12,214)	28	-	-	-	-	22,741	(440,587)	(5,392)	-	-	-	-	-	-	(319)	(446,298)
Vehicles		(574)	(25)	-	-	-	-	(374)	-	(973)	(111)	-	319	-	-	-	-	-	(765)
Assets retirement		(67,313)	(66,367)	-	-	-	-	-	3,030	(130,650)	(74,044)	-	-	-	-	-	-	1,828	(202,866)
		(1,002,250)	(122,790)	336	-	-	-	(1,997)	56,937	(1,069,764)	(203,672)	-	2,762	-	-	-	(1,216)	29,855	(1,242,035)
Total		948,013	729,938	(1,160)	760,304	(72,558)	(123,318)	(1,997)	(11,151)	2,228,071	3,126,253	-	(142)	1,245,552	(26,500)	(189,268)	(1,216)	(10,049)	6,372,701

(a) Units of production - UOP depreciation method.

Additions to property, plant and equipment during the nine-month period ended in September of 2023, under construction in progress, mostly refer to the construction of a water processing plant (debottlenecking) and facilities for infrastructure of drilling of wells, in the amount of R$ 86,319, a well drilling campaign in in the amount of R$ 96,510, workover in the amount of R$ 100,591 and warehouse of materials to be used in well revitalization, in amount of R$ 131,623.

At the start of operations at the Potiguar Cluster on June 8, 2023, Petrobras transferred facilities and equipment in the amount of R$2,573,511, which are part of the acquisition cost of this asset, comprising R$ 1,647,205 in machinery and equipment, R$ 1,397 in tools R$ 304,414 in installations, R$618,509 in wells and R$732 in vehicles.

On December 31, 2022, the Company performed a reservoir volume certification and identified evidence that led to the carrying out of the impairment test for the Camarão field, belonging to 3R Offshore, which identified a necessity of an impairment loss in the amount of R$ 123,318 at the end of that year, considering the rate of 10.97% p.a. discount. For the other entities, the Company's Management did not identify evidence that would lead to the need to carry out an impairment test.

On June 30, 2023, the Company's Management identified evidence that led to the carrying out of the impairment test for the Camarão field, belonging to 3R Offshore, which identified an impairment loss in the amount of R$ 26,500 at the end of the referred period, considering the rate discount of 11.36% p.a. The premise is that the project of flow of gas product occur by the platform of Manati and, therefore, depends on the commercial agreement and/or corporate with the current holder of the economic rights of the platform about the duct of the flow until the cost. Additionally, it was realized the revision of the deadline of the sale of the gas (with point of delivery in the arrival of the pipeline at the platform of Manati) and the investment necessary for the project of the tie-back (connection by the production area of the Camarão until the platform of Manati), In this moment, this investment isn't contemplated in the budget of short term of the Company.

As of September 30, 2023 Management did not identify any evidence that this cluster's operations have suffered an impairment loss.

13. Intangible

Parent Company

	Useful life (year)	Balance as of January 1, 2022	Addition	Balance as of December 31, 2022	Addition	Balance as of September 30, 2023
Cost						
Assignment of rights		777	-	777	-	777
Software and licenses	5	1,668	7,633	9,301	9,389	18,690
Brands and patents	5	258	-	258	-	258
		2,703	**7,633**	**10,336**	**9,389**	**19,725**
Amortization						
Software and licenses		(69)	(212)	(281)	(2,105)	(2,386)
Brands and patents		(255)	-	(255)	-	(255)
		(324)	**(212)**	**(536)**	**(2,105)**	**(2,641)**
Total		**2,379**	**7,421**	**9,800**	**7,284**	**17,084**

Consolidated

	Useful life (year)	Balance as of January 1, 2022	Addition	Added-Value	Balance as of December 31, 2022	Addition	Disposals	Added-Value	Balance as of September 30, 2023
Cost									
Assignment of rights	UOP	1,610,263	1,654,308	-	3,264,571	4,247,216	(160)	-	7,511,627
Software and licenses	5	3,820	10,477	-	14,297	40,709	-	-	55,006
Brands and patents	5	260	-	-	260	-	-	-	260
		1,614,343	**1,664,785**	**-**	**3,279,128**	**4,287,925**	**(160)**	**-**	**7,566,893**
Amortization									
Assignment of rights		(118,881)	(118,020)	(43,746)	(280,647)	(189,427)	160	(10,707)	(480,621)
Software and licenses		(95)	(615)	-	(710)	(5,022)	-	-	(5,732)
Brands and patents		(255)	-	-	(255)	-	-	-	(255)
		(119,231)	**(118,635)**	**(43,746)**	**(281,612)**	**(194,449)**	**160**	**(10,707)**	**(486,608)**
Total		**1,495,112**	**1,546,150**	**(43,746)**	**2,997,516**	**4,093,476**	**-**	**(10,707)**	**7,080,285**

On June 8, 2023, 3R Potiguar completed the transfer of 100% of the concession rights over Petrobras Potiguar Cluster production field, after approval of the transfer of concession contracts by the ANP. The value of the transaction considering adjustments and deferred payments was US$ 1.5 billion (R$ 7,233,827), divided into (i) US$ 110 million (R$ 591,948), paid upon signing of the acquisition agreement, in January 2022; (ii) US$ 1.1 billion (R$ 5,407,889) referring to the final closing installment, already considering the configurations provided in the contract, paid in June 23 and (iii) US$ 251 million (R$ 1,233,990), divided into 4 annual installments of US$ 62.8 million, being the first in March 2024. Installations and equipment were identified in the amount of R$ 2,573,511, which were classified as fixed assets, according to note 12, the inventories of oil and oil products oil contained in the Clara Camarão refinery in the amount of R$ 162,321 and R$ 153,659, respectively, were classified as inventories according with note 7. Therefore, the amount recorded in intangible assets as assignment of exploratory rights was R$4,232,129, the total amount of transactions recorded in these 2023 was R$ 7,121,569.

On September 30, 2023, Management did not identify any indication of impairment.

14. Trade payables

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Domestic suppliers	5,626	4,763	536,909	228,223
Foreign suppliers	197	1,456	107,774	18,445
Total	**5,823**	**6,219**	**644,683**	**246,668**

The main amounts are related to the purchase of raw materials for use in the refining activity of 3R Potiguar and the contracting of operating services, maintenance crude oil treatment services, electricity and equipment, for use in the exploration and production of crude oil and gas, in all the clusters of the Company and its subsidiaries.

15. Loans and financing

Financial institution	Safra Bank (a)	Safra Bank (a)	Safra Bank (a)	BNB Bank (b)	CEF Bank (b)	CEF Bank (b)	CCB Bank (b)	UMB (pool of banks) (c)	Total
Annual finances charges (%)	Dolar + 6,70%	Dolar +8,20%	Dolar +8,65%	IPCA + 5,29%	DI Tax + 2,67%	DI Tax + 2,42%	DI Tax + 1,80%	SOFR + 6,25%	
Addition	50,000	24,500	25,500	-	-	-	-	-	100,000
Foreign exchange gain (loss)	6,225	(438)	(229)	-	-	-	-	-	5,558
Incurred interest	2,647	9	9	-	-	-	-	-	2,665
December 31, 2022	**58,872**	**24,071**	**25,280**	-	-	-	-	-	**108,223**
Addition	-	-	-	36,937	50,000	100,000	60,000	2,461,800	2,708,737
Transaction cost	-	-	-	-	-	-	-	(107,137)	(107,137)
Foreign exchange gain (loss)	(1,973)	(2,016)	(2,107)	-	-	-	-	-	(6,096)
Main Settlement	(54,364)	(22,175)	(23,291)	-	-	-	-	-	(99,830)
Interests payments	(3,603)	(1,757)	(1,858)	(640)	(1,903)	-	-	(75,712)	(85,473)
Adjusts of conversion	-	-	-	-	-	-	-	16,907	16,907
Incurred interest	1,068	1,877	1,976	-	3,699	2,725	4,005	97,335	112,685
Capitalized Interest	-	-	-	782	-	-	-	-	782
September 30, 2023	-	-	-	**37,079**	**51,796**	**102,725**	**64,005**	**2,393,193**	**2,648,798**
Current liabilities	-	-	-	132	18,463	2,725	34,005	83,663	138,988
Noncurrent liabilities	-	-	-	36,947	33,333	100,000	30,000	2,309,530	2,509,810

(a) Loans acquired by 3R Offshore with maturity on April 2023 for R$ 50,000 (US$ 10.776) and July 2023 for R$ 24,500 (US$ 4.611) and R$ 25,500 (US$ 4.843).These Loans were payed in may and june 2023.

(b) Loans raised during the period, which R$ 36,937 contracted with Banco BNB maturing in June, 2030 by the subsidiary 3R Macau ,(ii) R$ 50,000 and R$ 100,000 contracted with Banco CEF by the parent company 3R OG and by the subsidiary 3R Offshore, respectively, maturing in April, 2025 and July, 2026 and (iii) R$ 60,000 with Banco CCB, acquired by 3R OG, maturing in October, 2024.

(c) Loan acquired by 3R Lux in June, 2023 and maturing in February, 2027 in the amount of US$ 500 million (R$ 2,461,800) with the objective of provide financial resources for the payment of obligations assumed with the closing of Potiguar Cluster.

The Company holds bank loans and debentures which, in accordance with the terms of the contract, are subject to restrictive contractual clauses (covenant) and cross default clauses.

As of September 30, 2023, there were no defaults, breaches of financial covenants (breaches) or adverse changes to clauses that would result in changes to the payment terms of loan and financing contracts, as well as debentures as per note 16.

16. Debentures

Debenture issued by subsidiary 3R Areia Branca

Issue of debenture under the Deed for the First Issue of one simple non-share-convertible debenture of the Mortgage Guaranty type, in a single series with the following characteristics ("BTG 3R Areia Branca Debentures"):

Holder of debenture – BTG Pactual Serviços Financeiros S.A.
Total issue amount - R$ 47,124
Quantity – 1
Unit value – R$ 47,123,700.00 (forty and seven million, one hundred and twenty three thousand and seven hundreds reais) as of the issue date
Issue date – September 21, 2021
Due date – November 1, 2024
Payment of interest – Quarterly
Guarantee – chattel mortgage of all shares and pledge of rights derived from concession agreements
Early payment – at any time, the Company can amortize the outstanding amount in either a total or partial manner
Remuneration – The face value will be subject to indexation at the amount of the closing quotation for sale of the US$ by the BACEN. Interest on the updated par value will be charged at a rate of 8.5%(eight and half percent per year), resulting in an effective rate of 8.81%(eight and eighty-one percent per year).

Debenture issued by subsidiary 3R OG

Issue of debentures, according to 2° issue of simple debentures, non-share-convertible of the Mortgage Guaranty type, in a single series with the following characteristics ("Debentures 3R OG"):

Holder of Debentures – Bank Itaú BBA S.A.
Total issue amount - R$ 900,000
Quantity – 900,000
Unit value – R$ 1,000.00 (one thousand reais) as of the issue date
Issue date – August 16, 2022
Due date - August 15, 2025
Payment of interest – Quarterly and monthly as from the 25th month
Guarantee – Firm guarantee granted by the financial institutions Coordinators of the financial operation.
Early Payment – after the 18th month from the issue, observing the terms and conditions established in the Deed of Issue, carry out the optional partial extraordinary amortization of the Debentures.
Remuneration – The final interest rate refers accumulated variation of 100% (one hundred percent) of the average daily rates of the DI for one day, "over extra group", expressed as a percentage per year, base 252 (two hundred and fifty-two) business days, calculated and published daily by B3 S.A. – Bolsa, Brasil and Balcão, plus a 3.00% (three percent) spread (surcharge) per year, base 252 (two hundred and fifty-two) working days.

BTG Debentures – Potiguar

Issuance of debentures, in accordance with the 4th Issuance of simple, non-convertible, Unsecured Debentures, in a Single Series, with the following characteristics ("BTG Debentures - Potiguar"):

Debenture Holder – Banco BTG Pactual S.A.
Total issue amount – R$ 2,646,050
Quantity – 200
Unit value - R$ 13,230,250.00 (Thirteen million, two hundred and thirty thousand and two hundred and fifty reais) on the issue date
Issue - March 27, 2023
Maturity - October 20, 2027
Interest payment - Quarterly
Guarantee - Guarantee of fiduciary assignment
Early Amortization – The Issuer may, at its sole discretion, provided that two (2) years have elapsed from the Date of Payment, carry out the extraordinary amortization of the Debentures, upon payment of a portion of the Updated Nominal Unit Value of the Debentures plus (i) the applicable Remuneration, calculated pro rata temporis from the Payment Date or the immediately preceding Remuneration Payment Date, as the case may be , including, up to the date of actual payment, excluding; and (ii) early amortization premium equivalent to 1.25% (one twenty-five hundredths percent) per year, levied on the portion of the Updated Unit Face Value subject to the Optional Extraordinary Amortization, multiplied by the remaining term of the Debentures, counted on the basis of 360 (three hundred and sixty) consecutive days between the date of the effective payment of the Amortization from the 18th (eighteenth) month (including) counted from the Issue Date, observing the terms and conditions established in the Deed of Issue, carry out the amortization partial optional extraordinary meeting of the Debentures.
Remuneration - The face value will be subject to indexation at the amount of the closing quotation for sale of the US$ by the BACEN. The fixed interest rate equivalent to 11.1075% (eleven point thousand and seventy-five percent) per year, based on 360 (three hundred and sixty) calendar days, calculated linearly and cumulatively pro rata temporis for calendar days, incidents on the Updated Unit Par Value from the Payment Date of the Debentures or the Remuneration Payment Date, immediately preceding, including, as the case may be, up to the respective payment date, exclusive.

Santander Debentures – Potiguar

Issuance of debentures, in accordance with the 5th Issuance of simple, non-convertible, Unsecured Debentures, in a Single Series, with the following characteristics ("Santander Debentures - Potiguar"):

Debenture holder - Banco Santander S.A.
Total issue amount – R$ 2,461,800
Quantity - 24,618,000
Unit value - R$ 1,000.00 (one hundred reais) on the issue date
Issue - May 26, 2023
Maturity - May 26, 2028
Interest payment - Bimonthly, quarterly and four-monthly
Guarantee - Guarantee of fiduciary assignment
Early Amortization - The Issuer may, at its sole discretion and at any time, carry out the extraordinary amortization of the Debentures (Optional Extraordinary Amortization), upon payment (i) of a portion of the Updated Face Unit Value of the Debentures plus (ii) the applicable Remuneration, calculated pro rata temporis from the first Pay-in Date or the immediately preceding Remuneration Payment Date, as the case may be, including up to the actual payment date, excluding (iii) other charges due and unpaid up to the Amortization date Extraordinary Optional Amortization, if any, and (iv) if the Extraordinary Optional Amortization is not carried out on the dates and in the installments described in the contract, of the Premium levied on the amounts indicated in items (i) and (ii) above.
Remuneration - The face value will be subject to indexation at the amount of the closing quotation for sale of the US$ by the BACEN. The fixed interest rate between 9.80% p.a. and 10.51% p.a., based on 360 (three hundred and sixty) calendar days, calculated on a linear and cumulative basis pro rata temporis by calendar days, levied on the Updated Unit Face Value from the first Payment Date of the Debentures or the Remuneration Payment Date immediately preceding, including, as the case may be, up to the respective payment date, exclusive. The Remuneration will be calculated and paid as provided for in the Deed of Issue.

	Parent company		3R Areia Branca		3R Potiguar BTG		3R Potiguar Santander		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Opening balance	**900,585**	**-**	**42,734**	**48,212**	**-**	**-**	**-**	**-**	**943,319**	**48,212**
Issue of debentures	-	900,000	-	-	2,646,050	-	2,461,800	-	5,107,850	900,000
Transaction costs	-	(19,274)	-	-	(116,590)	-	-	-	(116,590)	(19,274)
Transaction costs appropriated	4,818	2,142	-	-	8,728	-	-	-	13,546	2,142
Interest appropriated	107,571	40,502	1,819	4,401	88,869	-	87,383	-	285,642	44,903
Interest paid	(107,733)	(22,785)	(1,964)	(4,121)	(75,920)	-	(62,096)	-	(247,713)	(26,906)
Settlement of principal	-	-	(17,658)	(3,052)	-	-	-	-	(17,658)	(3,052)
FX indexation	-	-	1,815	(2,706)	42,000	-	42,000	-	85,815	(2,706)
Exchange variation paid	-	-	(241)	-	(796)	-	(193)	-	(1,230)	-
Currency variation incurred	-	-	22	-	(184,043)	-	348	-	(183,673)	-
	905,241	**900,585**	**26,527**	**42,734**	**2,408,298**	**-**	**2,529,242**	**-**	**5,869,308**	**943,319**
Current liabilities	396,845	17,717	22,743	21,517	12,360		25,442		457,390	39,234
Noncurrent liabilities	508,396	882,868	3,784	21,217	2,395,938		2,503,800		5,411,918	904,085

Cash flows related to interest paid on debentures are presented separately. Management consistently classifies, from period to period, as arising from financing activities.

17. Taxes payable

17.1. Income tax and social contribution payable

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Federal IRPJ and CSLL taxes	-	-	68,865	6,317
	-	-	**68,865**	**6,317**

17.2. Other taxes payable

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Federal PIS/Cofins contributions	447	711	16,615	7,541
State ICMS tax	-	-	27,655	32,120
Federal withholding (IRRF)	1,268	1,920	13,371	4,831
Nacional Insurance (INSS)	64	40	11,451	5,270
Other taxes and contributions	99	112	4,138	1,222
	1,878	**2,783**	**73,230**	**50,984**

18. Accounts payable for assets acquisitions

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Acquisition Rio Ventura Cluster (a)	-	-	99,252	93,472
Acquisition 3R Areia Branca (b)	36,465	32,184	36,465	32,184
Acquisition Fazenda Belém Cluster (c)	-	-	-	61,563
Acquisition Peroá Cluster (d)	-	-	192,591	241,549
Acquisition Papa Terra Cluster (e)	-	-	395,556	404,137
Acquisition Potiguar Cluster (f)	-	-	1,183,279	-
	36,465	**32,184**	**1,907,143**	**832,905**
Current	36,465	-	808,943	299,089
Noncurrent	-	32,184	1,098,200	533,816

(a) Refers to the obligation to pay for the acquisition of Rio Ventura Cluster, of which US$ 16 million (R$ 96,609) to be paid within 30 months after the closing of the transaction and US$ 43.2 million (R$ 255,961) to be paid as provided for in the contract as contingent payments, linked to the Brent price if it reaches a moving average equal to or greater than US$ 48 and US$ 58 per barrel, respectively, measured over a period of 12 months, at any time from the conclusion of the acquisition of the asset, indexed to the LIBOR rate and the US dollar exchange rate at the end of the period. These contingent payments linked to Brent price were paid on October, 7, 2022. The remaining amount to be paid for the acquisition of Rio Ventura Cluster on September 30, 2023 is R$ 99,252.

(b) Refers to the contingent installment to be paid in March 2024 for the acquisition of 3R Areia Branca of up to US$ 7 million (R$ 37,406), if the average daily price of Brent reference between August 2, 2021 and December 31, 2023 is higher than $ 55 per barrel. For calculation purposes, the payment of US$ 4.66 thousand will be due for every US$ 0.01 per barrel of average Brent in the pre-established period that exceeds the minimum Brent, limited to US$ 7 million. Therefore, considering that the pre-established conditions will be met, the amount to be paid for the acquisition of 3R Areia Branca on September 30, 2023 is R$ 36,465.

(c) Refers to the obligation to pay for the acquisition of the Fazenda Belém Cluster, according to the agreement of August 14, 2020, in which 3R FZB acquired the totality of Petrobras interest in the onshore fields of Fazenda Belém and Icapuí, the Fazenda Belém Cluster, in the Potiguar basin, in Ceará. The total value of the transaction is US$ 10 million (R$ 59,204), to be paid in 12 months after the closing of the transaction updated at the monthly Libor rate. The amount was totally paid on August 07, 2023.

(d) Refers to the obligation to pay for the acquisition of the Peroá Cluster in January of 2024, pursuant to the contract signed on January 29, 2021, in which 3R Offshore acquired 100% of Petrobras' interest in the production fields of Peroá and Cangoá and BM-ES-21 (Malombe Discovery Assessment Plan), jointly known as Peroá Cluster, located in the Espírito Santo Basin. The amount to be paid is up to US$ 42.5 million (R$ 245,144) in contingent payments provided for in the contract, as follows: (i) US$ 20 million linked to the presentation of the declaration of commerciality of Malombe to the ANP; (ii) US$ 12.5 million linked to Brent benchmark reaching US$ 48 per barrel; and (iii) US$ 10 million linked to Brent benchmark reaching US$ 58 per barrel, updated at the monthly Libor rate. On August 30, 2023, the amount of US$10 million (R$53,558) was paid. The remaining amount to be paid for the acquisition of Peroá Cluster on September 30, 2023 is R$ 192,591.

(e) Refers to the obligation to pay for the acquisition of the Papa-Terra Cluster, pursuant to the contract signed on July 9, 2021, in which 3R Offshore acquired the 62.5% interest of Petrobras in Papa Terra production field consisting of the FPSO (P-63) and the TLWP-type platform (P-61), jointly named cluster Papa-Terra, located in the Campos Basin, in Rio de Janeiro, with an amount to be paid of US$ 90 million discounted of the remaining cash generation from July 1, 2021 up to operation's closing, being considered on the acquisition date an expected payment of US$ 80.4 million (R$ 436,194), updated at the monthly Libor rate, which is conditioned to the reference price of Brent oil and the operating performance of the asset between completion date of the transaction and December 2032, divided into 11 installments with due dates between July 2023 and April 2027. On July 28, 2023, the amount of US$5.4 million (R$28,422) was settled, of which R$1,019 through financial disbursement and R$27,403 through discount due to cash generation in accordance with the conditions precedent of the contract signed in July 2021. On September 30, 2023, the remaining amount to be paid for the acquisition of Papa-Terra on September 30, 2023 is R$ 395,556.

(f) Refers to the obligation to pay for the acquisition of Potiguar Cluster, pursuant to the contract signed on January 31, 2022, in which 3R Potiguar acquired 100% of the interests in the concession rights over the set of 22 oil and gas fields , located in the Potiguar Basin, in the State of Rio Grande do Norte, with an amount to be paid of US$ 235.0 million (R$ 1,154,297), updated by the Libor rate. On June, 8, 2023 the updated amount to be payed in 4 annual installments, being the first in march 2024, is US$ 251.2 millions,(R$ 1,233,990). On September 30, 2023, the updated amount to be paid is US$ 258.1 million (R$ 1,292,516). The remaing amount to be paid for the acquisition of Potiguar Cluster on September 30, 2023 is R$1,183,279.

19. Other liabilities

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Obligations to former controller interest (a)	48,616	58,706	51,679	58,706
Obligation to pay Fazenda Pinauna	-	-	15,000	15,000
Others	1,880	1,860	9,954	16,998
	50,496	**60,566**	**76,633**	**90,704**
Current	1,880	1,663	24,953	24,476
Noncurrent	48,616	58,903	51,680	66,228

(a) A Contingent payment linked to the calculation of taxable income for income tax and social contribution by 3R Offshore, 3R Candeias and 3R OG. Under the terms of the purchase and sale agreement for some of the clusters, if these entites of the Group are able to realize the benefits of prior period tax losses, the former controller will be entitled to the equivalent amount of up to one third of the benefit obtained as a result of its use.

20. Transactions with related parties

The changes in the balances with related parties as shown in the following table:

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Assets and liabilities				
Current assets				
Debentures (i)	325,977	12,613	-	-
Dividends receivable (ii)	-	225,868	-	-
Accounts payable to related parties (iii)	10,204	14,749	-	-
Total current assets with accounts receivable from related parties	**336,181**	**253,230**	-	-
Noncurrent assets				
Debentures (i)	413,360	620,000	-	-
Total Non current assets with accounts receivable from related parties	**413,360**	**620,000**	-	-
Current liabilities				
Increase of capital of subsidiary (iv)	50,000	12,000	-	-
Others accounts payable	-	605	-	-
Debentures (v)	-	-	16,865	-
Total current liabilities with accounts payable from related parties	**50,000**	**12,605**	**16,865**	-
Noncurrent liabilities				
Debentures (v)	-	-	21,429	-
Total non current liabilities with accounts payable from related parties	-	-	**21,429**	-
Profit or loss				
Financial income and expenses				
Interests of Loan granted	-	2,183	-	-
Interests of Debentures	83,560	19,864	(1,184)	-
Related parties income	**83,560**	**22,047**	**(1,184)**	-

(i) On October 3, 2022, 3R RV issued the 1st private placed debentures in favor of the Company, in the amount of R$ 300,000. On October 13, 2022, 3R Potiguar issued the 1st private placement debentures in favor of the Company, in the amount of R$ 40,000, and on November 21, 2022 the 2nd private placement debentures was issued in favor of of the Company, in the amount of R$ 30,000; and On October 27, 2022, 3R Offshore issued the 1st private placed debentures in favor of the Company, in the amount of R$ 250,000. All issues mentioned above, mature on August 14, 2025 and are remunerated with investment corresponding to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days plus a spread of 3.8% per annum based on 252 business days and are not convertible into shares. On February 14, 2023, 3R Potiguar carried out the 3rd private placement of debentures, not convertible into shares, in favor of the Company, in the amount of R$ 30,000, with maturity on August 14, 2025 and are remunerated with investment corresponding to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days plus a spread of 3.8% per year based on 252 business days. On May 31, 2023, 3R Potiguar carried out the 6th private placementof debentures, not convertible into shares, in favor of the Company, in the amount of R$ 110,000, with maturity on April 11, 2025 and are remunerated with investment corresponding to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days plus a spread of 2.2% per year based on 252 business days.

(ii) Refers to dividends from the subsidiary 3R Pescada paid in July, 2023 referring to the result for the year 2022.

(iii) The amount of R$ 10,204 (R$ 14,749 on December 31, 2022) refers to the shared costs paid by Parent Company and to be reimbursed by its Subsidiaries.

(iv) Refers to the capital increase in subsidiary 3R Potiguar and 3R Candeias in the amount of R$ 50,000. In December 31, 2022, refers to the capital increase in the subsidiary 3R Macau in the amount of R$12,000, which have been paid in January 2023.

(v) On July 19, 2023, 3R Offshore carried out the second issue of debentures, non-convertible into shares, privately placed in favor of Maha Energy Holding Brasil ("Maha"), in the amount of R$37,500, with a maturity date of August, 14 2025. The remuneration applied corresponds to the accumulated variation of 100% (one hundred percent) of the average daily DI rates based on 252 annual business days plus a spread of 3.8% per year based on 252 business days.

Remuneration of key personnel

Pursuant to Brazilian Corporate Law No. 6,404/76 and the Company's Bylaws, it is the responsibility of the shareholders, at the General Meeting, to establish the global amount of the annual remuneration of the administrators, with the Board of Directors responsible for distributing the sum among the administrators.

The Company is managed by a Board of Directors composed of a minimum of 5 and a maximum of 11 members, all elected and dismissed by the General Meeting with a unified term of 2 years and a Board of Directors elected by the Executive Board composed of a minimum of 3 and at least a maximum of 7 members, including a chief executive officer, an investor relations officer, a financial officer and the others without specific designation. The compensation of the members of the Board of Directors and Executive Board on September 30, 2023 and December 31, 2022 are shown in the table below:

	September 30, 2023	December 31, 2022
Remuneration and benefits	8,118	18,623
Payroll charges	1,841	2,591
Share based payments	8,941	-
Total	**18,900**	**21,214**

After the reorganization of the Company's Statutory Board, which took place on January 3, 2023, the board of directors is now composed of 3 directors, while on December 31, 2022, the Company had 6 directors.

21. Provision for abandonment (ARO)

The amounts of the provision for the asset retirement obligation (ARO) are measured according to the project concession term and are discounted to present value for purposes of initial recognition. The ARO liability is updated annually or when there is objective evidence that its value may be materially different. Revisions in the basis for calculation of the estimates of the expenditures are recognized as cost of the property, plant and equipment and the effects of the passage of time (denominated reversal of discount) in the model for calculation of the future obligation are allocated directly to profit or loss (net financial results).

The changes in the balance of the provision for ARO are shown in the following table:

	Consolidated									
	3R RV	3R Areia Branca	3R Pescada	3R Macau	3R Candeias	3R FZB	3R Offshore (Peroá)	3R Offshore (Papa-Terra)	3R Potiguar	Total
Balances as of January 1, 2022	**143,983**	**9,567**	**124,611**	**135,803**	**-**	**-**	**-**	**-**	**-**	**413,964**
Recognition of provision	-	-	-	-	123,869	274,511	200,113	161,811	-	**760,304**
Amortization of the cost of abandonment	(850)	-	-	(2,406)	-	-	-	-	-	**(3,256)**
Updating of provision for ARO	7,223	489	5,284	6,826	14,454	8,584	7,650	-	-	**50,510**
Remeasurement of provision for abandonment	(57,002)	22,302	(27,878)	(37,858)	-	-	-	-	-	**(100,436)**
FX translation adjustment	-	-	(8,101)	-	-	-	-	-	-	**(8,101)**
Balance as of December 31, 2022	**93,354**	**32,358**	**93,916**	**102,365**	**138,323**	**283,095**	**207,763**	**161,811**	**-**	**1,112,985**
Recognition of provision	-	-	-	-	-	-	-	-	1,245,552	**1,245,552**
Amortization of the cost of abandonment	(1,346)	-	-	(11)	-	-	-	-	-	**(1,357)**
Updating of provision for ARO	4,294	1,558	4,480	4,893	6,559	13,221	10,869	7,989	23,270	**77,133**
Remeasurement of provision for abandonment (a)	(27,820)	(5,067)	(10,702)	(23,683)	(27,043)	(80,595)	(2,162)	(22,898)	-	**(199,970)**
Reimbursement of abandonment expense	-	-	-	4,305	-	-	-	-	-	**4,305**
FX translation adjustment	-	-	(4,083)	-	-	-	-	-	-	**(4,083)**
Balance as of September 30, 2023	**68,482**	**28,849**	**83,611**	**87,869**	**117,839**	**215,721**	**216,470**	**146,902**	**1,268,822**	**2,234,565**
Discount rate	7.73%	7.73%	7.73%	7.73%	7.73%	7.73%	7.94%	7.73%	7.73%	
Abandonment forecast	2053	2053	2050	2053	2053	2053	2039	2049	2053	

(a) During 2023, the Company and its subsidiaries remeasured the provision for abandonment due to the presentation of the useful life contained in the new reserve certification issued by DeGolyer and MacNaughton as per note 1.

22. Provision for Contingencies

The Company and its subsidiaries are parties to lawsuits of a civil, tax and labor nature where the likelihood of loss, based on the opinions of its internal and external legal counsel, is ranked as probable. Management considers that the provision for losses recorded is sufficient to cover probable losses, as shown below:

	Parent company		Consolidated	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Labor	3,517	3,589	3,667	3,589
Other	-	-	-	424
	3,517	**3,589**	**3,667**	**4,013**

As of September 30, 2023, the Company and its subsidiaries are involved in lawsuits of a civil and labor sundry nature where the likelihood of losses is ranked as possible by Management and its legal counsel, amounting to approximately R$ 2,716,778 (R$ 1,292,482 as of December 31, 2022).

The following table shows the amounts involved in cases ranked as possible losses, as backed up by the appraisal of the Company's external legal counsel:

	Consolidated	
	September 30, 2023	December 31, 2022
Civil (a)	2,702,340	1,278,886
Labor	14,438	7,813
Tax (b)	-	5,783
	2,716,778	**1,292,482**

(a) In december, 2022, 3R Offshore (in the quality of supposed successor to Petrobras) showed constestation in a public civil action filed by the National Confederation of Fishermen and Aquaculturists, whose objective is the payment of compensation for material damage (loss of profit) and pain and suffering. The amount showed by the autor is R$ 1,327,600 (R$ 1,277,240 on December 31, 2022), refers to damage supposedly suffered by unidentified fishermen due to intervention in the fishing activity, allegedly caused by the creation of an exclusion zone for fishing for oil and gas exploration carried out by Petrobras in the Papa-Terra cluster (operated by 3R Offshore only after December 2022). The amount showed have as basis the beginning of the license concession granted to Petrobras in October 2013.

Additionally, the increase during 2023 mainly , refers to the amount of the public civil action filed by the National Confederation of Fishermen and Aquaculturists against 3R Offshore (in the quality of supposed successor of Petrobras). The amount presented by the autor refers supposedly to compensation as material and moral damages, suffered by unidentified fishermen. By granting the license to explore oil and gas to Petrobras, at the Peroá Cluster (operated by 3R Offshore from August 2022), the environmental agency created an exclusion zone for fishing. The damages claimed by the National Confederation of Fishermen and Aquaculturists would therefore result from the alleged intervention in the fishing activity, resulting from the said exclusion zone and would have as motivation the said license concession.

(b) On December 31, 2022, the Company was also a defendant in an administrative proceeding filed by the Federal Treasury against 3R Offshore, which aimed to draw up 11 (eleven) infraction notices for alleged omission of income from investments in securities in the calculation of the IRPJ. and CSLL, arising from triggering events relating to the periods from October 2001 to July 2003, in the amount of R$ 33,492 on December 31, 2022. Furthermore, the Company was also a defendant in another administrative proceeding filed by the Federal Treasury against 3R Pescada, in the amount of R$ 5,507 on December 31, 2022, referring to a tax assessment notice notified to it due to the impossibility of deducting operating expenses on the grounds that the subsidiary did not present adequate documentation proving such expenses. These lawsuits were settled during 2023.

23. Leases

Leases - Liabilities

	Parent company									
	January 1, 2022	Additions of leases	Lease Payments	Interest recognized in profit or loss	December 31, 2022	Disposals	Disposals	Lease Payments	Interest recognized in profit or loss	September 30, 2023
Administrative property	**6,550**	13,475	(3,438)	1,557	**18,144**	178	(5,547)	(3,786)	1,383	**10,372**
	6,550	**13,475**	**(3,438)**	**1,557**	**18,144**	**178**	**(5,547)**	**(3,786)**	**1,383**	**10,372**

	Consolidated									
	January 1, 2022	Additions of leases	Lease payments	Interest recognized in profit or loss	December 31, 2022	Additions of leases	Disposals	Lease payments	Interest recognized in profit or loss	September 30, 2023
Administrative property	**9,066**	12,593	(4,266)	1,755	**19,148**	2,473	(5,547)	(4,295)	1,463	**13,242**
Other Properties	**105**	325	(176)	20	**274**	10	-	(329)	60	**15**
Equipment - thermoelectric	**16,554**	16,141	(2,785)	1,234	**31,144**	6,524	-	(9,633)	3,133	**31,168**
	25,725	**29,059**	**(7,227)**	**3,009**	**50,566**	**9,007**	**(5,547)**	**(14,257)**	**4,656**	**44,425**

Right-of-use

	Parent company							
	January 1, 2022	Additions of leases	Depreciation	December 31, 2022	Additions of leases	Disposals	Depreciation	September 30, 2023
Administrative property	**6,550**	13,475	(2,803)	**17,222**	178	(5,547)	(2,722)	**9,131**
	6,550	**13,475**	**(2,803)**	**17,222**	**178**	**(5,547)**	**(2,722)**	**9,131**

	Consolidated							
	January 1, 2022	Additions of leases	Depreciation	December 31, 2022	Additions of leases	Disposals	Depreciation	September 30, 2023
Administrative property	**8,816**	12,593	(3,288)	**18,121**	2,473	(5,547)	(5,377)	**9,670**
Other property	**120**	325	(325)	**120**	10	-	(123)	**7**
Plants and Equipments	**16,554**	16,141	(2,061)	**30,634**	6,524	-	(5,914)	**31,244**
	25,490	**29,059**	**(5,674)**	**48,875**	**9,007**	**(5,547)**	**(11,414)**	**40,921**

24. Equity

Paid-in capital

As of December 31, 2022, 3R OG's paid-in capital was distributed as follows:

Shareholders	Paid-in capital	Number of shares	Percentage equity interest
Gerval Investimentos Ltd.	452,830	22,089,385	10.9%
BTG Pactual WM Gestão de Recursos Ltda.	216,029	10,459,632	5.2%
Coronation Funds Management Ltd.	207,720	10,252,961	5.0%
Other shareholders	3,277,827	160,285,654	78.9%
	4,154,406	**203,087,632**	**100.0%**

On June 9, 2023, Management approved the Company's capital increase in the amount of R$ 900,000, with the issue of 36,809,815 common shares, by private subscription.

On July 7, 2023, Management approved the Company's capital increase, by private subscription, to meet the exercise of share purchase options, as provided for in the share purchase option plan, approved by the Company's shareholders, at the Extraordinary General Meeting, held on August 31, 2020. The value of the Company's capital increase was R$1,377, through the issuance of 87,480 common shares, by private subscription.

The shares that make up the Company's share capital are traded on the Brazilian stock exchange, with approximately 98% outstanding (free float).

On September 30, 2023, there was a change in shareholding involving these shares. Thus, the Company's share capital was distributed as follows:

Shareholders	Paid-in capital	Number of shares	Percentage equity interest
Gerval Investimentos Ltda.	424,686	20,165,245	8.4%
Banco BTG Pactual S.A.	293,235	13,999,162	5.8%
BTG Pactual WM Gestão de Recursos Ltda.	278,068	13,085,150	5.5%
Schroder Investment Management Brasil Ltda.	252,789	12,078,646	5.0%
Other shareholders	3,807,005	180,656,724	75.3%
	5,055,783	**239,984,927**	**100.0%**

Capital reserve

On December 31, 2022, the Company's capital reserve represented the amount of R$ 37,136.

During the period ended September 30, 2023, there was cancellation of options involving transactions with share-based payments, due to the dismissal of professionals who had the benefit. Additionally, the Company structured two new share-based payment programs, with the registered amount added to the existing program the liquid amount of R$ 7.370 (In December 2022, the net of the transaction of payments based on shares that affect the equity was R$ 33,793). As of September 30, 2023, there are 68 professionals (45 professionals as of December 31, 2022) participating in the share-based pay programs.

As of September 30, 2023, the Company's capital reserve represents the amount of R$ 44,506.

Accumulated translation adjustment

The Company recorded the amount of R$ 11,997 in the entitled "Accumulated translation adjustment" for the period ended September 30, 2023 ((R$ 9,469) on December 31, 2022), resulting from the conversion of the functional currency from the dollar to the real presentation currency of its subsidiaries 3R Pescada and 3R Lux, totaling a balance of R$ 94,386 (R$ 106,383 on December 31, 2022).

Dividends

The Company's bylaws provide for the percentage of 25% as the minimum mandatory dividend after the respective deductions.
The results recorded in the periods ended September 30, 2023 and September 30, 2022 absorbed the accumulated loss. In the period ended September 30, 2022, there was no distribution of dividends. Considering that the period ended September 30, 2023 refers to quarterly information – ITR, there was no distribution of dividends for the respective period.

25 . Operating segments

The Company and its subsidiaries operate in the Brazilian oil and gas market, carrying out exploration and production ("E&P"), refining of derivades of oil and gas *("Mid & Dowstream")* activities of oil and gas derivatives, in addition to corporate support and other businesses to carry out its activities.

With the completion of the acquisition of Potiguar Cluster, on June 08, 2023, the Company and its subsidiaries began to operate in the *Mid & Dowstream* segment. Previously the Company and its subsidiaries operated only in the E&P segment.

This information reflects the Company's current management model and is used by the Board of Executive Officers (Chief Operating Decision Maker - CODM) to make decisions regarding resource allocation and performance evaluation.

a) Operating segments

	Consolidated				
	E&P	Mid & Downstream	Corporate and Others	Eliminations (a)	Jul-Sep, 2023
Net operating revenue	1,506,640	1,525,305	-	(671,686)	2,360,259
Cost of products sold	(834,159)	(1,359,985)	-	570,099	(1,624,045)
Gross profit	**672,481**	**165,320**	**-**	**(101,587)**	**736,214**
General and administrative expense (G&A)	(68,587)	(2,716)	(53,724)	1,947	(123,080)
Other operating (expenses)/revenues	(5,414)	-	(528)	-	(5,942)
Financial results, net	(714,862)	5,566	(9,680)	-	(718,976)
Net Income (loss) before income tax and social contribution	**(116,382)**	**168,170**	**(63,932)**	**(99,640)**	**(111,784)**
Income taxes	63,443	(30,518)	-	1,406	34,331
Net income (loss) for the period	**(52,939)**	**137,652**	**(63,932)**	**(98,234)**	**(77,453)**
Controlling shareholders	(58,974)	137,652	(63,932)	(98,234)	(83,488)
Non-controlling shareholders	6,035	-	-	-	6,035

	Consolidated				
	E&P	Mid & Downstream	Corporate and Others	Eliminations (a)	Jan-Sep, 2023
Net operating revenue	2,843,780	1,789,810	-	(863,051)	3,770,539
Cost of products sold	(1,719,764)	(1,606,887)	-	735,210	(2,591,441)
Gross profit	**1,124,016**	**182,923**	**-**	**(127,841)**	**1,179,098**
General and administrative expense (G&A)	(185,755)	(11,823)	(158,167)	1,953	(353,792)
Other operating (expenses)/revenues	(64,648)	(4,990)	(892)	-	(70,530)
Financial results, net	(676,917)	5,573	(40,493)	-	(711,837)
Net Income (loss) before income tax and social contribution	**196,696**	**171,683**	**(199,552)**	**(125,888)**	**42,939**
Income taxes	1,562	(30,518)	-	4,055	(24,901)
Net income (loss) for the period	**198,258**	**141,165**	**(199,552)**	**(121,833)**	**18,038**
Controlling shareholders	186,439	141,165	(199,552)	(121,833)	6,219
Non-controlling shareholders	11,819	-	-	-	11,819

(a) Refers to intercompany transactions for the sale of crude oil and gas.

b) Assets by segment

	Consolidated				
	E&P	Mid & Downstream	Corporate and Others	Eliminations	September 30, 2023
Property, plant and equipment	6,649,527	944,641	20,568	-	7,614,736
Intangible	7,547,168	-	19,725	-	7,566,893
Depreciation and amortization	(1,697,318)	(14,091)	(5,311)	(11,923)	(1,728,643)
Addition in PPE and Intangible	6,662,456	944,641	10,753	-	7,617,850

26. Net Revenues

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Sales Revenue								
Gross oil revenues	-	-	-	-	734,993	483,943	1,801,441	1,397,570
Deductions (taxes) from revenues	-	-	-	-	(44,727)	(97,805)	(215,923)	(298,222)
Net oil revenues	**-**	**-**	**-**	**-**	**690,266**	**386,138**	**1,585,518**	**1,099,348**
Gross derivatives revenues	-	-	-	-	1,676,608	-	1,983,111	-
Deductions (taxes) from revenues	-	-	-	-	(197,275)	-	(248,308)	-
Net derivatives revenues	**-**	**-**	**-**	**-**	**1,479,333**	**-**	**1,734,803**	**-**
Gross gas revenues	-	-	-	-	192,302	139,898	494,914	221,575
Deductions (taxes) from revenues	-	-	-	-	(44,836)	(23,662)	(96,343)	(43,631)
Net gas revenues	**-**	**-**	**-**	**-**	**147,466**	**116,236**	**398,571**	**177,944**
Revenue from services rendered								
Gross revenue from services rendered	-	-	-	-	48,990	-	58,629	-
Deductions (taxes) from revenues	-	-	-	-	(5,796)	-	(6,982)	-
Net oil revenues	**-**	**-**	**-**	**-**	**43,194**	**-**	**51,647**	**-**
Total net Revenues	**-**	**-**	**-**	**-**	**2,360,259**	**502,374**	**3,770,539**	**1,277,292**

The Group's oil revenues are from the Pescada and Arabaiana fields, the Macau Cluster, the Rio Ventura Cluster, Fazenda Belém Cluster, Peroá Cluster, the Ponta do Mel and Redonda fields and Recôncavo Cluster.

The Group's gas liquid revenues are from the Pescada and Arabaiana fields, the Macau Cluster, the Rio Ventura Cluster, Peroá cluster, Recôncavo cluster and Potiguar.

The Group's derived revenues refers mainly to the liquid petroleum derived, originating from refining processing carried out at the Clara Camarão refinery belonging to 3R Potiguar.

The Group's provided services net revenues refers mainly to gas compression service at the Potiguar Cluster.

27. Cost of Products

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Operating costs	-	-	-	-	(1,089,433)	(76,861)	(1,619,595)	(147,823)
Rental of area	-	-	-	-	(17,525)	(7,966)	(33,392)	(19,335)
Oil and gas royalties	-	-	-	-	(128,237)	(43,282)	(231,747)	(112,765)
Depreciation and amortization	-	-	-	-	(196,183)	(76,306)	(357,841)	(160,994)
Water treatment and electric power	-	-	-	-	(30,570)	(42,924)	(66,532)	(62,825)
Costs with fluid trucking	-	-	-	-	(24,089)	-	(45,995)	-
Personnel costs	-	-	-	-	(34,222)	(10,798)	(71,829)	(26,096)
Gas processing and transport	-	-	-	-	(80,204)	-	(133,108)	-
Others	-	-	-	-	(23,582)	(13,599)	(31,402)	(18,665)
	-	-	-	-	**(1,624,045)**	**(271,736)**	**(2,591,441)**	**(548,503)**

28. General and administrative expense (G&A)

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Salaries and payroll charges	(31,092)	(23,810)	(97,470)	(73,313)	(44,206)	(43,203)	(162,427)	(133,548)
Outsourced services	(6,593)	(6,127)	(14,781)	(16,814)	(17,639)	(12,312)	(44,003)	(30,096)
Depreciation and amortization	(2,192)	(1,186)	(6,150)	(2,529)	(25,196)	(8,179)	(55,270)	(17,991)
Provision for share-based payment transactions	(3,659)	(15,164)	(7,672)	(35,509)	(3,659)	(15,164)	(7,672)	(35,509)
Provision for contingencies	(16)	320	72	(1,538)	826	467	346	(1,264)
Software and hardware maintenance and support	(5,017)	(3,128)	(17,544)	(7,289)	(11,795)	(4,386)	(33,856)	(10,892)
Sundry other expenses	(3,941)	(4,061)	(13,406)	(9,392)	(21,411)	(9,214)	(50,910)	(23,597)
	(52,510)	**(53,156)**	**(156,951)**	**(146,384)**	**(123,080)**	**(91,991)**	**(353,792)**	**(252,897)**

29. Other operating (expenses) / revenues

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Expenses with transaction of assets (a)	-	-	-	-	(2,731)	(33,571)	(45,127)	(48,927)
Sundry other expenses / revenues	(528)	2,980	(893)	(6,077)	(3,211)	3,079	1,097	(14,081)
	(528)	**2,980**	**(893)**	**(6,077)**	**(5,942)**	**(30,492)**	**(44,030)**	**(63,008)**

(a) Mains refers to expenses with mobilization to carry out the transition of the assets of the Potiguar Cluster and Pescada Cluster, whose acquisition process was completed on June 8, 2023 and 65% of the Pescada Cluster that is located in the process of acquiring Petrobras.

29.1. Impairment (loss)/reversal

During the nine months of 2023, the Company identified signs that led to an impairment test in Camarão field, originating an impairment loss in the amount of R$26,500, considering a discount rate of 11.36% p.a., as per explanatory note 12.

As of September 30, 2022, the Company did not identify indications that would lead to the need to carry out the impairment test.

30. Financial Income and Expenses

	Parent company				Consolidated			
	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Financial income								
Yields from securities	7,194	4,755	16,487	79,749	93,084	13,454	149,871	100,253
Updating of deposits in court	4	4	11	10	5	33	13	87
(Less) taxes	(1,691)	(286)	(4,684)	(3,895)	(2,722)	(746)	(7,558)	(5,013)
Exchange variation – debentures	-	-	-	-	(6,382)	(1,299)	60,536	2,242
Interest on debentures - related parties	29,077	-	83,560	-	-	-	-	-
Present value adjustment	14,712	-	16,163	-	14,712	-	16,163	-
Exchange variation (a)	(1,278)	24	1,631	291	2,104	4,674	102,895	27,464
Gains on hedge operations (b)	-	-	-	-	(21,520)	330,982	98,875	123,833
Sundry other financial revenues	83	1,399	672	3,106	1,821	1,568	9,416	4,288
	48,101	**5,896**	**113,840**	**79,261**	**81,102**	**348,666**	**430,211**	**253,154**
Financial expenses								
Increase in provision for ARO	-	-	-	-	(41,011)	(15,483)	(77,133)	(27,610)
Interest – leases	(400)	(458)	(1,383)	(999)	(1,836)	(913)	(4,656)	(1,828)
Interest – debentures	(35,986)	(6,737)	(107,571)	(6,209)	(176,019)	(7,554)	(285,642)	(8,695)
Interest – borrowings	(4,228)	-	(7,704)	(228)	(79,094)	(976)	(112,685)	(1,753)
Interest – debentures - related parties	-	-	-	-	(1,184)	-	(1,184)	-
SWAP interest rate	-	-	-	-	(16,680)	-	(16,680)	-
Exchange variation – acquisition earn out	(188)	-	(564)	-	(46,873)	-	(87,851)	-
Losses on hedge operations (b)	-	-	-	-	(188,334)	(93,627)	(239,851)	(279,730)
Losses on securities	-	(126)	-	(229,748)	(38)	(165)	(1,588)	(236,615)
Accumulated translation adjustment	-	-	-	-	-	(2,380)	-	(18,649)
Present value adjustment	-	(345)	(5,221)	(1,437)	(3,814)	(3,385)	(30,721)	(8,432)
Exchange variation (a)	(60)	(2,727)	(87)	(14,076)	(213,929)	(26,598)	(218,879)	(22,642)
Appropriated transaction costs	(1,606)	-	(4,818)	(2,775)	(8,206)	-	(13,546)	-
Others financial expenses	(3,383)	(1,134)	(9,835)	-	(23,060)	(11,614)	(51,632)	(26,818)
	(45,851)	**(11,527)**	**(137,183)**	**(255,472)**	**(800,078)**	**(162,695)**	**(1,142,048)**	**(632,772)**
Net financial results	**2,250**	**(5,631)**	**(23,343)**	**(176,211)**	**(718,976)**	**185,971**	**(711,837)**	**(379,618)**

(a) It refers mainly to the positive exchange variation, predominantly correlated to the amounts payable for acquisitions, according to explanatory note 18, loans and financings, issue of debentures for the acquisition of the Potiguar Cluster.

(b) The Company's Management contracts Non-Deliverable Forward ("NDF") and Brent Collars. Hedge operations were carried out to cover part of its production for the next 24 months at an average price of US$ 81 per barrel obtained with NDFs at 3R Macau and average price of US$ 85 per barrel for NDFs at 3R Potiguar and a floor of US$ 54 per barrel for puts and a ceiling of US$ 98 per barrel for calls, at 3R Macau, a floor of US$ 98 of US$ 57 per barrel for puts and a ceiling of US$ 101 per barrel for calls, at 3R Candeias and a floor of US$ 70 per barrel for puts and a ceiling of US$ 89 per barrel for calls, at 3R Rio Ventura.

31. Earnings (Loss) Per Share

The calculation of the Company's basic and diluted loss per share was based on the net loss attributed to the holders of common shares and the average weighted number of common shares in circulation after the adjustments for the potential dilutive common shares.

	Parent company				Consolidated			
Basic earnings per share	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Net loss for the period	(83,488)	431,856	6,219	192,570	(83,488)	431,856	6,219	192,570
Average weighted number of common shares	218,351,166	202,593,078	218,351,166	202,593,078	218,351,166	202,593,078	218,351,166	202,593,078
Basic and diluted net loss per share - R$	**(0.38)**	**2.13**	**0.03**	**0.95**	**(0.38)**	**2.13**	**0.03**	**0.95**

	Parent company				Consolidated			
Diluted earnings per share	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022	Jul-Sep 2023	Jul-Sep 2022	Jan-Sep 2023	Jan-Sep 2022
Net loss for the period	(83,488)	431,856	6,219	192,570	(83,488)	431,856	6,219	192,570
Average weighted number of common and diluting shares	220,667,729	204,710,077	220,667,729	204,710,077	220,667,729	204,710,077	220,667,729	204,710,077
Weighted number of diluting shares	2,316,562	2,116,999	2,316,562	2,116,999	2,316,562	2,116,999	2,316,562	2,116,999
Basic and diluted net loss per share - R$	**(0.38)**	**2.11**	**0.03**	**0.94**	**(0.38)**	**2.11**	**0.03**	**0.94**

32. Financial Instruments and Risk Management

a) Financial instruments

The Company's main financial instruments are cash and cash equivalents, securities, restricted cash, trade accounts receivables from third parties, accounts receivable from related parties, debentures related parties, suppliers, loans and financing, debentures, accounts payable to related parties, amounts payable for asset, derivatives and other obligations.

The Company does not operate with derivative financial instruments for speculative purposes. The Company hires, through its subsidiaries 3R Macau, 3R Candeias, 3R Potiguar and 3R Rio Ventura, NDF and Brent Collars for the purpose of protecting against fluctuations in oil prices (Brent).

The Company's Management contracts Non-Deliverable Forward ("NDF") and Brent Collars. Hedge operations were carried out to cover part of its production for the next 24 months at an average price of US$ 81 per barrel obtained with NDFs at 3R Macau and average price of US$ 85 per barrel for NDFs at 3R Potiguar and a floor of US$ 54 per barrel for puts and a ceiling of US$ 98 per barrel for calls, at 3R Macau, a floor of US$ 98 of US$ 57 per barrel for puts and a ceiling of US$ 101 per barrel for calls, at 3R Candeias and a floor of US$ 70 per barrel for puts and a ceiling of US$ 89 per barrel for calls, at 3R Rio Ventura.

As of September 30, 2023, the contracts provide coverage for 8,105 thousand barrels (2,747 thousand on December 31, 2022) expected to be sold in the next 24 months.

			Fair value recorded as of	
Instrument	Quantity on September 30, 2023	Quantity on December 31, 2022	September 30, 2023	December 31, 2022
NDFs	2,184,000	2,625,000	(61,504)	(9,539)
Collars	5,921,000	122,000	(79,208)	352
Total	**8,105,000**	**2,747,000**	**(140,712)**	**(9,187)**
Current assets	-	-	7,239	15,934
Noncurrent assets	-	-	39,652	7,613
Liabilities current	-	-	(96,243)	(32,734)
Noncurrent liabilities	-	-	(91,360)	-

As of September 30, 2023, and December 31, 2022, the following balances of derivative financial instruments refer to Non-Deliverable Forward ("NDF") operations against the fluctuation of the oil price (Brent).

3R Macau

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	September 30, 2023	December 31, 2022	Maturity	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
NDF	2,055,000	2,119,000	2023-2025	819,467	850,327	(165,388)	817,136	(59,700)	27,832

3R Potiguar

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	September 30, 2023	December 31, 2022	Maturity	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
NDF	129,000	-	2023-2025	53,799	-	(55,603)	-	(1,804)	-

As of September 30, 2023, and December 31, 2022, the balances of the derivative financial instruments set out below refer to operations involving options and collars, operations against the fluctuation of the oil price (Brent).

3R Macau

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	September 30, 2023	December 31, 2022	Maturity	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Collar	5,222,500	-	-	1,032,012	-	(1,162,827)	-	(74,580)	-

3R Candeias

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	September 30, 2023	December 31, 2022	Maturity	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Collar	443,500	-	2023-2025	115,719	-	(123,408)	-	(2,661)	-

3R Rio Ventura

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	September 30, 2023	December 31, 2022	Maturity	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Collar	255,000	-	-	18,997	-	(41,232)	-	(1,967)	-

Category of financial instruments

CPC 46 (IFRS 13) defines fair value as the amount that would be received on the sale of an asset or paid on the transfer of a liability in an ordinary transaction between market participants on the measurement date. The standard clarifies that fair value must be based on assumptions that market participants use when assigning a value to an asset or liability and establishes a hierarchy that prioritizes the information used to develop these assumptions. The fair value hierarchy places greater weight on available market information (in other words observable data) and less weight on information related to non-transparent data (in other words unobservable data).

CPC 40 (IFRS 7) establishes a three-level hierarchy to be used when measuring and disclosing fair value. As far as possible, the Company uses observable market data to measure the fair value of an asset or liability that are classified considering the inputs used in the valuation techniques as follows:

Level 1 – quoted prices (unadjusted) in an active market that are observable for identical assets and liabilities at the measurement date.

Level 2 – prices are other than prices practiced as determined by level 1 that are observable for the asset or liability, directly or indirectly, in an active market for similar assets or liabilities or in an inactive market for identical assets or liabilities.

Level 3 – prices arising from little or no market activity for the asset or liability that are not based on observable market data (unobservable prices).

The following table presents the carrying amounts of financial assets and liabilities, including their levels in the fair value hierarchy, when applicable:

	Level	Parent company		Consolidated	
		September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Financial assets measured at amortized cost					
Cash and cash equivalents	-	147,947	86,942	781,980	800,442
Securities	-	-	-	14,515	31,353
Restrict cash	-	192	130	245,978	14,985
Trade accounts receivable	-	-	-	533,087	223,252
Accounts receivable from related parties	-	10,204	14,749	-	-
Debentures - related parties	-	739,337	632,613	-	-
		897,680	**734,434**	**1,575,560**	**1,070,032**
Financial liabilities measured at amortized cost					
Suppliers	-	5,823	6,219	644,683	246,668
Loans and financing	-	115,801	-	2,648,798	108,223
Debentures	-	905,241	900,585	5,869,308	943,319
Debentures - related parties		-	-	38,293	-
Accounts payable to related parties	-	50,000	12,605	-	-
Other obligations	-	50,496	60,566	76,633	90,704
		1,127,361	**979,975**	**9,277,715**	**1,388,914**
Financial assets measured at fair value through profit and loss (FVTPL)					
Securities	2	-	-	2,520,500	-
Derivative financial instruments	2	-	-	46,891	23,547
		-	**-**	**2,567,391**	**23,547**
Financial liabilities measured at fair value through profit and loss (FVTPL)					
Derivative financial instruments	2	-	-	187,603	32,734
Accounts payable for acquisitions	-	36,465	32,184	1,907,143	832,905
		36,465	**32,184**	**2,094,746**	**865,639**

The carrying amount of the financial assets and liabilities measured at amortized cost shown above are a reasonable approximation of their fair values, owing to their characteristics, with the exception of the debentures. The fair value of the debentures as of September 30, 2023 is R$ 6,390,213 assessed at level 2 (R$ 790,478 on December 31, 2022 – level 2).

b) Management of risks

The Group's Management has overall responsibility for establishing and supervising the risk management structure. Risk management guidelines are established to identify and analyze the risks to which the Group is exposed to define appropriate risk limits and controls and to monitor risks and adherence to defined limits

Liquidity risk

This represents the risk of shortfalls of cash and difficulty for the Group in honoring its debts, the Company seeks to align the maturity of its debts with the cash generation period to avoid mismatches and generate the need for greater leverage.

The following are the contractual maturities of financial liabilities as of September 30, 2023, and December 31, 2022, such amounts are gross and not discounted and include payments of contractual interest charges:

December 31, 2022					
	Parent company				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade acccounts payable	6,219	6,219	-	-	-
Accounts payable - related parties	12,605	12,605	-	-	-
Debentures	900,585	17,717	953,352	-	-
Accounts payable for acquisitions	32,184	-	37,405	-	-
Other obligations	60,566	1,663	197	106,012	-

	Consolidated				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade acccounts payable	246,668	246,668	-	-	-
Debentures	943,319	39,234	980,643	-	-
Derivative financial instruments	32,734	32,734	-	-	-
Loans and financing	108,223	108,223	-	-	-
Accounts payable for acquisitions	832,905	299,089	545,769	-	-
Other obligations	90,704	24,476	7,522	106,012	-

September 30, 2023					
	Parent company				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade acccounts payable	5,823	5,823	-	-	-
Loans granted	115,801	52,468	69,134	-	-
Debentures	905,241	396,845	514,286	-	-
Accounts payable - related parties	50,000	50,000	-	-	-
Other obligations	50,496	1,880	-	112,085	-
Accounts payable for acquisitions	36,465	36,465	-	-	-

	Consolidated				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade acccounts payable	644,683	644,683	-	-	-
Loans granted	2,648,798	138,988	2,391,994	-	-
Debentures	5,869,308	457,390	541,605	5,007,600	-
Debentures - related parties	38,294	16,865	22,857	-	-
Derivative financial instruments	187,603	187,603	-	-	-
Accounts payable for acquisitions	1,907,143	808,943	1,102,280	-	-
Other obligations	76,633	24,953	3,063	112,085	-

Credit risk

The mainly risk refers to cash, financial investments, restricted cash and the Group's cash and cash equivalents and accounts receivable. All operations are carried out with banks of recognized liquidity, with financial risks classified with a minimum rating of A1 by Standard & Poor's, minimizing their risks.

In the Segment of E&P, the sales for entities outside the economic group are mainly concentrated in larger Companies of the sector from the national market, been mainly commercialized by setting contracts without any evidence of default. For the *("Mid & Dowstream")* segment, sales are made to large distributors operating in the domestic market with a very short delivery period. Therefore, Management considers that the risk of default on its credits is low.

Derivatives are contracted with banks and financial institutions rated between A+/A1 and AAA, by Standard & Poor's, Fitch and Moodys, with the aim of providing coverage against the risk of oil price volatility. These operations protect the Group's revenues, in accordance with the hedge policy approved by Management.

Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate due to changes in market prices. Market risk comprises three types of risk: interest rate risk, currency risk and price risk.

Interest rate risk

This risk arises from the possibility of the Group incurring losses due to fluctuations in interest rates that increase financial expenses related to loans and financing, debentures, amounts payable for acquisitions and other obligations. The Group preferably does not use derivative financial instruments to manage exposure to interest rate fluctuations.

The interest rate risk sensitivity analysis is performed for a 12-month horizon. The values referring to the possible and remote scenarios mean the total floating interest expense in the event of a variation of 25% and 50% in these interest rates, respectively, keeping all other variables constant. The table below informs, in the probable scenario, the amount to be incurring in the next 12 months with expenses by the Company with interest related to debts with floating interest rates on September 30, 2023, and December 31, 2022.

As September 30, 2023			
Consolidated			
Risk	Probable Scenario (*)	Probable Scenario (*) (Δ of 25%)	Probable Scenario (*) (Δ of 50%)
CDI	141,825	168,832	195,390
IPCA	1,602	2,004	2,407
SOFR / LIBOR	413,830	464,831	515,815
Total	**557,257**	**635,667**	**713,612**

As December 31, 2022			
Consolidated			
Risk	Probable Scenario (*)	Probable Scenario (*) (Δ of 25%)	Probable Scenario (*) (Δ of 50%)
LIBOR	70,755	72,625	79,499
CDI	17,717	21,063	24,324
Total	**88,472**	**93,688**	**103,823**

(*) The probable scenario was calculated considering the currency quotations and floating rates to which the debts are indexed.

Currency risk (exchange rate)

This risk arises from the possibility that the Company may incur losses due to fluctuations in US dollar exchange rates, which reduce nominal invoiced amounts or increase financial liabilities and obligations taken in the transactions that involve currency risk are recorded on the Company's balance sheet. The following table sets out the net foreign exchange exposure to US dollar:

	Consolidated	
	September 30, 2023	December 31, 2022
Assets		
Cash and cash equivalents	2,845	6,226
Securities	2,525,579	19,685
Accounts receivable for third parties	67,764	-
Restricted cash	147,482	-
Derivative financial instruments	46,891	23,547
Liabilities		
Suppliers	(107,774)	(18,445)
Loans and financing	(2,393,193)	(108,223)
Debentures	(4,964,067)	(42,734)
Derivative financial instruments	(187,603)	(32,734)
Accounts payable for assets acquisitions	(1,907,143)	(832,905)
Total net exchange exposure	**(6,769,219)**	**(985,583)**

Sensitivity analysis

A possible appreciation (devaluation) of the real against the US dollar on September 30, 2023 would affect the measurement of financial instruments denominated in foreign currency with impacts between assets and liabilities shown below. The analysis assumes that all other variables, especially interest rates, remain constant and ignores any forecast impact on sales and purchases.

		Consolidated			
Assets	Risk	September 30, 2023	Probable Scenario (I)	Impact of Scenario (II)	Impact of Scenario (III)
Cash and cash equivalents	Devaluation of US$	2,845	2,812	2,531	2,250
Securities - US$	Devaluation of US$	2,525,579	2,496,528	2,246,876	1,997,223
Restrict cash	Devaluation of US$	147,482	145,786	131,208	116,629
Trade accounts receivable	Devaluation of US$	67,764	66,984	60,286	53,587
Derivative financial instruments	Devaluation of US$	46,891	46,352	41,716	37,081
Liabilities	**Risk**	**September 30, 2023**	**Probable Scenario (I)**	**Impact of Scenario (II)**	**Impact of Scenario (III)**
Suppliers	Appreciation of US$	(107,774)	(106,534)	(117,188)	(127,841)
Loans and financing	Appreciation of US$	(2,393,193)	(2,365,665)	(2,602,232)	(2,838,798)
Debentures	Appreciation of US$	(4,964,067)	(4,906,966)	(5,397,663)	(5,888,360)
Accounts payable for assets acquisitions	Appreciation of US$	(1,907,143)	(1,885,206)	(2,073,727)	(2,262,247)
Derivative financial instruments	Appreciation of US$	(187,603)	(185,445)	(203,990)	(222,534)
Total net exposure		**(6,769,219)**	**(6,691,354)**	**(7,912,182)**	**(9,133,010)**

For the calculation of values in the above scenarios, the projection of the average exchange rate disclosed in the FOCUS report issued by BACEN for the period ended September 30, 2023 (US$ 1/R$ 4.95) was considered in the probable scenario. In Scenario II, this projection was increased by 10% and in Scenario III, the projection was increased by 20%, both in relation to the probable scenario. The Company considers that this metric is the most appropriate for analyzing the sensitivity of the presented scenarios.

On December 31, 2022 the scenarios are shown below, considering the average exchange rate projection disclosed in the FOCUS report issued by BACEN (US$ 1.00/R$ 5.22). In scenario II this projection was increased by 10% and in scenario III the projection was increased by 20%.

		Consolidated			
Assets	Risk	December 31, 2022	Probable Scenario (I)	Impact of Scenario (II) (Δ 10%)	Impact of Scenario (III) (Δ 20%)
Cash and cash equivalents US$	Devaluation of US$	6,226	6,133	5,520	4,907
Securities - US$	Devaluation of US$	19,685	19,392	17,453	15,513
Derivatives	Devaluation of US$	23,547	23,196	25,774	28,995
Liabilities					
Suppliers	Appreciation of US$	(18,445)	(18,170)	(19,987)	(21,804)
Loans and financing	Appreciation of US$	(108,223)	(106,611)	(117,273)	(127,934)
Debentures	Appreciation of US$	(42,734)	(42,098)	(46,307)	(50,517)
Accounts payable for assets acquisitions	Appreciation of US$	(832,905)	(820,502)	(902,552)	(984,602)
Derivative financial instruments	Appreciation of US$	(32,734)	(32,247)	(35,471)	(38,696)
Total net exposure		**(985,583)**	**(970,907)**	**(1,072,843)**	**(1,174,138)**

Price risk

Price risks for the Company arise from changes in oil prices. The operations with derivatives had the exclusive objective of protecting part of the expected results of short-term and long-term commercial transactions.

The following sensitivity table deals with a variation in the Brent price and the effect on the result of the period of marking to market and settlement of the NDF and Collar operations, in 3 (three) scenarios: (i) Probable Scenario, considering the last closing prices on the market for future agreements outstanding; (ii) Scenario II, considering valuation of 10% over the Scenario I prices; and (iii) Scenario III, considering valuation of 20% over the Scenario I prices. The Company's Management considers that this metric is the most appropriate for the sensitivity analysis of the scenarios presented.

Liabilities	Risk	September 30, 2023	Probable Scenario (I)	Possible Scenario (II) (Δ 10%)	Remote Scenario (III) (Δ20%)
Derivative financial instruments	Appreciation of US$	(140,712)	(220,192)	(780,085)	(1,339,978)
Total net exposure		**(140,712)**	**(220,192)**	**(780,085)**	**(1,339,978)**

Liabilities	Risk	December 31, 2022	Probable Scenario (I)	Possible Scenario (II) (Δ 10%)	Remote Scenario (III) (Δ20%)
Derivative financial instruments	Appreciation of US$	(9,187)	(34,844)	(53,144)	(71,445)
Total net exposure		**(9,187)**	**(34,844)**	**(53,144)**	**(71,445)**

As of September 30, 2023 and December 31, 2022, the total revenue of 3R Macau, 3R Candeias, 3R RV and 3R Potiguar has 98% exposure to fluctuations in the price of Brent.

33. Commitments Assumed

The following are the commitments assumed by the Company as of September 30, 2023.

a) Gross Overriding Royalties Portion: Contingent payment of 3% on the gross revenue earned by the Group arising from the development of specific exploratory blocks of the Group, if this occurs during a period of up to 10 years. The PEM is expected to be completed in the second half of 2023.

b) On July 9, 2020, the Company's subsidiary 3R Pescada signed an agreement for acquisition of 65% of the equity interest held by Petrobras in the Pescada, Arabaiana and Dentão fields. The sale transaction value was US$ 1.5 million, to be paid in 2 (two) installments, US$ 300 thousand, upon signing of the agreement and US$ 1.2 million upon transaction closing, without considering the agreed-upon adjustments calculated as from the effective date of January 1, 2020.

c) On November 1, 2021, the Group concluded the process of purchase of 3R Areia. The total amount of such transaction may reach as high as US$ 72.3 million, the payment commitment assumed not recorded in the financial statements refers to the further contingent installments of up to US$ 16 million, in the event of confirmation of a volume of certified 2P reserves in the Ponta do Mel and Redonda higher than 9 (nine) million barrels of oil, less the oil production calculated from conclusion of the cited acquisition. Thus, for calculation purposes, the Company will re-certify these Fields in the second semester of 2023. If the existence of a volume of 2P reserves greater than the base reserves is determined, the volume that exceeds this amount will give rise to an additional payment by the Company equivalent to US$ 2.80 for each additional barrel of certified oil, limited to US$ 16 million.

34. Subsequent events

Approval for issuing 3R OG debentures

On October 10, 2023, the Company's Board of Directors approved the public offering for distribution of the 3rd (third) issue of simple debentures, non-convertible into shares, unsecured, in a single series, for public distribution, in the form of automatic registration of distribution, of the Company. The debentures mature in 10 (ten) years from the date of issue and were settled on November 6, 2023.

On October 15, 2023, within the scope of the offer, 1,000,000 (one million) simple debentures were issued, not convertible into shares, in a single series, unsecured, with a nominal unit value of R$1, thus making up the total issuance value of R$ 1,000,000, having been defined that remunerative interest corresponding to 8.42% per year will be accrued on the updated nominal unit value of the debentures, based on 252 business days, applicable from the start date of profitability, or the date of payment of the immediately preceding remuneration (inclusive), as applicable, until the date of actual payment (exclusive).



Parent Company and Consolidated Financial Statements as of and for the Year Ended December 31, 2022 and 2021

IBOVESPA B3 IBRX50 B3 IBRX100 B3 IVBX B3 IBRA B3 ICG B3 IGC-NM B3 IGCT B3 ITAG B3 SMLL B3 GPTW B3

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Independent auditors' report on the parent company and consolidated financial statements

To the Shareholders, Board of Directors and Management of

3R Petroleum Óleo e Gás S.A.

Rio de Janeiro – RJ

Opinion

We have audited the parent company and consolidated financial statements of 3R Petroleum Óleo e Gás S.A. ("Company"), referred to as Parent company and Consolidated, respectively, which comprise the statements of financial position as of December 31, 2022, and the statements of profit or loss, comprehensive income (loss), changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying parent company and consolidated financial statements present fairly, in all material respects, the parent company and consolidated financial position of the Company, as at December 31, 2022, and its parent company and consolidated financial performance and its parent company and consolidated cash flows for the year then ended in accordance with accounting practices adopted in Brazil and with International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board - IASB.

Basis for opinion

We conducted our audit in accordance with International and Brazilian Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the "Auditors' responsibilities for the audit of the parent company and consolidated financial statements" section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements and are set forth in the Professional Code of Ethics for Accountants and in the professional standards issued by the Federal Accounting Council, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the parent company and consolidated financial statements of the current period. These matters were addressed in the context of our audit of the parent company and consolidated financial statements as a whole, and in forming our opinion thereon, and we do not express a separate opinion on these matters.

1 - Evaluation of impairment

Refer to notes 7.i, 17 and 34.1 of the parent company and consolidated financial statements.

Key audit matter	How the matter was addressed in our audit
For the impairment test of non-financial assets, the Company estimates the recoverable amounts based on the projected cash flows of these cash generated units ("CGU") of exploration and production of oil and gas, and compares them with their carrying amounts. The cash flow projections used to determine the recoverable amount are dependent on factors related to the volumes of future production and timing of recovery of the oil and gas reserves, commodities prices, production costs ("OPEX"), capitalized expenditures ("CAPEX") and economic assumptions such as the discount rate and the exchange rate. Due to the level of complexity and judgment on the determination of the assumptions and projections used in the future cash flows for each CGU, we considered this as a key audit matter.	Our audit procedures included, among others: - Tests of design and implementation of certain internal controls related to the process of determining the recoverable amounts of exploration and production's CGU assets, including controls related to the review and approval of the key assumptions used to estimate the recoverable amounts; - Assessment of the procedures to identify the need to record impairment; - Assessment, with the support of our corporate finance specialists, of the key assumptions used in the impairment testing such as the discount rates, future oil and natural gas prices and the exchange rates by comparing them against external market data; - Assessment of the estimates of the recovery of oil and gas reserves used in the discounted cash flow projections, and the timing of recovery of the oil and gas reserves, by comparing it with volumes certified by internal specialist of the Company and with historical data on production; - Assessment of the competence, capacity, objectivity and independence of the internal specialist of the Company to certify the volumes of oil and gas reserves; - Assessment, , of CAPEX and OPEX used in the cash flow projection by comparing them to the Company's long-term budgets, and, for OPEX, to costs already incurred, when applicable; During the course of our audit procedures, we did not identify adjustments that would affect the measurement of the recoverable amounts of assets.

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	According to the evidence obtained from performing the procedures described above, we considered that the recoverable amounts for the CGUs are acceptable in the context of the parent company and consolidated financial statements taken as a whole, for the year ended December 31, 2022.

2 - Provision for abandonment of areas (decommissioning costs)	
Refer to notes 7.n and 26 of the parent company and consolidated financial statements.	
Key audit matter	**How the matter was addressed in our audit**
As a consequence of its operations, the Company recognizes provisions for decommissioning costs related to its obligation to remove equipment and restore areas where it operates upon abandonment. The Company's estimate of the provision for decommissioning costs includes assumptions in relation to the extent of the obligations assumed for environmental restoration and the dismantlement and removal of oil and gas production facilities as well as the timing and estimated costs of the abandonment. We identified this estimate as a key audit matter due to the level of judgment involved on determining the respective assumptions, especially the timing and estimated costs of abandonment, and the inflation and discount rates used.	Our audit procedures included, among others: – Tests of effectiveness of certain internal controls related to the process of defining the provision for decommissioning areas , including controls related to the development, review and approval of the key assumptions such as timing of area abandonment, estimated costs of decommissioning and the inflation and discount rates; - Assessment of the economic assumptions used in the determination of inflation and discount rates; - Evaluation of the timing of abandonment based on the existing volumes of reserves and the Company´s production plans; - Assessment of the competence, capacity, objectivity and independence of the external specialist hired by the Company to certify the volumes of oil and gas reserves, and the external specialist hired by the Company to assess the estimated abandonment costs, when applicable; - Evaluation of the estimated abandonment costs, by well characteristics, of the main services expected to be required upon abandonment, and, for a selection of costs, by comparing them with external industry reports or price quotes received for implementing those main services; During the course of our audit procedures, we identified unrecorded adjustments that affect the measurement of the provision for abandonment, which were not corrected by management, since they were considered to be immaterial.

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	According to the evidence obtained from performing the procedures described above, we considered that the amount of the provision for decommissioning costs to be acceptable in the context of the parent and consolidated financial statements taken as a whole, for the year ended December 31, 2022.

Other matters - Statements of added value

The parent company and consolidated statements of added value for the year ended December 31, 2022, prepared under the responsibility of the Company's management, and presented as supplementary information for IFRS purposes, were subject to audit procedures performed in conjunction with the audit of the Company's financial statements. In order to form our opinion, we evaluated whether these statements reconcile to the financial statements and to the accounting records, as applicable, and whether their form and content are in accordance with the criteria set out in Technical Pronouncement CPC 09 - Statement of Added Value. In our opinion, these statements of added value have been adequately prepared, in all material respects, according to the criteria in this Technical Pronouncement and are consistent with the parent company and consolidated financial statements taken as a whole.

Responsibilities of Management and Those Charged with Governance for the Parent Company and Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these parent company and consolidated financial statements in accordance with accounting policies adopted in Brazil and with International Financial Reporting Standards (IFRS), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company and consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company and its subsidiaries, or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's and its subsidiaries' financial reporting process.

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Auditors' Responsibilities for the Audit of the Parent Company and Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the parent company and consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but it is not a guarantee that an audit conducted in accordance with Brazilian and international standards on auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company and consolidated financial statements.

As part of an audit performed in accordance with Brazilian and international standards on auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the parent company and consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting material misstatement resulting from fraud is greater than the one deriving from error, as fraud may involve the act of circumventing internal control, collusion, forgery, omission or deliberate false representations.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's and its subsidiaries' ability to continue as a going concern. If we conclude that a material uncertainty exists, then we are required to draw attention in our auditors' report to the related disclosures in the parent company and consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are substantiated by the audit evidence obtained up to the date of our report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and contents of the parent company and consolidated financial statements, including the disclosures, and whether the parent and consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the parent company and consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

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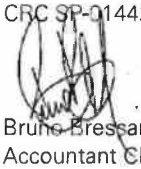
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We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current year and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Rio de Janeiro, March 8, 2023

KPMG Auditores Independentes Ltda.
CRC SP-014428/O-6 F-RJ



Bruno Bressan Marcondes
Accountant CRC RJ-112835/O-7

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	Note	Parent company		Consolidated	
		2022	2021	2022	2021
Current					
Assets					
Cash and cash equivalents	9	86,942	1,529	800,442	118,725
Securities	9.1	-	2,238,099	31,353	2,389,374
Derivative financial instruments	37	-	-	15,934	-
Trade accounts receivable	10	-	-	223,252	114,559
Accounts receivable from related parties	25	27,362	2	-	-
Advances	11	3,274	-	193,011	-
Inventories	12	-	-	187,472	16,622
Dividends receivable	25	225,868	-	-	-
Prepaid expenses		3,562	3,893	77,378	11,347
Income tax and social contribution assets	13.1	11,402	11,133	32,488	39,268
Other recoverable taxes	13.2	2,510	4,939	8,533	15,535
Other assets		187	1,838	837	8,028
Total current assets		**361,107**	**2,261,433**	**1,570,700**	**2,713,458**
Noncurrent assets					
Restricted cash	9.2	130	-	14,985	8,291
Debentures from related parties	25	620,000	-	-	-
Income tax and social contribution assets	13.1	-	-	2,442	2,244
Derivative financial instruments	37	-	-	7,613	-
Deferred tax assets	14	-	-	500,225	96,718
Court deposits		3,206	128	4,591	2,954
Other assets		192	198	2,568	2,316
		623,528	**326**	**532,424**	**112,523**
Investments	16	4,317,122	1,916,039	-	-
Advances for acquisition of assets	15	-	-	593,549	158,885
Property, plant and equipment	17	17,861	4,476	2,228,071	948,013
Intangible assets	18	9,800	2,379	2,997,516	1,495,112
Right-of-use	28	17,222	6,550	48,875	25,490
Total noncurrent assets		**4,985,533**	**1,929,770**	**6,400,435**	**2,740,023**
Total assets		**5,346,640**	**4,191,203**	**7,971,135**	**5,453,481**

The accompanying notes are an integral part of the financial statements.

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
Current					
Liabilities					
Trade payables	19	6,219	3,263	246,668	53,609
Loans and financing	20	-	-	108,223	-
Debentures	21	17,717	-	39,234	673
Derivative financial instruments	37	-	-	32,734	115,970
Labor obligations		27,526	108	55,946	16,428
Amounts payable to the operator		-	1,585	-	1,429
Income tax and social contribution payable	22.1	-	-	6,317	-
Other taxes payable	22.2	2,783	550	50,984	52,462
Provision for royalty payments		-	-	15,066	9,232
Leases	28	3,839	1,135	12,748	6,690
Accounts payable to related parties	25	12,605	32,534	-	-
Accounts payable for assets acquisitions	23	-	-	299,089	294,391
Other liabilities	24	1,663	-	24,476	15,979
Total current liabilities		**72,352**	**39,175**	**891,485**	**566,863**
Noncurrent liabilities					
Debentures	21	882,868	-	904,085	47,539
Provision for abandonment (ARO)	26	-	-	1,112,985	413,964
Deferred tax assets	14	-	-	79,430	89,447
Provision for legal and administrative proceedings	27	3,589	2,855	4,013	3,548
Leases	28	14,305	5,415	37,818	19,035
Accounts payable for assets acquisitions	23	32,184	34,874	533,816	129,323
Other liabilities	24	58,903	994	66,228	8,317
Total noncurrent Liabilities		**991,849**	**44,138**	**2,738,375**	**711,173**
Equity	29				
Capital		4,154,406	4,146,616	4,154,406	4,146,616
Capital reserve		37,136	114,976	37,136	114,976
Accumulated translation adjustment		106,383	115,852	106,383	115,852
Accumulated loss		(15,486)	(269,554)	(15,486)	(269,554)
Equity attributable to shareholders of the parent company		**4,282,439**	**4,107,890**	**4,282,439**	**4,107,890**
Equity attributable to non-controlling interest		-	-	58,836	67,555
Total equity		**4,282,439**	**4,107,890**	**4,341,275**	**4,175,445**
Total liabilities and equity		**5,346,640**	**4,191,203**	**7,971,135**	**5,453,481**

The accompanying notes are an integral part of the financial statements.

	Note	Parent company		Consolidated	
		2022	2021	2022	2021
Net Revenue	31	-	-	1,722,422	727,799
Cost of products sold	32	-	-	(835,544)	(319,530)
Gross profit		**-**	**-**	**886,878**	**408,269**
General and administrative expense (G&A)	33	(185,530)	(27,121)	(339,003)	(159,582)
Other operating (expenses) / revenues	34	(64,816)	(8,046)	(153,500)	5,939
Impairment (loss)/reversal	34.1	-	-	(123,318)	160,419
		(250,346)	**(35,167)**	**(615,821)**	**6,776**
Share of profit (loss) of subsidiary		582,560	(18,914)	-	-
Income (loss) before financial income (expenses)		**332,214**	**(54,081)**	**271,057**	**415,045**
Financial income	35	132,746	192,949	319,817	197,072
Financial expenses	35	(315,391)	(138,935)	(805,007)	(656,699)
		(182,645)	**54,014**	**(485,190)**	**(459,627)**
Net Income (loss) before income tax and social contribution		**149,569**	**(67)**	**(214,133)**	**(44,582)**
Current income tax and social contribution	14	-	(838)	(71,675)	(3,850)
Deferred income tax and social contribution	14	-	-	413,524	64,423
Net income (loss) for the year		**149,569**	**(905)**	**127,716**	**15,991**
Net income (loss) attributed to:					
Shareholders of the parent company		149,569	(905)	149,569	(905)
Non-controlling interest		-	-	(21,853)	16,896
Net income (loss) for the year		**149,569**	**(905)**	**127,716**	**15,991**
Basic earnings (loss) per share - R$	36			**0.74**	**(0.01)**
Diluted earnings per share - R$	36			**0.73**	**(0.01)**

The accompanying notes are an integral part of the financial statements.

	Parent company		Consolidated	
	2022	2021	2022	2021
Net Income (loss) of the year	149,569	(905)	127,716	15,991
Items that can subsequently be reclassified to profit or loss:				
Accumulated translation adjustment	(9,469)	6,872	(9,469)	6,872
Total comprehensive for the year	**140,100**	**5,967**	**118,247**	**22,863**

The accompanying notes are an integral part of the financial statements.

	Note	Capital	Capital reserve	Accumulated losses	Accumulated translation adjustment	Total	Non-controlling interest	Total equity
Balances as of January 1, 2021		**1,228,618**	**-**	**(260,498)**	**108,980**	**1,077,100**	**-**	**1,077,100**
Net income (loss) for the year	36	-	-	(905)	-	(905)	16,896	15,991
Capital increase – Supplementary public offering	29	559,502	263,295	-	-	822,797	-	822,797
Capital increase – Supplementary public offering II	29	2,168,100	-	-	-	2,168,100	-	2,168,100
Transactions costs associated with Public Offering of Shares		-	(39,118)	-	-	(39,118)	-	(39,118)
Transactions costs associated with Public Offering of Shares II		-	(79,905)	-	-	(79,905)	-	(79,905)
Share-based payment transactions		-	3,343	-	-	3,343	-	3,343
Capital increase from business combination	29	190,396	(32,639)	-	-	157,757	-	157,757
Capital transactions		-	-	(8,151)	-	(8,151)	50,659	42,508
Accumulated translation adjustment	29	-	-	-	6,872	6,872	-	6,872
Balances as of December 31, 2021		**4,146,616**	**114,976**	**(269,554)**	**115,852**	**4,107,890**	**67,555**	**4,175,445**
Net income (loss) for the year	36	-	-	149,569	-	149,569	(21,853)	127,716
Absorption of loss	29	-	(111,633)	111,633	-	-	-	-
Capital increase		-	-	-	-	-	6,000	6,000
Share-based payment transactions	29	7,790	33,793	-	-	41,583	-	41,583
Capital transactions		-	-	(7,134)	-	(7,134)	7,134	-
Accumulated translation adjustment	29	-	-	-	(9,469)	(9,469)	-	(9,469)
Balances as of December 31, 2022		**4,154,406**	**37,136**	**(15,486)**	**106,383**	**4,282,439**	**58,836**	**4,341,275**

The accompanying notes are an integral part of the financial statements.

	Note	Parent company 2022	Parent company 2021	Consolidated 2022	Consolidated 2021
Cash flows from operating activities					
Net income (loss) for the year	**36**	**149,569**	**(905)**	**127,716**	**15,991**
Adjusted by:					
Share of profit (loss) of subsidiary	**16**	(582,560)	18,914	-	-
Unrealized Interest from securities		142,296	(48,595)	116,452	(58,656)
Unrealized interest in court deposits	**35**	(14)	(4)	(92)	(4)
Interest on leases	**35**	1,557	-	3,009	305
Unrealized interest on loans		747	-	31,346	128,056
Interest on debentures	**35**	40,502	-	44,903	-
Present value adjustment		(901)	(598)	(2,478)	(275)
Unrealized exchange rate variation on loans and financing		-	-	5,558	-
Unrealized losses on derivative financial instruments		-	-	237,356	213,270
Unrealized exchange rate variation		12,658	(11,929)	(18,907)	(4,120)
Provisions for contingencies		734	2,150	465	2,857
Impairment loss/ (reversal)	**34.1**	-	-	123,318	(160,420)
Write-off of property, plant and equipment	**17**	29	-	1,163	2,363
Exchange rate variation – debentures		-	-	(2,706)	-
Measurement of present value of provision for asset retirement obligation		-	-	22,632	8,596
Income of interest from debentures - related parties		(19,864)	-	-	-
Depreciation of property, plant and equipment	**17**	1,159	76	114,887	29,720
Amortization of intangible assets		212	69	158,741	87,003
Amortization right-of-use asset	**28**	2,803	-	5,674	645
Debentures costs appropriate	**21**	2,142	-	2,142	52,027
Deferred income tax and social contribution	**14**	-	-	(413,524)	(64,423)
Write-off of investments		-	(5,513)	-	-
Share-based payment transaction	**29**	33,793	3,343	33,793	3,343
		(215,138)	**(42,992)**	**591,448**	**256,278**
Changes in assets and liabilities					
Trade accounts receivable		-	-	(108,693)	(69,888)
Income tax and social contribution recoverable taxes		(269)	(10,200)	6,582	22,738
Other recoverable taxes		2,429	-	7,002	-
Inventories		-	-	(113,217)	-
Other assets		1,657	(1,838)	6,939	(19,117)
Income tax and social contribution recoverable taxes		-	-	93,054	-
Other recoverable taxes		2,233	-	(1,478)	-
Advances		(3,274)	-	(193,011)	-
Suppliers		2,956	1,682	193,059	31,164
Amounts payable to the operator		(1,585)	(91)	(1,429)	533
Court deposits		(3,064)	-	(1,545)	(392)
Prepaid expenses		331	(2,808)	(66,031)	(8,868)
Labor obligations		27,418	34	39,518	13,177
Royalties		-	-	5,834	6,150
Settlement of abandonment cost		-	-	(3,256)	-
Derivative financial instruments		-	-	(344,138)	(131,649)
Related parties		(26,427)	-	-	-
Other liabilities		59,572	(1,366)	66,408	(688)
Cash provided by (used in) operating activities		**(153,161)**	**(57,579)**	**177,046**	**99,438**
Taxes paid on profit		-	(3,358)	(86,741)	(36,599)
Net cash provided by (used in) operating activities		**(153,161)**	**(60,937)**	**90,305**	**62,839**
Cash flows from investing activities		-			
Securities	**9.1**	2,095,803	(1,875,933)	2,241,569	(1,913,198)
Increase in paid-in capital at subsidiary	**16**	(2,081,827)	(1,160,020)	-	-
Acquisition of additional equity interest in subsidiary	**16**	-	(37,152)	-	-
Advances for assignment of assets	**15**	-	-	(591,949)	(44,853)
Acquisition of property, plant and equipment (fixed assets)	**17**	(14,573)	(3,719)	(447,989)	(147,661)
Acquisition of intangible assets	**18**	(7,633)	(1,665)	(1,316,216)	(219,078)
Restricted cash	**9.2**	(130)	-	(6,694)	(4,599)
Issue of debentures from related parties	**25**	(620,000)	-	-	-
Interest received of debentures to related parties		7,252	-	-	-
Acquisition of oil and gas assets		-	-	(235,762)	-
Payment of principal on loans received from a related party		(20,250)	-	-	-
Dividends received	**16**	32,833	-	-	-
Loans granted to related parties		-	410	-	-
Net cash generated (used) in investing activities		**(608,525)**	**(3,078,079)**	**(357,041)**	**(2,329,389)**
Cash flows from financing activities					
Transaction costs		(19,274)	(119,023)	(19,274)	(119,023)
Interest paid on debentures	**21**	(22,785)	-	(26,906)	(115,852)
Amount received from supplementary public offering		-	2,990,897	-	-
Payment of lease liabilities	**28**	(3,438)	-	(7,227)	(761)
Amount received from capital injection		-	-	-	3,014,897
Issuance of debentures	**21**	900,000	-	900,000	47,124
Payment of Debentures	**21**	-	-	(3,052)	(733,694)
Capital Increase		7,790	-	13,790	-
Loans received	**20**	-	-	100,000	-
Net Cash provided by financing activities		**862,293**	**2,871,874**	**957,331**	**2,092,691**
Net increase (decrease) in cash and cash equivalents		**100,607**	**(267,142)**	**690,595**	**(173,859)**
Cash and cash equivalents at beginning of year	**9**	1,529	256,742	118,725	287,942
Effect of exchange variation on cash and cash equivalents		(15,104)	11,929	(8,878)	4,642
Cash and cash equivalents at end of year	**9**	86,942	1,529	800,442	118,725
Net increase (decrease) in cash and cash equivalents		**100,607**	**(267,142)**	**690,595**	**(173,859)**

The accompanying notes are an integral part of the financial statements.

	Parent company		Consolidated	
	2022	2021	2022	2021
Net revenues	**-**	**110**	**1,722,460**	**738,098**
Sales of oil and gas	-	-	1,722,422	727,799
Other revenues	-	110	38	10,299
Inputs acquired from third parties	**(120,641)**	**(32,189)**	**(899,650)**	**(79,235)**
Cost of products, merchandise and services sold	-	-	(203,059)	(102,282)
Materials, power, outsourced services and other supplies	(120,641)	(32,189)	(573,273)	(137,372)
Impairment (loss) / reversal	-	-	(123,318)	160,419
Gross value added	(120,641)	(32,079)	822,810	658,863
Depreciation and amortization	(4,174)	(145)	(279,302)	(117,368)
Net value added produced by the Company	(124,815)	(32,224)	543,508	541,495
Value added received in transfer				
Share of profit (loss) of subsidiary	582,560	(18,914)	-	-
Financial income	132,746	192,949	319,817	197,072
Total value added for distribution	590,491	141,811	863,325	738,567
Distribution of value added	590,491	141,811	863,325	738,567
Personnel	**110,499**	**6,522**	**209,293**	**94,173**
Direct remuneration	103,637	6,194	177,248	53,457
Benefits	3,022	157	23,187	7,416
Severance pay accrual	3,840	171	8,858	33,300
Taxes, fees and contributions	**14,047**	**2,420**	**(310,089)**	**(38,103)**
Federal	14,029	1,817	(310,341)	(39,163)
State	-	561	-	721
Municipal	18	42	252	339
Remuneration of third-party capital	**316,376**	**133,774**	**836,405**	**666,506**
Interest	45,075	273	74,491	280,511
Rentals	985	352	28,761	9,808
Other remuneration	270,316	133,149	733,153	376,187
Remuneration of Company capital invested	**149,569**	**(905)**	**127,716**	**15,991**
Net income (loss) for the year	149,569	(905)	127,716	15,991

The accompanying notes are an integral part of the financial statements.

1. Operations

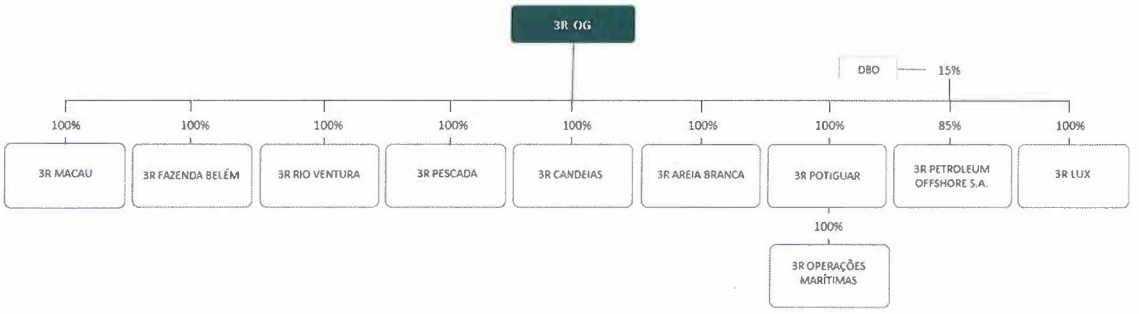
3R Petroleum Óleo e Gás S.A. ("Company" or "3R OG") is a publicly traded joint stock corporation under Brazilian law, founded on June 17, 2010. The Company's registered offices are located at Praia de Botafogo, 86, 16º floor, in the Botafogo district of the City of Rio de Janeiro, State of Rio de Janeiro (RJ). 3R OG operates in the oil and gas industry and focuses on redevelopment of mature fields located onshore, in shallow waters and offshore. It is qualified as a Grade A operator by the Brazilian National Petroleum, Natural Gas & Biofuels Agency - ANP.

The Company's stated corporate objects are to: (a) explore for, produce and sell oil and its by-products, natural gas and other hydrocarbon fluids, including, without limitation, the Brazilian sedimentary basins that the ANP has granted licenses for, as well as sedimentary basins located overseas; (b) carry out the importation and exportation of oil and any by-products thus produced; and (c) hold equity interests in other companies as partner, stockholder or shareholder, both in Brazil and abroad, that operate in activities related to the Company's corporate objectives.

Corporate structure

As at 31 December 2022, 3R OG holds 100% of the direct and indirect share capital of the following companies (together the "Group"): 3R Macau S.A. ("3R Macau"), 3R Fazenda Belém S.A. ("3R FZB"), 3R Rio Ventura S.A. ("3R RV"), 3R Candeias S.A. ("3R Candeias"), 3R Pescada S.A. ("3R Pescada"), 3R Areia Branca S.A., 3R Potiguar S.A. ("3R Potiguar"), 3R Operações Marítimas S.A. ("3R OP"), and 3R Lux ("3R Lux"). Additionally, 3R OG holds 85% of the share capital of 3R Petroleum Offshore S.A. ("3R Offshore").

The current corporate structure is shown in the following organization chart:



3R OG

The Company has 100% interest in the block known as BAR-M-387, located in the Barreirinhas basin in the Northeast State of Maranhão, acquired in the 11th round of ANP competitive public bidding processes, having paid R$ 778 by way of subscription bonus. As of December 31, 2022, the Company had completed 98% of the Minimum Exploratory Program ("PEM") for such block.

3R Macau (Macau Cluster)

The Macau Cluster includes the fields of Aratum, Macau, Serra, Salina Cristal, Lagoa Aroeira, Porto Carão and Sanhaçu, located in the Potiguar basin, in the State of Rio Grande do Norte. 3R Macau operates with a 100% interest in all concessions since May 28, 2020 and on April 8, 2021, the ANP approved the request for annexation of the Serra and Aratum fields to the Macau field area, thus becoming 5 concessions: Macau, Salina Cristal, Lagoa Aroeira, Porto Carão and Sanhaçu.

3R RV (Rio Ventura Cluster)

The Rio Ventura Cluster is comprised of 8 onshore fields: Água Grande, Bonsucesso, Fazenda Alto das Pedras, Pedrinhas, Pojuca, Rio Pojuca, Tapiranga and Tapiranga Norte, in the Recôncavo Basin in the Northeast Brazilian State of Bahia (BA). 3R RV is the operator with 100% equity interest in this fields since July 15, 2021.

3R Candeias (Recôncavo Cluster)

On May 11, 2022, the subsidiary 3R Candeias completed the purchase of Cluster Recôncavo. The total amount of the transaction was US$ 250 million (R$ 1,300,259) as per notes 17 and 18.

The Recôncavo Cluster encompasses the fields of Aratu, Ilha de Bimbarra, Mapele, Massuí, Candeias, Cexis, Socorro, Dom João, Dom João Mar, Pariri, Socorro Extensão, São Domingos, Cambacica and Guanambi, in the Recôncavo Basin in the Brazilian State of Bahia (BA). 3R Candeias is the operator of these fields with 100% interests in these concessions, with the exception of Cambacica and Guanambi, in which 3R Candeias holds an interest of 75% (25% held by Sonangol Hidrocarbonetos Brasil Ltda.) and 80% (20% held by Sonangol Guanambi Exploracao and Producao de Petroleo Ltda.), respectively.. In addition to the Recôncavo cluster, 3R Candeias is the operator with 100% equity interest in block PN-T-114, located in the Parnaíba basin in the State of Maranhão (MA).

3R Pescada (Pescada and Arabaiana)

This subsidiary holds a 35% interest in the fields known as Pescada, Arabaiana and Dentão. The Pescada and Arabaiana fields are located on the continental shelf of the State of Rio Grande do Norte (RN), in the Potiguar basin, are already in the production phase and are operated by Petrobras, which has 65% of participation.

On July 9, 2020, the subsidiary 3R Pescada signed a contract for the acquisition of 65% of the remaining interest from Petrobras in the Pescada, Arabaiana and Dentão fields, however, this transaction has not yet closed – refer to Note 38 (b).

3R Offshore (Peroá and Papa-Terra)

Conclusion of the acquisition of Peroá Cluster

On August 2, 2022, the Company through the subsidiary 3R Offshore, concluded the acquisition of the production fields of Peroá and Cangoá and Block BM-ES-21 (Malombe), jointly called Cluster Peroá, from Petrobras, after approval of the transfer of contracts concession by the ANP. It should be noted that the Company is qualified as a Grade A operator by the Brazilian National Petroleum, Natural Gas & Biofuels Agency – ANP being able to operate blocks and concessions on land (onshore) and at sea (offshore), including in ultra-deep waters.

The asset acquired was not identified as business combination, and the Company recognized the transaction as an asset acquisition. The total value of the transaction is US$55.6 million (R$ 307,336), as per notes 17 and 18.

The asset has an uninhabited fixed platform - supported on the seabed by means of a tower - located just over 50 kilometers from the coast of Espírito Santo, in the municipality of Linhares and has its operation carried out remotely through a control room in Victoria. The production is shipped through pipelines to the Cacimbas Gas Treatment Unit located in the municipality of Linhares, Espírito Santo. With the closing of the transaction, the asset's platform was renamed 3R – 1, marking the beginning of the Company's offshore operations.

Conclusion of the acquisition of Papa-Terra Cluster

On July 9, 2021, 3R Offshore signed an agreement for acquisition of the 62.5% interest held by Petrobras in the Papa-Terra Cluster and the remainder is held by MTI Energy group. The Papa-Terra cluster is located in deep waters of the Campos Basin in the State of Rio de Janeiro.

On December 23, 2022, 3R Offshore concluded the acquisition of the 62.5% interest in the concession rights over the Papa Terra production field from Petrobras, after approval of the transfer of concession contracts by the ANP.

The asset acquired was not identified as business combination, and the Company recognized the transaction as an asset acquisition. The value of the transaction was US$ 86.4 million (R$ 467,591), as per notes 17 and 18.

The Papa-Terra Cluster is in deep waters in the Campos Basin, approximately 100km off the coast of the State of Rio de Janeiro.

Its discovery took place in 2003 and the start of its production in November 2013. The field comprises the FPSO (P-63) and the TLWP-type platform (P-61), in addition to all production infrastructure and associated subsea systems and has a processing capacity of 140,000 barrels of oil per day, injection capacity of 340,000 barrels of water per day, storage capacity for 1,4 million barrels and slots to connect up to 21 production wells and 11 injection wells.

3R Offshore holds a 20% interest in exploratory blocks BM-CAL-312 and BM- CAL-372, which are part of the BM-CAL-12 concession area, and 100% interest in the Pinaúna and Camarão fields, both in the developmental phase and belonging to the block known as BM-CAL-4.

On September 8, 2022, 3R OG decided to exercise its interest purchase right by acquiring 15% of the share capital of 3R Offshore therefore, from this date, the Company now holds an 85% interest in 3R Offshore, with the remaining 15% belonging to DBO 2.0 S.A. ("DBO"). The total value of the transaction is R$ 12 million.

3R Areia Branca (Ponta do Mel and Redonda)

3R Areia Branca holds 100% of the concession and is the operator of the onshore production fields of Ponta do Mel, Redonda and Carcará, all located in the township of Areia Branca, in the Potiguar Basin, in the Northeast State of Rio Grande do Norte (RN); it also holds 100% of the Crejoá concession, in the Southeast State of Espírito Santo (ES).

3R FZB (Fazenda Belém Cluster)

This cluster consists of the onshore fields of Fazenda Belém and Icapuí, located in the Potiguar Basin in the Northeast Brazilian State of Ceará (CE).

On August 6, 2022 the Company, through the subsidiary 3R FZB, concluded the acquisition of the Fazenda Belém Cluster, owned by Petrobras, after approval of the transfer of concession contracts by the ANP.

The asset acquired was not identified as business combination, and the Company recognized the transaction as an asset acquisition. The total value of the transaction is US$35.2 million (R$ 167,511), as per notes 17 and 18.

3R Potiguar (Potiguar Cluster)

On January 31, 2022, the Company, through its subsidiary 3R Potiguar, signed a purchase agreement with Petrobras for its 100% interest in the Potiguar Cluster, in the Potiguar Basin, in the Northeast State of Rio Grande do Norte (RN).

The agreement provides for the assignment of concession contracts for a set of 22 fields in production and the transfer of the entire infrastructure and pipeline systems that support the operation, in addition to the Guamaré industrial asset ("AIG"), which includes processing units of natural gas (UPGNs), the Clara Camarão refinery and the Guamaré waterway terminal (terminal for private use), with storage capacity and systems that allow the export and import of oil and derivatives. The total value of the transaction is US$ 1.38 billion – refer to note 15.

The Potiguar Cluster comprises three concession sub-Clusters: (i) Canto do Amaro, which comprises twelve onshore production concessions: Canto do Amaro, Barrinha, Barrinha Leste, Barrinha Sudoeste, Benfica, Boa Vista, Fazenda Canaan, Morrinho, Mossoró, Pedra Sentada, Pintassilgo, Poço Verde, Redonha Profundo, Serra do Mel and Serra Vermelha; (ii) Alto do Rodrigues, which comprises seven onshore production concessions: Alto do Rodrigues, Fazenda Pocinho, Guamaré, Guamaré Sudeste, Monte Alegre, Estreito, Serraria and Angico; and (iii) Ubarana, which comprises three concessions: Cioba, Oeste de Ubarana and Ubarana located in shallow water, between 10 and 22 km off the coast of the municipality of Guamaré. All oil and gas production is transported through pipelines to the processing facilities located at AIG.

Management expects that this acquisition will close in the first half of 2023.

Credit and Guarantee Agreement

On August 2, 2022 the Group, through its subsidiary 3R Lux, contracted financing with a consortium of financial institutions, led by Morgan Stanley Senior Funding Inc., as creditors, in the amount of US$ 500 million which will be guaranteed by the Company

and certain of its subsidiaries and with real guarantees to be constituted on certain (i) receivables, (ii) shares and (iii) rights arising from concessions of certain subsidiaries of the Company.

The financing will mature in 60 months from the signing date and and, following disbursement, will incur interest at the SOFR (Secured Overnight Financing Rate), reference rate, plus 6.25% per year, the latter subject to variation, up or down, of according to certain conditions set out in the contract. The primary use for the financing is the closing of the acquisition of the Potiguar Cluster and the amounts will be disbursed on the closing of that acquisition.

Term of commitment for structuring and issuance of debentures

On October 20, 2022, 3R Potiguar, entered into a commitment for structuring and issuing debentures, with a firm guarantee of placement, in the amount of US$ 500 million, with Banco BTG Pactual S.A. ("BTG Pactual").

The debentures will mature 60 months from October 20, 2022.. Following issuance, the debentures will incur interest at the SOFR reference rate plus 7.5%.
The primary use for the financing is the closing of the acquisition of the Potiguar Cluster and the amounts will be disbursed on the closing of that acquisition.

2. Company's Subsidiaries

As of December 31, 2022 and 2021, 3R OG held the following equity interests directly and indirectly:

	12/31/2022	12/31/2021
3R Macau	100%	100%
3R FZB	100%	100%
3R RV	100%	100%
3R Candeias	100%	100%
3R Offshore (a)	85%	70%
3R Pescada	100%	100%
3R Areia Branca	100%	100%
3R Potiguar	100%	100%
3R Operações Marítimas (b)	100%	-
3R Lux (c)	100%	-

(a) On September 8, 2022, the acquisition of shares by DBO 2.0 S.A. ("DBO") representing 15% of the share capital of 3R Offshore, was approved, therefore, from this date, the Company now holds an 85% interest in 3R Offshore.

(b) Fully controlled by 3R Potiguar (constituted on April 1, 2022), with the objective of providing port services after the closing of the Potiguar Cluster.

(c) Company without operating activities incorporated in June 2022 and directly controlled by 3R OG, incorporated with the objective of acquiring interests and managing businesses and contracting debt abroad or in Brazil.

3. Basis for Preparation of the Financial Statements

Declaration of conformity

The Company's parent company and consolidated financial statements as of and for the years ended December 31, 2022 and 2021, have been prepared and are being presented in accordance with the International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB"), and also in accordance with accounting practices adopted in

Brazil (BR GAAP). Moreover, they are also being presented in a manner that is conducive with the standards issued by the Brazilian Securities Commission ("CVM") applicable to the preparation of annual financial statements.

Management authorized publication of the Company's parent company and consolidated financial statements on March 08, 2023.

All the relevant financial information and only such information, is being disclosed and corresponds to the financial information used by Management in the running of the Group.

Basis for consolidation

The financial statements of the Company's subsidiaries are included in the consolidated financial statements as from the date control begins through the date such control no longer exists. The accounting policies of the subsidiaries are aligned with the accounting policies adopted by the Company. In the parent company financial statements, the financial information on the Company's subsidiaries is recognized under the equity method. Intergroup balances and transactions, and any revenues or expenses from intergroup transactions, are eliminated upon preparation of the consolidated financial statements. Unrealized gains resulting from transactions with the subsidiary recorded under the equity accounting method are eliminated against the investment in proportion to the Company's share in the subsidiaries. Unrealized results are eliminated in the same manner as the unrealized gains are, but only up to the point at which there is no evidence of any impairment loss.

4. Functional and Reporting Currency

The parent company and consolidated financial statements are presented in thousands of Brazilian Reais, which is the functional currency of the Company and all of its subsidiaries, with the exception of 3R Pescada. All the balances have been rounded off to the nearest thousandth, except as indicated otherwise. Subsidiary 3R Pescada has the United States Dollar (US$) as its functional currency.

5. Use of Estimates and Judgments

In preparing these financial statements, Management has used its judgment and made estimates that affect the application of the Group's accounting policies and the reported amounts of assets and liabilities, as well as the disclosures of contingent liabilities, revenues, and expenses. Actual results may be different from such estimates.

Management's estimates and assumptions are reviewed in an ongoing manner and any alterations therein are recognized prospectively. Nevertheless, uncertainty relating to such assumptions and estimates could lead to results that require significant adjustment to the carrying amount of the affected asset or liability in future periods.

Judgments

The information on judgments made in the application of the accounting policies that significantly affect the amounts reported in the financial statements is included in the following Notes:

- Note 34.1 – Impairment (existence of indications for impairment loss or reversal);
- Note 26 - Provision for abandonment (extent of the obligation assumed for the environmental repair needed upon future retirement);
- Note 23 – Accounts payable for asset acquisitions (contingent payments, linked to the oil reference price (brent) and reserve certifications);
- Note 14 - Deferred income tax and social contribution (existence of likelihood of future taxable income).

Uncertainties regarding assumptions and estimates

The information regarding uncertainties related to premises and estimates that may have a significant effect resulting in material adjustments to the carrying amounts of assets and liabilities in the next fiscal year is contained in the following Notes:

- Note 17 – Property, plant and equipment (depreciation and impairment – principal assumptions: volume of future production and period for recovery of oil and gas reserves, prices of commodities, cost of production ("OPEX"), expenditures on investments ("CAPEX") and economic premises such as discount and exchange rates);
- Note 18 – Intangible assets (amortization and impairment – principal assumptions: volume of future production and period for recovery of oil and gas reserves, prices of commodities, cost of production ("OPEX"), expenditures on investments ("CAPEX") and economic premises such as discount and exchange rates);
- Note 23 – Accounts payable for asset acquisitions (principal assumptions: oil reference price (brent) and reserve certifications);
- Note 26 – Provision for abandonment (principal assumptions: retirement deadline, estimated cost and discount rate); and
- Note 27 – Provision for contingencies (principal assumptions: likelihood of loss in pending cases).
- Note 14 – Deferred income tax and social contribution (principal assumptions: deadline for recoverability).

6. Basis for Measurement

The parent company and consolidated financial statements have been prepared based on historic cost, except for the following material items, which are measured as of each reporting date and recognized in the statement of financial position:

- derivative financial instruments are measured at fair value;
- contingent payments assumed in a business combination measured at fair value.

7. Significant Accounting Policies

The Group has applied the accounting policies described here-in in a consistent manner for all periods presented in these financial statements.

a) *Foreign currency transactions*

Transactions in foreign currency are translated to the entity's functional currency at the exchange rates in effect on the transaction dates. Monetary assets and liabilities denominated and calculated in foreign currency as of the reporting date are reconverted to the functional currency according to the exchange rate in effect for that date. The differences encountered are recognized in the statements of profit or loss in the exchange variation line item. Non-monetary items that are measured based on their historical cost in foreign currency are translated at the exchange date in effect on the transaction date.

The assets and liabilities of the Company's subsidiary whose functional currency is the US$ are converted into R$ at the reporting date exchange rate, and the statements of profit or loss items are translated at the exchange rate in effect on the transaction date. The exchange differences resulting from such translation are recognized separately in equity, in the statements of comprehensive income (loss), in the line item entitled Other comprehensive income – Cumulative translation adjustment.

b) *Cash and cash equivalents*

These current assets are maintained to meet short-term cash commitments and are comprised of the balance of cash on hand, current bank accounts and marketable securities with immediate liquidity and insignificant risk of any change in value.

c) *Restricted cash*

This item involves deposits held for the purpose of guaranteeing long-term cash commitments, consists of marketable securities with liquidity linked to fulfillment of the Group's obligations and features insignificant risk of any change in value.

d) *Trade accounts receivable*

Accounts receivable correspond to amounts receivable from the sale of oil and gas supplied in the normal course of activities of subsidiaries of the Group, billed and which have not been paid.

e) *Inventories*

Inventories are measured at their weighted average purchase or production cost and are adjusted to their net realizable value, when this is lower than cost. The net realizable value comprises the estimated selling price in the normal course of business, less estimated completion costs and estimated costs necessary to complete the sale.

f) *Corporate income tax (IRPJ) and social contribution on net income (CSLL)*

The federal IRPJ and CSLL for the year are calculated based on the rates for the former of 15%, plus a surtax of 10% on any taxable income that exceeds R$ 240, and 9% on taxable results for the latter, and they consider the offset of IRPJ tax losses and negative CSLL results, limited to 30% of the taxable income for the year.

The current IRPJ and CSLL expense is the tax payable or receivable estimated on the taxable income or loss for the year and any adjustment to taxes payable in relation to prior years. The amount of the current taxes payable or receivable is recognized in the balance sheet as a tax asset or liability based on the best estimate of the expected amount of the taxes to be paid or received that reflects any uncertainties relating to calculation thereof. Such amount is measured based on the tax rates in effect as of the reporting date.

g) *Deferred income tax and social contribution*

Deferred tax assets and liabilities are recognized in relation to temporary differences between the carrying amounts of assets and liabilities for financial statement purposes and those used for taxation purposes. The changes in deferred tax assets and liabilities in the year are recognized as a deferred IRPJ and CSLL expense. However, deferred taxes are not recognized for:

– temporary differences on the initial recognition of assets and liabilities in a transaction that is not a business combination and affects neither taxable income or loss nor accounting results;

– temporary differences related to investments in subsidiaries, associates, and enterprises under joint control, to the extent that the Group can control the time for reversal of the temporary difference and it is probable that the temporary difference will not be reversed in the foreseeable future; or

– taxable temporary differences resulting from initial recognition of goodwill.

A deferred tax asset is recognized in relation to deductible tax losses and temporary differences not used to the extent that it is probable that future taxable profits will be available, against which they will be used. Future taxable profits are determined based on the reversal of the relevant taxable temporary differences. If the amount of the latter is insufficient to fully recognize a deferred tax asset, then the future taxable profits will be considered, adjusted for the reversal of the existing temporary differences, based on the business plans of the Company and its subsidiaries individually.

Deferred tax assets are reviewed as of every reporting date and will be deducted to the extent that realization thereof is no longer probable.

Deferred tax assets and liabilities are measured based on the rates expected to be applied to the temporary differences when they are reverted, based on the rates decreed through the reporting date, and reflect the uncertainty related to the tax on income, if any.

The measurement of deferred tax assets and liabilities reflects the tax consequences resulting from the manner whereby the Company expects to recover its assets and liabilities.

Prepayments or amounts eligible for offset are recorded under current or noncurrent assets according to the respective expectation for realization.

h) *Investments*

These noncurrent assets are recorded under the equity accounting method in the individual financial statements. Such investments are initially recognized at cost, which includes transaction expenditures. After initial recognition, the financial statements include the Company's share in the net income or loss for the period and other comprehensive income (loss) of the subsidiary through the date on which significant influence no longer exists.

Foreign currency differences generated upon translation to the reporting currency of subsidiary 3R Pescada, which has a functional currency that differs from the Company's, are recognized under other comprehensive income (loss) in the line item entitled Cumulative translation adjustment.

i) *Property, plant and equipment*

Recognition and measurement

The Company's Property, plant and equipment is shown at historical cost of acquisition, less depreciation and the provision for impairment, when applicable. Depreciation of the assets is calculated under the equity accounting method or under the units produced methods for oil and gas assets.

Expenditures on exploration, appraisal and production development are recognized under the successful efforts method of accounting.

Costs incurred prior to obtaining the concessions and expenditures on geological and geophysical studies and surveys are charged to results when incurred.

Expenditures on exploration and discovery directly associated with an exploratory well are capitalized as exploration and appraisal assets until the well-drilling is completed and the results thereof appraised. Such costs include employee salaries, supplies and fuels used, the cost of drilling rig rental and other costs incurred with third parties.

If commercial reserves are not found, the exploratory well is written off from results. When reserves are found, the cost is maintained under assets until the conclusion of additional appraisals, which may include the drilling of additional wells, regarding the commerciality of the hydrocarbon reserves.

Exploratory assets are subject to technical, commercial and financial reviews at least once a year to confirm Management's intent to develop and produce hydrocarbons in the area. If such intention is not confirmed, the costs are written off from results. When proven reserves are identified and development authorized, exploratory expenses on the area are transferred to "Oil and Gas Assets".

In the development phase, investments for construction, installation and infrastructure (like rigs, pipelines and drilling of development wells, including delimitatoin wells or unsuccessful development wells) are capitalized as "Oil and Gas Assets".

Costs of loans directly related to the acquisition, construction or production of an asset that necessarily requires significant time to be concluded for use or sale are capitalized as part of the cost of the corresponding asset. All the other costs of loans are recorded as expenses in the period in which they are incurred.

An item of fixed assets is written off when sold and when no future economic benefit is expected from use or sale thereof. Any gain or loss resulting from the write-off of the asset (calculated as being the difference between the net sale value and the asset's carrying amount) are included in the profit or loss for the year in which the asset is written off.

The residual values and useful service lives of the assets, as well as the depreciation methods, are reviewed at the closing of each year and adjusted in a forward looking manner, when such is the case.

Depreciation

The "Oil and Gas Assets", including the costs for future retirement and dismantling of the areas and assets that will benefit the entire useful economic life of the field, such as gas and oil pipelines, are depreciated under the units produced method, based on the ratio between the production of oil and gas from each field in the period and the respective proven reserves developed.

With the exception of the capitalizable exploratory expenditures mentioned above, the Company's fixed assets are depreciated under the straight-line method in profit or loss based on the useful economic life estimated for each component.

The Property, plant and equipment are depreciated as from the day on which they are installed and are available for use or, in the case of assets constructed internally, from the day on which the construction is finalized and the asset available for use.

Depreciation is calculated on the depreciable amount, which is the cost of an asset, or other amount replacing the cost, in accordance with the rates and criteria mentioned in Note 17.

The depreciation method, useful lives and residual values are reviewed as of every reporting date and adjusted if needed.

Impairment of non-financial assets
The carrying amounts of the Company's non-financial assets are reviewed as of each reporting date to calculate whether there indication of impairment. If there is such indication, then the recoverable amount of the asset is estimated.

An impairment loss is recognized if the carrying amount of the asset or cash generating unit ("CGU") exceeds its recoverable value.

The recoverable value of an asset or CGU is the greater of the respective value in use and the fair value less sellling expenses. In the appraisal conducted by the Company's Management of the value in use, the estimated future cash flows are discounted to their present values by using the pretax discount rate that reflects prevailing market conditions regarding the capital recoverability period and the specific risks of the asset or CGU. For the purpose of testing recoverable value, assets than cannot be tested individually are brought together to form the smallest group of assets that generate cash inflows from continual use. Such assets are largely independent of other assets or groups of assets (CGU).

Impairment losses are recognized in profit or loss. Losses recognized in relation to CGUs are initially allocated in the reduction of any goodwill allocated to this CGU (or group of CGUs) and subsequently in the reduction of the other assets of this CGU (or group of CGUs) pro rata (see Note 17).

An impairment loss is reversed only to the extent that the recoverable amount of the asset does not exceed the cost, net of depreciation and amortization, if no impairment loss had been recognized.

j) *Intangible assets*
The intangible assets acquired by the Company have finite useful lives and are measured at cost, less accumulated amortization and any impairment losses.

Subsequent expenditures are capitalized only when they increase the future economic benefits incorporated to the specific asset to which they relate. All other expenditures, including expenditures on goodwill generated internally and trademarks and patents, are recognized in results as incurred.

Intangible assets related to the acquisition of oil and gas exploration and production concessions are amortized using the produced units method, based on the ratio between the oil and gas production of each field in the period and their respective proved reserves developed.

Amortization of computer software programs, as well as of environmental licenses and studies, is calculated using the straight-line method based on the estimated useful life of the items, net of their estimated residual values. The estimated useful life of such assets is 5 (five) years. Amortization is generally recognized in results.

Amortization methods, useful lives and residual values are reviewed on every reporting date and adjusted if needed.

k) *Trade accounts payable*
These current liabilities are recognized at face value and subsequently increased, when applicable, by monetary variations and corresponding charges incurred through the reporting dates.

l) *Loans, financing, and Debentures*

Loans, financing and debentures are recognized, when applicable, initially at fair value, upon receipt of funds, net of transaction costs, where applicable. The subsequent measurement is carried out using the amortized cost method, that is, plus charges, interest incurred pro rata temporis and monetary and exchange variations as contractually provided, incurred up to the date of the individual and consolidated financial statements.

m) *Provision for legal and administrative proceedings*

The provision for tax, civil and labor court cases is set up for risks where expectations are ranked as "probable losses", based on the appraisal of Management and assisted by external legal counsel, with the respective amounts recorded based on the estimated costs associated with the outcome of such cases.

n) *Provision for abandonment*

The Company has legal obligations for removal of equipment and restoration of land or maritime areas at the end of the production period of its reserves, based on estimated volumes and production curves. The estimates of future removal and environmental recovery are made based on current information on costs of and plans for expected recovery. These obligations are recognized at their present value using a risk-free discount rate adjusted by the country risk premium.

The nature of the expenditures includes mobilization and dismantling of drilling rigs, well-covering and retirement services, restoration, environmental repairs, reforestation and other such services.

o) *Provisions*

The amounts of the provisions recorded by the Company, including the earn-outs committed to upon acquisitions of the assets, are determined by means of the discount of the estimated future cash flows at a pre-tax rate that reflects current market appraisals of the time value of money and the specific risks for the related liability. The effects of derecognition of the discount by the passage of time are recognized in results as a financial expense.

p) *Financial instruments*

A financial asset or liability is recognized when the Company becomes party to the contractual provisions of the respective instrument.

Initial recognition

Upon initial recognition, financial assets are recognized at fair value plus or minus the transaction costs that are directly attributable to the acquisition or issue of such assets, except for trade accounts receivable that do not contain a significant financing component.

In the case of financial liabilities, upon initial recognition they are measured at fair value plus or minus the transaction costs that are directly attributable to the acquisition or issuance of such liabilities, except for financial liabilities measured at fair value.

Classification and subsequent measurement

Upon initial recognition, a financial asset is classified in the same manner as it is measured. Financial assets are not reclassified subsequent to their initial recognition, unless there are alterations in the business model for management of financial assets.

A financial liability is also classified in the same manner as it is measured upon initial recognition. Alterations that require subsequent measurement in financial libilities as derivatives and contingent consideration related to a business combination are recognized in results.

Derecognition

The Company derecognizes a financial asset when the contractual rights to the asset's cash flows expire, or when it transfers the

contractual rights to receive to the contractual cash flows on a financial asset in a transaction in which substantially all the risks and benefits of ownership of the financial asset are transferred or in which the Company neither transfers or substantially retains all the risks and benefits of ownership of the financial asset and also does not retain control over the financial asset.

Also, the Company derecognizes a financial liability when its contractual obligation is withdrawn, cancelled or expires. The Company also derecognizes a financial liability when its terms are modified, and the flows of the modified liability are substantially different. In this case, a new financial liability based on the modified terms is recognized at fair value.

Impairment of financial assets
Provisions for expected losses are to be measured based on one of the following:

- Credit losses expected for 12 months, that is, credit losses that result from potential events of default within 12 months of the base date; and
- Credit losses expected for the entire lifespan, that is, credit losses that result from all potential events of default over the expected lifespan of a financial instrument.

The lifetime expected credit loss measurement applies if the credit risk of a financial asset at the reporting date has increased significantly since its initial recognition, and the 12-month credit loss measurement applies if the risk has not increased significantly since its initial recognition. An entity may determine that the credit risk of a financial asset has not increased significantly if the asset has low credit risk at the base date. However, the lifetime expected credit loss measurement applies to trade receivables and contract assets without a significant financing component.

q) *Net revenues*
Revenue is recognized when the customer obtains control of the goods or services.

The Company revenues are derived from oil and gas sales. Revenue is measured based on the consideration specified in the agreement with the customer and is recognized if: (i) the most significant risks and benefits inherent in ownership of the goods have been transferred to the buyer; (ii) if is probable that future economic and financial benefits will flow to the Company; (iii) the associated costs and possible return of the product can be reliably estimated; (iv) there is no continuing involvement with the products sold; and (v) the amount of the revenue can be reliably measured. Revenue is measured net of returns and commercial discounts, when applicable.

The Company recognizes its revenues when (or as) it satisfies its performance obligation, transferring the promised good or service to the customer.

r) *Net financial results*
Financial revenues represent interest and inflation indexation resulting from marketable securities, unwinding of discounts obtained and inflation indexation of other assets.. Financial expenses represent bank expenses, inflation indexation of contractual obligations and interest on financing received.

s) *Earnings (loss) per share*
The basic / diluted earnings (loss) per share is computed by dividing the profit or loss attributable to ordinary share holders of the parent entity by the weighted average number of ordinary shares, excluding shares held in treasury.

t) *Statement of Added Value ("DVA")*
The purpose of such statement is to evidence the wealth created by the Company and its distribution during a determined period. It is presented as required by Brazilian corporate legislation, as part of the Company financial statements and as supplementary information thereto, although it is not a statement called for or mandatory under IFRS.

The accompanying DVA has been prepared based on the information obtained in the accounting records that serve as the basis

for preparation of the financial statements and according to the provisions contained in Brazilian accounting standard CPC 09 – Value Added Statement.

u) *Business combinations*

These ventures are recorded using the acquisition method when the set of activities and assets acquired meet the definition of a business and control thereof is transferred to the Company. In order to determine whether a set of activities and assets is a business, the Company Management appraises whether the set of activities and assets acquired includes at least an input and a substantive process that together significantly contribute to the capacity to generate output. The Company has the option of conducting a "concentration test" that permits a simplified appraisal as to whether a set of activities and assets acquired is not a business. The optional concentration test is passed if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

The consideration transferred is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill resulting from the transaction is tested every year for appraisal of an impairment loss. Gains on an advantageous purchase are immediately recognized in results. Transaction costs are recorded in results as incurred, except those costs related to the issue of debt or equity instruments.

Consideration transferred does not include amounts relatin to the payment of pre-existing relationships. Such amounts are generally recognized in profit or loss.

Any contingent consideration payable is measured at its fair value as of the acquisition date. If the contingent consideration is classified as an equity instrument, then it is not remeasured and the settlement is recorded within shareholders' equity. The remaining contingent considerations are remeasured at fair value as of each reporting date and the subsequent alterations to the fair value are recorded in profit or loss.

8. New Standards and Interpretations Not Yet in Effect

A series of new standards and amendments will be effective for years beginning after January 1, 2022. The Company has not adopted these standards in preparing these financial statements.When they are adoted, management does not expect them to have a significant impact on the parent company or consolidated financial statements:

- Classification of liabilities as current or non-current (amendments to CPC 26/IAS 1);
- Deferred tax related to assets and liabilities arising from a single transaction (amendments to CPC 32/IAS 12);
- IFRS 17 Insurance Contracts;
- Disclosure of Accounting Policies (Amendments to CPC 26/IAS 1 and IFRS Practice Statement 2); and
- Definition of Accounting Estimates (Amendments to CPC 23/IAS 8).

9. Cash and Cash Equivalents

As of December 31, 2022 and 2021, the amounts refers to the following:

	Parent company		Consolidated	
	2022	2021	2022	2021
In Brazil:				
Cash and cash equivalents				
Cash and banks	86,820	1,529	794,216	118,725
Abroad:				
Cash and cash equivalents				
Cash and banks	122	-	6,226	-
	86,942	**1,529**	**800,442**	**118,725**

Cash and cash equivalents consist of amounts held in a bank account, with immediate liquidity, maintained mainly through Bank Deposit Certificates ("CDB") and Fixed Income, with yields linked to the CDI (the Brazilian inter-bank overnight deposit rate). The financial resources will be used mainly as working capital and for the settlement of obligations assumed by the Company.

9.1. Securities

		Parent company		Consolidated	
	Indexers	2022	2021	2022	2021
Exchange investment fund	USD (Ptax)	-	2,216,210	19,685	2,277,704
Multimarket mutual fund	CDI	-	21,889	11,668	111,670
Total of securities		**-**	**2,238,099**	**31,353**	**2,389,374**

The Company's marketable securities are comprised of a foreign exchange investment fund and a multimarket mutual fund set up for investment purposes and not for use to cover working capital needs. As of December 31, 2022, these amounts were used primarily to pay obligations related to the acquisition of the cluster Recôncavo, the cluster Fazenda Belém and the clusters Peroá and Papa-Terra.

9.2. Restricted cash

	Parent company		Consolidated	
	2022	2021	2022	2021
Bank surety (a)	130	-	14,985	8,291
	130	**-**	**14,985**	**8,291**

(a) On December 31, 2022, in the Consolidated, the amount of R$ 223 refers to the deposits made for participation in the 17th bidding round for exploratory blocks by the ANP, R$ 10,612 refers to payments made to land leaseholders with documentary regularization pending to receive the amount and R$ 4,150 for bank surety to ensure the suspension of debt enforceability before the National Treasury regarding social employer contributions.

10. Trade Accounts Receivable

	Consolidated							
	Petrobras - (Oil and gas)		Companhia de Gás da Bahia ("Bahiagás") - (Gas)		PetroReconcavo S.A. - (Provision of services - Gas)		Total	
	2022	2021	2022	2021	2022	2021	2022	2021
3R RV	35,451	16,957	10,826	-	-	-	46,277	16,957
3R Areia Branca	5,962	6,200	-	-	-	-	5,962	6,200
3R Pescada	6,387	4,412	-	-	-	-	6,387	4,412
3R Macau	65,854	86,990	-	-	-	-	65,854	86,990
3R Candeias	30,949	-	7,570	-	2,025	-	40,544	-
3R FZB	9,708	-	-	-	-	-	9,708	-
3R Offshore	48,520	-	-	-	-	-	48,520	-
	202,831	114,559	18,396	-	2,025	-	223,252	114,559

Trade accounts receivable from third parties are mostly concentrated with Petróleo Brasileiro S.A. ("Petrobras"), rated Ba1 by Moody's, BB- by Standard & Poor's and by Fitch. Therefore, Management considers that the risk of default on its trade account receivables is low, since the Company has no history of defaulting customers, and its main client, Petrobras, has a good credit rating. On December 31, 2022 and 2021, there were no overdue amounts in the trade accounts receivable and management assessed the expected loss and determined that any provision for expected credit losses would be not significant. As of December 31, 2022, the average period for receiving accounts receivable from third parties is 22 days.

11. Advances

	Parent company		Consolidated	
	2022	2021	2022	2021
Advances to suppliers (a)	446	-	82,140	-
Others advances (b)	2,828	-	110,871	-
	3,274	**-**	**193,011**	**-**

(a) Refers mainly to structuring services necessary for the start of operations at the Papa-Terra Cluster, belonging to 3R Offshore, in the amount of R$67,809.

(b) Mainly refers to advances made to enable funding, through a loan and financing agreement which will be reclassified to loans and financing after completion of the funding process. These funding will be used to the acquisition of Potiguar cluster.

12. Inventories

	Parent company		Consolidated	
	2022	2021	2022	2021
Oil (a)	-	-	123,675	-
Material for use and consumption – Warehouse	-	-	63,797	16,622
	-	**-**	**187,472**	**16,622**

(a) Refers to the inventories of oil produced by the Papa-terra field stored in the FPSO (Floating Production, Storage and Offloading) measured at production cost.

13. Recoverable taxes

13.1. Income tax and social contribution assets

	Parent company		Consolidated	
	2022	2021	2022	2021
Income tax (IRPJ) and social contribution (CSLL) (a)	11,402	11,133	34,930	41,512
	11,402	**11,133**	**34,930**	**41,512**
Current Assets	11,402	11,133	32,488	39,268
Non-current Assets	-	-	2,442	2,244

(a) Comprised of negative IRPJ and negative CSLL results from prior years and prepayments made during the respective years.

13.2. Other recoverable taxes

	Parent company		Consolidated	
	2022	2021	2022	2021
Federal withholding tax (IRRF)	2,504	4,938	3,627	5,919
State Value-Added Tax on Goods and Services (ICMS)	-	-	3,542	2,370
Federal Social Integration Program (PIS) and Social Security Finance (COFINS) contributions	6	1	1,154	6,224
Other taxes	-	-	210	1,022
	2,510	**4,939**	**8,533**	**15,535**

14. Deferred income tax and social contribution

The Company and its subsidiaries recognize deferred tax assets related to temporary differences, and carry-forward tax losses. On December 31, 2022, after the start of operations of subsidiaries 3R Candeias and 3R Offshore, the Company recorded these tax assets as it considers their realization.

The deferred tax assets and liabilities are broken down as follows:

	Parent company		Consolidated	
	2022	2021	2022	2021
Deferred tax assets on temporary differences	-	-	115,420	57,839
Deferred tax assets on carry-forward tax losses	-	-	384,805	38,879
Total deferred tax assets	**-**	**-**	**500,225**	**96,718**
Deferred tax liabilities on temporary differences	-	-	(5,535)	-
Deferred tax liabilities on fair value adjustments of assets in acquisition of 3R Areia Branca	-	-	(73,895)	(89,447)
Total deferred tax liabilities	**-**	**-**	**(79,430)**	**(89,447)**
Net deferred taxes	**-**	**-**	**420,795**	**7,271**

Management's expectation for the use of the deferred tax assets as of December 31, 2022 and 2021 is based on taxable income projections considering business financial assumptions. The balance of deferred tax assets has the following expected realization.

	Consolidated	
Year	2022	2021
2022	-	96,718
2023	172,908	-
2024	96,095	-
2025	105,749	-
2026	111,967	-
2027	9,548	-
From 2028	3,958	-
	500,225	**96,718**

Amounts recognized in results

	Parent company		Consolidated	
	2022	2021	2022	2021
Current IRPJ and CSLL expenses	**-**	**(838)**	**(71,675)**	**(3,850)**
Current year expenses	-	(838)	(71,675)	(3,850)
Deferred IRPJ and CSLL expenses	**-**	**-**	**413,524**	**64,423**
Temporary differences	-	-	67,488	44,724
Carry-forward tax losses	-	-	346,036	19,699
Total tax expenses	**-**	**(838)**	**341,849**	**60,573**

Reconciliation of effective tax rate

Reconciliation of the expense calculated through application of the currently effective combined statutory rates and the IRPJ and CSLL expense calculated in results is broken down as follows:

	Parent company		Consolidated	
	2022	2021	2022	2021
Net income (loss) before IRPJ and CSLL	**149,569**	**(67)**	**(214,133)**	**(44,582)**
Currently effective statutory rate	34%	34%	34%	34%
IRPJ and CSLL calculated at statutory rates	**(50,853)**	**23**	**72,805**	**15,158**
Effect of (additions) exclusions in tax calculations	**50,853**	**(861)**	**269,044**	**45,415**
Permanent differences	(23,140)	1,494	(937)	16,416
Share of profit (loss) of subsidiary	214,744	(6,431)	-	-
Temporary differences for which no deferred tax assets have been recognized	(35,995)	4,076	(35,995)	31,081
Recognition of deferred IRPJ/CSLL from previous years	-	-	318,031	261
Tax losses for which no deferred tax assets have been recognized	(104,756)	-	(113,337)	(2,343)
Tax incentive - profit from exploration (a)	-	-	101,282	-
IRPJ and CSLL benefit / (expense)	**-**	**(838)**	**341,849**	**60,573**
Current income tax and social contribution	-	(838)	(71,675)	(3,850)
Deferred income tax and social contribution	-	-	413,524	64,423
Effective rates	**0%**	**-1,251%**	**160%**	**136%**

(a) The calculation of income tax on profit is influenced by the tax incentive granted by the Superintendence for the Development of the Northeast – ("SUDENE"), in the subsidiaries 3R Macau, 3R Rio Ventura and 3R Areia Branca, providing the tax benefit of reduction of 75% of IRPJ, calculated on the basis of operating profit.

15. Advances for Acquisition of Assets

	Parent company		Consolidated	
	2022	2021	2022	2021
3R Pescada (a)	-	-	1,600	1,600
3R FZB	-	-	-	48,009
3R Candeias	-	-	-	50,968
3R Offshore	-	-	-	58,308
3R Potiguar (b)	-	-	591,949	-
	-	-	**593,549**	**158,885**

(a) On July 9, 2020, subsidiary 3R Pescada signed an agreement for acquisition of 65% of the interest held by Petrobras in the Pescada, Arabaiana and Dentão fields. The amount of the transaction was US$ 1.5 million, to be paid in two installments, US$ 300 thousand, equivalent to R$ 1,600 upon agreement signing, and US$ 1.2 million upon transaction closing.

(b) On January 31, 2022, the Company, through 3R Potiguar, signed a purchase and sale agreement for the 100% interest in the Potiguar Cluster with Petrobras. The total value of the transaction is US$ 1.38 billion, of which (i) US$ 110 million (R$ 591,948) was paid upon execution of the agreement for the acquisition of said asset; (ii) US$ 1.04 billion is to be paid on the closing date of the transaction; and (iii) US$ 235 million in 4 annual installments of US$ 58.75 million, starting in March 2024, ending in March 2027. The closing of the transaction is subject to the fulfillment of conditions precedent, such as approval by the ANP. Additionally, the transaction included the transfer to 3R Potiguar of cash generated by the production and sale of oil and gas from the 22 fields in production starting from July 1, 2022.

The amounts of advances for the acquisition of blocks at 3R FZB, 3R Candeias and 3R Offshore were derecognized in 2022 on the final closing of these acquisitions.

16. Investments

	Parent company	
	2022	2021
3R Offshore	333,402	157,629
3R Pescada	151,328	159,969
3R Candeias	1,370,643	87,450
3R Macau	1,200,452	983,538
3R RV	251,525	195,321
3R FZB	80,978	48,801
3R Areia Branca	272,970	282,331
3R Potiguar	575,648	1,000
3R Lux	80,176	-
	4,317,122	**1,916,039**

Changes in the balances of investments in the years ended December 31, 2022 and 2021, are broken down as follows:

	3R Offshore	3R Pescada	3R Candeias	3R Macau	3R RV	3R FZB	3R Areia Branca	3R Potiguar	3R Lux	Total
Balances as of January 1, 2021	**96,873**	**55,864**	**50,596**	**233,267**	**21,986**	**48,985**	**-**	**-**	**-**	**507,571**
Capital increase	30,456	-	36,055	827,000	204,400	-	20,000	1,000	-	1,118,911
Relative stake – Non controlling interest	(8,147)	981	-	-	-	-	-	-	-	(7,166)
Acquisition of 40% stake in 3R Pescada	-	37,152	-	-	-	-	-	-	-	37,152
Share of profit (loss) of subsidiary	39,425	53,589	799	(76,729)	(31,065)	(184)	(4,749)	-	-	(18,914)
Shareholders' equity at acquisition	-	-	-	-	-	-	267,080	-	-	267,080
Accumulated translation adjustment	(978)	12,383	-	-	-	-	-	-	-	11,405
Balance as of December 31, 2021	**157,629**	**159,969**	**87,450**	**983,538**	**195,321**	**48,801**	**282,331**	**1,000**	**-**	**1,916,039**
Capital increase	114,000	-	1,250,000	-	-	50,000	-	600,000	79,827	2,093,827
Relative share – Non controlling interest	(7,134)	-	-	-	-	-	-	-	-	(7,134)
Share of profit (loss) of subsidiary	68,907	33,661	33,193	442,782	56,204	(17,823)	(9,361)	(25,352)	349	582,560
Dividends declared	-	(32,833)	-	(225,868)	-	-	-	-	-	(258,701)
Accumulated translation adjustment	-	(9,469)	-	-	-	-	-	-	-	(9,469)
Balance as of December 31, 2022	**333,402**	**151,328**	**1,370,643**	**1,200,452**	**251,525**	**80,978**	**272,970**	**575,648**	**80,176**	**4,317,122**

Summary financial information on the subsidiaries as of December 31, 2022 and 2021 is as set out below:

	2022							
	Equity interest	Current assets	Noncurrent assets	Current liabilities	Noncurrent liabilities	Shareholders' equity	Added value in the acquisition of 3R Areia Branca (i)	Income (loss)
3R Offshore	85%	354,417	1,269,695	416,646	874,064	333,402	-	68,907
3R Pescada	100%	91,331	165,952	12,031	93,925	151,328	-	33,661
3R Candeias	100%	101,618	1,488,833	70,363	149,445	1,370,643	-	33,193
3R Macau	100%	495,414	1,144,563	319,864	119,661	1,200,452	-	442,782
3R RV	100%	118,567	693,798	73,545	487,295	251,525	-	56,204
3R FZB	100%	38,218	407,150	81,295	283,095	80,978	-	(17,823)
3R Areia Branca	100%	69,956	146,933	33,787	53,574	129,528	143,442	(9,361)
3R Potiguar	100%	62,573	596,986	13,911	70,000	575,648	-	(25,352)
3R Lux	100%	80,184	-	8	-	80,176	-	349
		1,412,278	**5,913,910**	**1,021,450**	**2,131,059**	**4,173,680**	**143,442**	**582,560**

	2021							
	Equity interest	Current assets	Noncurrent assets	Current liabilities	Noncurrent liabilities	Shareholders' equity	Added value in the acquisition of 3R Areia Branca (i)	Income (loss)
3R Offshore	70%	67,161	137,025	45,799	758	157,629	-	39,425
3R Pescada	100%	111,372	178,775	5,567	124,611	159,969	-	53,589
3R Candeias	100%	88,094	647	1,291	-	87,450	-	799
3R Macau	100%	218,613	1,109,917	196,523	148,468	983,539	-	(76,729)
3R RV	100%	31,077	680,640	277,403	238,994	195,320	-	(31,065)
3R FZB	100%	48,664	235	98	-	48,801	-	(184)
3R Areia Branca	100%	53,292	133,957	21,443	57,106	108,700	173,631	(4,749)
3R Potiguar	100%	1,000	-	-	-	1,000	-	-
		619,273	**2,241,196**	**548,124**	**569,937**	**1,742,408**	**173,631**	**(18,914)**

(i) On November 1, 2021, the Company concluded the process of purchase and incorporation of 100% of the shares of 3R Areia Branca whereby, as of such date, it acquired from Banco BTG Pactual S.A. ("BGT Pactual") and other minority shareholders all of the 3R Areia Branca shares.

The fair value of the payment calculated as of the acquisition is in the amount of R$ 267,080, which is comprised as follows: R$ 73,359, paid with cash and cash equivalents as of the acquisition date; R$ 157,757, corresponding to 4,533,236 common shares, quoted at R$ 34.80 (thirty-four Reais and eighty centavos), as per the market quotation on the Brazilian stock exchange. This amount corresponds to R$ 190.396 of the issuance value of the shares and R$ (32.639) of adjustment to the fair value of the shares considering the market quotation of the shares on the date of the transaction); and R$ 35,964 relating to item (iii) above -- US$ 7 million (R$ 39,686) -- discounted by means of the present value adjustment at the time of the acquisition in the amount of R$ 3,722, considering an annual discount rate of 7.54% p.a.

17. Property, plant and equipment

Parent company

	Cost						
	Balances as of January 1, 2021	**Addition**	**Write-off**	**Balances as of December 31, 2021**	**Addition**	**Write-off**	**Balances as of December 31, 2022**
Administrative property, plant and equipment	**261**	3,644	(72)	**3,833**	14,573	(29)	**18,377**
Other property, plant and equipment	**756**	75	-	**831**	-	-	**831**
	1,017	**3,719**	**(72)**	**4,664**	**14,573**	**(29)**	**19,208**

	Accumulated depreciation						
	Balances as of January 1, 2021	**Addition**	**Write-off**	**Balances as of December 31, 2021**	**Addition**	**Write-off**	**Balances as of December 31, 2022**
Administrative property, plant and equipment	**(182)**	(76)	70	**(188)**	(1,159)	-	**(1,347)**
	(182)	**(76)**	**70**	**(188)**	**(1,159)**	-	**(1,347)**
Net balances of property, plant and equipment	**835**			**4,476**			**17,861**

Consolidated

	Cost														
Fields	Balances as of January 1, 2021	Addition	Acquisition of 3R Areia Branca	Provision for ARO	Added value	Write-off	Revision to ARO	Cumulative translation adjustment	Balances as of December 31 2021	Addition	Provision for ARO	Added value	Write-off	Revision to ARO	Cumul. translat. adjust.	Balances as of December 31 2022
Pescada and Arabaiana	**506,393**	7,906	-	-	-	(1,318)	-	72,840	**585,820**	5,131	-	-	-	-	(66,077)	**524,875**
Camarão	**162,598**	33	-	-	-	-	-	-	**162,631**	-	-	-	-	-	-	**162,631**
Macau cluster	**176,598**	106,086	-	-	-	(1,095)	(36,358)	-	**245,231**	162,203	-	-	(789)	(37,858)	-	**368,787**
Rio Ventura	-	123,612	-	155,369	-	-	(14,805)	-	**264,176**	119,705	-	-	(333)	(57,002)	-	**326,546**
Areia Branca	-	80	183,719	-	19,418	-	(9,152)	-	**194,065**	11,023	-	-	(378)	22,302	-	**227,012**
Fazenda Belem	-	236	-	-	-	-	-	-	**236**	128,427	274,511	-	-	-	-	**403,174**
Candeias	-	283	-	-	-	-	-	-	**283**	107,269	123,869	-	-	-	-	**231,421**
Peroá	-	-	-	-	-	-	-	-	-	59,136	200,113	-	-	-	-	**259,249**
Papa Terra	-	-	-	-	-	-	-	-	-	239,421	161,811	-	-	-	-	**401,232**
Other fields	**199,582**	75	-	-	-	-	-	-	**199,657**	4,833	-	-	-	-	-	**204,490**
Administrative fixed assets	**7,948**	4,386	-	-	-	(534)	-	-	**11,800**	15,582	-	-	-	-	-	**27,382**
	1,053,119	**242,697**	**183,719**	**155,369**	**19,418**	**(2,947)**	**(60,315)**	**(72,840)**	**1,663,899**	**852,730**	**760,304**	**-**	**(1,500)**	**(72,558)**	**(66,077)**	**3,136,799**

	Accumulated impairment														
Fields	Balances as of January 1, 2021	Addition	Acquisition of 3R Areia Branca	Provision for ARO	Added value	Reversal	Revision for ARO	Cumulative translation adjustment	Balances as of December 31 2021	Addition	Provision for ARO	Added value	Reversal	Revision for ARO	Cumul. translat. adjust.	Balances as of December 31 2022
Pescada and Arabaiana	**(54,575)**	-	-	-	-	47,158	-	7,417	-	-	-	-	-	-	-	-
Camarão	**(113,505)**	-	-	-	-	113,261	-	-	**(244)**	(123,318)	-	-	-	-	-	**(123,562)**
Other fields	**(170,265)**	-	-	-	-	-	-	-	**(170,265)**	-	-	-	-	-	-	**(170,265)**
	(338,345)	-	-	-	-	**160,419**	-	7,417	**(170,509)**	**(123,318)**	-	-	-	-	-	**(293,827)**

									Accumulated depreciation							
Fields	**Balances as of January 1, 2021**	**Addition**	**Acquisition of 3R Areia Branca**	**Provision for ARO**	**Added value**	**Write-off**	**Revision for ARO**	**Cumulative translation adjustment**	**Balances as of December 31 2021**	**Addition**	**Provision for ARO**	**Added value**	**Write-off**	**Revision for ARO**	**Cumul. translat. adjust.**	**Balances as of December 31 2022**
Pescada and Arabaiana	**(353,017)**	(4,562)	-	-	-	-	-	(63,564)-	**(421,143)**	(5,904)	-	-	-	-	54,934-	**(372,112)**
Macau cluster	**(4,627)**	(13,560)	-	-	-	52	-	-	**(18,135)**	(14,251)	-	-	-	-	-	**(32,386)**
Rio Ventura	**-**	(9,002)	-	-	-	-	-	-	**(9,002)**	(20,132)	-	-	-	-	-	**(29,134)**
Areia Branca	**-**	(1,907)	(93,284)	-	(346)	-	-	-	**(95,537)**	(13,306)	-	(1,999)	337	-	-	**(110,505)**
Fazenda Belem	**-**	(1)	-	-	-	-	-	-	**(1)**	(22,168)	-	-	-	-	-	**(22,169)**
Candeias	**-**	(9)	-	-	-	-	-	-	**(9)**	(11,883)	-	-	-	-	-	**(11,892)**
Peroá	**-**	-	-	-	-	-	-	-	**-**	(23,523)	-	-	-	-	-	**(23,523)**
Papa Terra	**-**	-	-	-	-	-	-	-	**-**	(9,908)	-	-	-	-	-	**(9,908)**
Administrative fixed assets	**(1,749)**	(333)	-	-	-	532	-	-	**(1,550)**	(1,720)	-	-	-	-	-	**(3,270)**
	(359,393)	**(29,374)**	**(93,284)**	**-**	**(346)**	**584**	**-**	**(63,564)**	**(545,377)**	**(122,795)**	**-**	**(1,999)**	**337**	**-**	**-**	**(669,834)**
	355,381								**948,013**							**2,228,071**

The administrative property, plant and equipment encompass the balances of lands, furniture and fixtures, installations, machinery and equipment and data processing equipment, which are depreciated over the course of the following estimated useful lifespans:

Furniture and fixtures	10 years
Machinery and equipment	10 years
Data processing equipment	5 years
Installations	5 years

3R Pescada (Pescada and Arabaiana)

The additions to property, plant and equipment between January and December 2022 are mostly related to the revitalization of production flow lines.

As of December 31, 2022, Management did not identify any indications that the field may have suffered impairment losses. As of December 31, 2021, Management identified indications that previously recognized impairment losses had reversed that led to the realization of the impairment test which resulted in its reversion – refer to note 34.1.

3R Offshore (Camarão)

As of December 31, 2022, Management identified indications that the field had suffered an impairment loss that lead to the realization of the impairment test, resulting in its recognition of an impairment loss. As of December 31, 2021 Management identified indications that previously recognized impairment losses had reversed that led to the realization of the impairment test which resulted in its reversion. Refer to note 34.1.

3R Macau (Cluster Macau)

The additions to property, plant and equipment between January and December 2022 mainly refer to the revitalization of wells, in the amount of R$ 68,062, the construction of two water processing plants (Debottlenecking), in the amount of R$ 50,449, and field installations of R$ 22,767.

As of December 31, 2022 and 2021, Management did not identify indications that this cluster's operations have suffered an impairment loss.

3R RV (Cluster Rio Ventura)

The acquisitions of property, plant and equipment between January and December 2022 are mainly composed of the revitalization of wells, in the amount of R$ 63,361, installations of fields, in the amount of R$32,159 and warehouse materials to be used in revitalization of wells, in the amount of R$ 22,178.

As of December 31, 2022 and 2021, Management did not identify indications that this cluster's operations have suffered an impairment loss.

3R Areia Branca (Ponta do Mel and Redonda fields)

As of December 31, 2022, Management did not identify indications that this cluster's operations have suffered an impairment loss.

3R Candeias (Recôncavo Cluster)

In 2022, on the closing of the purchase transaction, the Group acquired installations and equipment in the amount of R$ 55,019 from Petrobras. Further acquisitions of property, plant and equipment made between May and December 2022 were mainly composed of the revitalization of wells, in the amount of R$ 23,913 and warehouse materials to be used in revitalization of wells, in the amount of R$ 20,796.

As of December 31, 2022, Management did not identify indications that this cluster's operations have suffered an impairment loss.

3R FZB (Cluster Fazenda Belém)

In 2022, on the closing of the purchase transaction, the Group acquired installations and equipment in the amount of R$ 114,293 from Petrobras. Further acquisitions of property, plant and equipment made between August and December 2022 are mainly composed of revitalizations of wells, in the amount of R$ 5,581.

As of December 31, 2022 Management did not identify any evidence that this cluster's operations have suffered an impairment loss.

3R Offshore (Cluster Peroá)

In 2022, on the closing of the purchase transaction, the Group acquired installations and equipment in the amount of R$ 58,733 from Petrobras. Further acquisitions of property, plant and equipment made between January and December 2022 are mainly composed of technology of information and telecommunication, in the amount of R$ 110 and installations of wells in the amount of R$ 388.

As of December 31, 2022 Management did not identify any evidence that this cluster's operations have suffered an impairment loss.

3R Offshore (Cluster Papa-Terra)

In 2022, on the closing of the purchase transaction, the Group acquired installations and equipment in the amount of R$ 238,810 from Petrobras.

As of December 31, 2022 Management did not identify any evidence that this cluster's operations have suffered an impairment loss.

Other fields

The 'other fields' refer to the Pinaúna field, block BM-ES-5, PAD Versailles, and block CAL-M-372. The impairment provision for these fields/blocks in the amount of R$ 170,265 was recognized in prior periods due to expectations for return of the fields/blocks to the ANP in the future.

As of December 31, 2022, Management did not identify indications that might lead to a change in the amount of impairment previously recognized.

18. Intangible assets

Parent Company

	Cost								
	Balances as of January 1, 2021	Addition	Write-off	Amortization	Balance as of December 31, 2021	Addition	Write-off	Amortization	Balance as of December 31, 2022
Software and licenses	**5**	1,665	-	(69)	**1,601**	7,633	-	(212)	**9,022**
Other intangible assets	**778**	-	-	-	**778**	-	-	-	**778**
	783	**1,665**	**-**	**(69)**	**2,379**	**7,633**	**-**	**(212)**	**9,800**
Cost	9,307	1,665	-	-	10,972	7,633	-	-	18,605
Amortization	(8,524)	-	-	(69)	(8,593)	-	-	(212)	(8,805)

Consolidated

	Cost										
Fields	Balances as of January 1, 2021	Addition	Acquisition 3R Areia Branca	Added Values	Amortization	Amortization added value	Balance as of December 31, 2021	Addition	Amortization	Amortization Value added	Balance as of December 31, 2022
Block BAR-M-387	**778**	-	-	-	-	-	**778**	-	-	-	**778**
3R Macau (a)	**834,874**	33,720	-	-	(59,075)	-	**809,519**	-	(48,359)	-	**761,160**
3R Rio Ventura (a)	**-**	422,582	-	-	(13,726)	-	**408,856**	-	(22,366)	-	**386,490**
3R Areia Branca (b)	**-**	-	35,082	251,257	(6,857)	(7,251)	**272,231**	1,000	(5,051)	(43,742)	**224,438**
3R Candeias (c)	**-**	-	-	-	-	-	**-**	1,247,592	(22,193)	-	**1,225,399**
3R Fazenda Belém (d)	**-**	-	-	-	-	-	**-**	17,589	(846)	-	**16,743**
3R Offshore (e)	**-**	-	-	-	-	-	**-**	246,075	(15,788)	-	**230,287**
3R Papa Terra (f)	**-**	-	-	-	-	-	**-**	144,404	(3,647)	-	**140,757**
Software and licenses	**6**	3,816	-	-	(94)	-	**3,728**	8,126	(390)	-	**11,464**
	835,658	**460,118**	**35,082**	**251,257**	**(79,752)**	**(7,251)**	**1,495,112**	**1,664,786**	**(118,640)**	**(43,742)**	**2,997,516**
Cost	872,121	460,118	36,414	251,257	-	-	1,619,910	1,664,786	-	-	3,284,696
Impairment	(7,517)	-	(452)	-	-	-	(7,969)	-	-	-	(7,969)
Amortization	(28,946)	-	(880)	-	(79,752)	(7,251)	(116,829)	-	(118,640)	(43,742)	(279,211)

(a) As of December 31, 2022 and 2021, Management did not identify indications of impairment.

(b) On 19 of August of 2022, the ANP approved the result of the bidding related to the 3rd Cycle of the Permanent Concession Offer, with this, 3R Areia Branca, now owns the concession of the exploratory blocks POT-T-326, POT-T-353, POT -T-437, POT-T-524, POT-T-525 and POT-T-568, having paid a signature bonus in the amount of R$ 1,000. As of December 31, 2022, Management did not identify any indication of impairment. As of December 31, 2022, Management did not identify any indication of impairment.

(c) On May 11, 2022, the subsidiary concluded the acquisition of the Recôncavo cluster. The total amount of the transaction was U$ 250 million of which (i) U$ 10 million (equivalent to R$ 50,968) was paid at December 08,2020; and (ii) U$ 240 million (equivalent to R$ 1,249,291) on May 11, 2022, . Included in the acquisition amount were installations and equipment valued at R$ 55,019, which have been classified as fixed assets, as per note 17, therefore the amount recorded in intangible assets as assignment of exploratory rights was R$ 1,245,240. On December 31, 2022, Management did not identify any indication of impairment.

(d) On August 6, 2022 the subsidiary 3R FZB, concluded the acquisition of two onshore fields that form the production fields of the Cluster Fazenda Belém from Petrobras, after approval of the transfer of the concession contracts by the ANP. The total value of the transaction was US$ 35.2 million (R$ 167,511), of which (i) US$8.8 million (R$ 48,009) was paid upon execution of the agreement in August 2020, (ii) US$4.6 million (R$ 24,269) was paid on August 5, 2022 with a discount from the cash generation accumulated since April 2019 (effective date of the agreement) in the amount of US$ 11.8 million (R$ 36,028), and (iii) US$ 10.0 million (R$ 59,205) to be paid in twelve months following the closing the transaction. The fair value of the acquisition was US$ 23.4 million (R$ 131,483), corresponding to the sum of i,ii and iii less the cash generation accumulated since April 2019. Installations and equipment were identified in the amount of R$114,293, which were classified as property, plant and equipment – refer to note 17 - so the amount recorded in intangible assets as assignment of exploratory rights was R$17,189. As of December 31, 2022, Management did not identify any indication of impairment.

(e) On August 2 2022, the subsidiary 3R Offshore concluded the acquisition of the production fields of Peroá and Cangoá and Block BM-ES-21 (Malombe), jointly called Cluster Peroá, from Petrobras, after approval of the transfer of contracts concession by the ANP. The total value of the transaction was US$ 55 million (R$ 307,336), of which (i) US$ 5 million (R$ 26,912) was paid upon execution of the purchase agreement; (ii) US$ 8.07 million (R$ 41,938) was paid on August 2, 2022; and (iii) US$ 42.5 million (R$ 238,486) in contingent payments (note 23). Installations and equipment were identified in the amount of R$ 58,733, which were classified as property, plant and equipment - refer to note 17 - the amount recorded in intangible assets as assignment of exploratory rights was R$ 246,075 On December 31, 2022, the Company's Management did not identify any evidence that would lead to the need to carry out an impairment test.

(f) On December 23, 2022, the subsidiary 3R Offshore concluded the acquisition of the production fields of Papa-Terra composed by the FPSO P-63 and the Tension Leg Well Platorm (TLWP) P-61, from Petrobras, after approval of the transfer of contracts concession by the ANP. The total value of the transaction considering adjustments was US$ 104.6 million (R$ 563,158), of which (i) US$ 6 million (R$ 31,397) was paid on the signature of the agreement, in July 2021; (ii) 11 contingent installments, that can reach up to US$ 90.0 million, being considered on the acquisition date an expected payment of US$ 80.4 million (R$ 436,194), which are conditioned to the reference price of Brent and the operating performance of the asset between the transaction completion date and December 2032; and (iii) US$ 18.2 million (R$ 95,567) was paid on December 23, 2022, referring to the final installment of the "closing consideration" as well as the balance of oil contained in the FPSO (produced prior to the effective date) and inventory of materials and equipment that were transferred to the Group on this date, for the purpose of the environmental compensation license, deducted from cash generation, since July 1, 2021. On closing of the acquisition, the Group recognized facilities and equipment in the amount of R$238,810 which were classified as property, plant and equipment – refer to note 1- as well as oil inventories stored in the FPSO in the amount of R$105,079 and materials for use and consumption in the amount of RR$ 34,567 - refer to note 12.The amount recorded in intangible assets as assignment of exploratory rights was R$ 144,404.

On December 31, 2022, Management did not identify any indication of impairment.

19. Suppliers

	Parent company		Consolidated	
	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Domestic suppliers	4,763	2,428	228,223	47,780
Foreign suppliers	1,456	835	18,445	5,829
Total	**6,219**	**3,263**	**246,668**	**53,609**

The main amounts are related to operating services, crude oil treatment services, electricity and equipment, in addition to the expenses with the provision of services for the preparation of the start of operations in some clusters in 2022, including the Recôncavo cluster belonging to 3R Candeias, the Peroá Cluster belonging to 3R Offshore, the Fazenda Belém Cluster belonging to 3R FZB and the Papa-Terra cluster, belonging to 3R Offshore.

20. Loans and financing

		Consolidated				
Financial institution	Annual financial taxes (%)	12/31/2021	Loans received	Foreign exchange gain (loss)	Interest	12/31/2022
Bank Safra	6.70%	-	50,000	6,225	2,647	58,872
Bank Safra	8.20%	-	24,500	(438)	9	24,071
Bank Safra	8.65%	-	25,500	(229)	9	25,280
		-	**100,000**	**5,558**	**2,665**	**108,223**

Loans contracted by 3R Offshore with maturity in April 2023 for R$50,000 and July 2023 for R$24,500 and R$25,500.

21. Debentures

Debentures issued by subsidiary 3R Macau

Issue of debentures under the Deed for the Second Issue of simple non-share-convertible debentures of the Mortgage Guaranty type, in a single series with the following characteristics ("BTG Debentures"):

Holder of Debentures – Planner Trustee Distribuidora de Títulos e Valores Mobiliários Ltda.

Total issue amount - R$ 708,071
Quantity – 708,071
Unit value – R$ 1 (one thousand Brazilian Reais) as of the issue date
Issue date – May 27, 2020
Due date - April 27, 2025
Payment of interest – Quarterly and monthly as from the 25th month
Guarantee – chattel mortgage of shares, chattel mortgage of receivables, pledge of rights derived from concession agreements and pledge of oil and gas production.
Early Payment – after the 24th month from the issue, the Company can amortize the outstanding amount in either a total or partial manner.
Remuneration – The face value will be subject to indexation at the amount of the closing quotation for sale of the US$ by the Brazilian Central Bank (BACEN). The interest on the updated face value will be charged at a rate of 15.00% p.a., with the effective rate being 18.65% once the transaction costs are discounted.

On the last business day of 2021 (December 30), the debentures were pre-paid. The amount paid for settlement of the debentures was R$ 782,257, including principal, cumulative interest and prepayment costs as set out in the agreement.

Debenture issued by subsidiary 3R Areia Branca

Issue of debenture under the Deed for the First Issue of one simple non-share-convertible debenture of the Mortgage Guaranty type, in a single series with the following characteristics ("BTG 3R Areia Branca Debentures"):

Holder of debenture – BTG Pactual Serviços Financeiros S.A.
Total issue amount - R$ 47,124
Quantity – 1
Unit value – R$ 47,124 as of the issue date
Issue date – September 21, 2021
Due date – November 1, 2024
Payment of interest – Quarterly
Guarantee – chattel mortgage of all shares and pledge of rights derived from concession agreements
Early payment – at any time, the Company can amortize the outstanding amount in either a total or partial manner
Remuneration – The face value will be subject to indexation at the amount of the closing quotation for sale of the US$ by the BACEN. Interest on the updated par value will be charged at a rate of 8.5% p.a., resulting in an effective rate of 8.81% p.a.

Debenture issued by subsidiary 3R OG

Issue of debentures, according to 2° issue of simple debentures, non-share-convertible of the Mortgage Guaranty type, in a single series with the following characteristics ("Debentures 3R OG"):

Holder of Debentures – Bank Itaú BBA S.A.
Total issue amount - R$ 900,000
Quantity – 900,000
Unit value – R$ 1,000 (one thousand Brazilian Reais) as of the issue date
Issue date – August 16, 2022
Due date - August 15, 2025
Payment of interest – Quarterly and monthly as from the 25th month
Guarantee – Firm guarantee granted by the financial institutions Coordinators of the financial operation.
Early Payment – after the 18th month from the issue, observing the terms and conditions established in the Deed of Issue, carry out the optional partial extraordinary amortization of the Debentures.
Remuneration – The final interest rate refers accumulated variation of 100% (one hundred percent) of the average daily rates of the DI for one day, "over extra group", expressed as a percentage per year, base 252 (two hundred and fifty-two) business days, calculated and published daily by B3 S.A. – Bolsa, Brasil and Balcão, plus a 3.00% (three percent) spread (surcharge) per year, base 252 (two hundred and fifty-two) working days.

	Parent company		Macau		3R Areia Branca		Consolidated	
	12/31/2022	12/31/2021	12/31/2022	12/31/2021	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Opening balance	-	-	-	632,785	48,212	-	48,212	632,785
Issue of debentures	900,000	-	-	-	-	47,124	900,000	47,124
Transaction costs	(19,274)	-	-	-	-	-	(19,274)	-
Transaction costs appropriated	2,142	-	-	52,027	-	-	2,142	52,027
Interest appropriated	40,502	-	-	105,748	4,401	668	44,903	106,416
Interest paid	(22,785)	-	-	(115,852)	(4,121)	-	(26,906)	(115,852)
Settlement of principal	-	-	-	(733,694)	(3,052)	-	(3,052)	(733,694)
FX indexation	-	-	-	58,986	(2,706)	420	(2,706)	59,406
	900,585	-	-	-	**42,734**	**48,212**	**943,319**	**48,212**
Current liabilities	17,717	-	-	-	21,517	673	39,234	673
Noncurrent liabilities	882,868	-	-	-	21,217	47,539	904,085	47,539

22. Taxes payable

22.1. Income tax and social contribution payable

	Parent company		Consolidated	
	12/31/2022	12/31/2021	12/31/2022	12/31/2022
Federal IRPJ and CSLL taxes	-	-	6,317	-
	-	-	6,317	-

22.2. Other taxes payable

	Parent company		Consolidated	
	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Federal PIS/COFINS contributions	711	7	7,541	6,090
State ICMS tax	-	-	32,120	33,248
Federal withholding tax (IRRF)	1,920	168	4,831	10,232
Nacional Insurance (INSS)	40	-	5,270	1,013
Other taxes and contributions	112	375	1,222	1,879
	2,783	550	50,984	52,462

23. Accounts payable for assets acquisitions

	Parent company		Consolidated	
	2022	2021	2022	2021
Acquisition Cluster Rio Ventura (a)	-	-	93,472	357,724
Acquisition 3R Areia Branca (b)	32,184	34,874	32,184	34,874
Acquisition Ponta do Mel and Redonda fields (c)	-	-	-	15,481
Acquisition of Sanhaçu (50%) (d)	-	-	-	15,635
Acquisition Cluster Fazenda Belém (e)	-	-	61,563	-
Acquisition Cluster Peroá (f)	-	-	241,549	-
Acquisition Cluster Papa Terra (g)	-	-	404,137	-
	32,184	34,874	832,905	423,714
Current	-	-	299,089	294,391
Noncurrent	32,184	34,874	533,816	129,323

(a) Refers to the obligation to pay for the acquisition of Cluster Rio Ventura, with US$ 16 million (R$ 96,609) to be paid within 30 months after the closing of the transaction and US$ 43.2 million (R$ 255,961) to be paid as provided for in the contract as contingent payments, linked to the Brent price if it reaches a moving average equal to or greater than US$ 48 and US$ 58 per barrel, respectively, measured over a period of 12 months, at any time from the conclusion of the acquisition of the asset, indexed to the LIBOR rate and the US dollar exchange rate at the end of the period. These contingent payments linked to Brent price were paid on October, 7, 2022. Therefore, the remaining amount to be paid for the acquisition of Cluster Rio Ventura Cluster on December 31, 2022 is R$ 93,472.

(b) Refers to the contingent installment to be paid for the acquisition of 3R Areia Branca of up to US$ 7 million (R$ 37,406), if the average daily Brent reference price between August 2, 2021 and December 31, 2023 is higher than US$ 55 per barrel. For calculation purposes, a payment of US$ 4.66 thousand will be due for each US$ 0.1 per barrel of average Brent in the pre-

established period that exceeds the minimum Brent, limited to US$ 7 million. The remaining amount to be paid for the acquisition of Areia Branca on December 31, 2022 is R$ 32,184.

(c) On January 6, 2022, the remaining amount was settled for the acquisition of Ponta do Mel and Redonda fields by 3R Areia Branca in the amount of R$ 15,797.

(d) Refers to the obligation to pay for the acquisition of the remaining 50% of the Sanhaçu field, belonging to 3R Macau, which took place on December 21, 2021. The amount of two installments of US$ 1.4 million (R$ 16,064) was to be paid in 6 and 12 months from the closing of the transaction, updated at the monthly Libor rate. On June 20, 2022 the first installment of US$ 1.4 million (R$7,253) was paid and on December 22, 2022 the remaining amount of R$ 7,704 was paid.

€ Refers to the obligation to pay for the acquisition of the cluster Fazenda Belém, according to the agreement of August 14, 2020, in which 3R FZB acquired the totality of Petrobras' interest in the onshore fields of Fazenda Belém and Icapuí, the Cluster Fazenda Belém, in the Potiguar basin, in Ceará. The total value of the transaction is US$ 10 million (R$ 59,204), updated at the monthly Libor rate, to be paid 12 months after the closing of the transaction.Therefore, the remaining amount to be paid for the acquisition of Fazenda Belém on December 31, 2022 is R$ 61,563.

(f) Refers to the obligation to pay for the acquisition of the cluster Peroá, according to the agreement of January 29 of 2021, in which 3R Offshore acquired 100% of Petrobras interest in the Peroá and Cangoá production fields and BM-ES-21 (Malombe Discovery Assessment Plan), jointly known as the Peroá cluster, located in the Espirito Santo basin. The amount to be paid is up to US$ 42.5 million (R$ 245,144) in contingent payments provided for in the contract: (i) US$ 20 million linked to the presentation of Malombe's declaration of commerciality to the ANP; (ii) US$ 12.5 million linked to the Brent benchmark reaching US$ 48 per barrel; and (iii) US$ 10 million linked to the Brent benchmark reaching US$ 58 per barrel. Therefore, the remaining amount to be paid for the acquisition of cluster Peroá on December 31, 2022 is R$ 241,549.

(g) Refers to the obligation to pay for the acquisition of the cluster Papa-Terra, according to the agreement of July 09 of 2021, in which 3R Offshore acquired the 62.5% interest of Petrobras in Papa-Terra, composed of the FPSO (P-63) and the platform TWLP (P-61), jointly known as the Papa-terra cluster located in the Campos basin in Rio de Janeiro. The amount to be paid is up to US$ 90 million deducted from the remaining cash generation from July 1, 2021 up to operation´s closing, being considered on the acquisition date an expected payment of US$ 80.4 million, (R$ 436,194), indexed to the monthly LIBOR rate, which is conditioned to the reference price of Brent oil and the performance of the asset between the completion date of the transaction and December 2032. On December 31, 2022, the amount to be paid is US$ 85.2 million (R$ 444,862. The remaining amount to be paid for the acquisition of cluster Papa-Terra on December 31, 2022 is R$ 404,137.

24. Other obligations

	Parent company		Consolidated	
	2022	2021	2022	2021
Obligations to former controller (a)	58,706	-	58,706	-
Obligation to pay Pinaúna Farm	-	-	15,000	15,000
Others	1,860	994	16,998	9,296
	60,566	**994**	**90,704**	**24,296**
Current	1,663	-	24,476	15,979
Noncurrent	58,903	994	66,228	8,317

(a) Amount payable to former controller see explanatory note –4 - other expenses.

25. Transactions with related parties

	Parent company		Consolidated	
	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Assets and liabilities				
Current assets				
Debentures (i)	12,612	-	-	-
Dividends receivable (ii)	225,868	-	-	-
Others accounts receivable (iii)	14,750	2	-	-
Accounts receivable from related parties	**253,230**	**2**	**-**	**-**
Noncurrent assets				
Debentures (i)	620,000	-	-	-
Debentures from related parties	**620,000**	**-**	**-**	**-**
Increase of capital of subsidiary (iv)	12,000	32,250	-	-
Others accounts payable	605	284	-	-
Accounts payable to related parties	**12,605**	**32,534**	**-**	**-**
Profit or loss				
Financial income				
Loan granted	2,183	-	-	-
Debentures (i)	19,864	-	-	-

(a) i) On October 3, 2022, 3R RV issued th^{e} 1st private placement debentures in favor of the Company, in the amount of R$300,000. On October 13, 2022, 3R Potiguar issued th^{e} 1st private placement debentures in favor of the Company, in the amount of R$ 30,000, On November 21, 2022, th^{e} 2nd private placement debentures were issued in favor of the Company, in the amount of R$40,000; and On October 27, 2022, 3R Offshore issued th^{e} 1st private placement debentures in favor of the Company, in the amount of R$ 250,000, with maturity on August 14, 2025. The applied remuneration corresponds to the accumulated variation of 100 % (one hundred percent) of average daily DI rates based on 252 business days per year plus a spread of 3.8% per year based on 252 business daysi) The amount for R$ 225,868 refers to dividend to be received from the subsidiary 3R Macau for the result of the year 2022i) The amount for R$ 14,750 refers to shared costs paid by the parent company to be reimbursed by the subsidiaries

(iv) Refers to the capital increase in the subsidiary 3R Macau in the amount of R$12,000, which have already been paid in and will be settled in January 2023.

Remuneration of key personnel

Under Brazil's Corporation Law (Nº 6.404/76) and 3R OG's Bylaws, it is the responsibility of share-holders at their General Meeting to set the total amount for the annual remuneration of administrators, with the Board of Directors carrying out the distribution of the funds among the administrators.

The Company is managed by a Board of Directors made up of at least 5 (five) and no more than 11 (eleven) members, all elected and dismissible by the General Meeting of Shareholders, with a unified term of office of 2 (two) years. The Board of Directors in turn appoints an Executive Officers Committee made up of at least 3 (three) and no more than 7 members, one a President & CEO, another an Investor Relations Office, another a CFO and the remainder without specific designation. The total annual remuneration of the members of the Board of Directors and Executive Officers Committee for the years ended December 31, 2022 and 2021 is set out in the following table:

	12/31/2022	12/31/2021
Remuneration and benefits	18,623	24,549
Payroll charges	2,591	4,794
Total	**21,214**	**29,343**

As of December 31, 2022, the Company's Executive Officers Committee is made up of 6 (six) officers, at December 31,2021 it was 9 (nine).

26. Provision for abandonment (ARO)

The amounts of the provision for the asset retirement obligation (ARO) are measured according to the project concession term and are discounted to present value for purposes of initial recognition. The ARO liability is updated annually or when there is objective evidence that its value may be materially different. Revisions in the basis for calculation of the estimates of the expenditures are recognized as cost of the property, plant and equipment and the effects of the passage of time (denominated reversal of discount) in the model for calculation of the future obligation are allocated directly to profit or loss (net financial results).

The changes in the balance of the provision for ARO are shown in the following table:

	Consolidated								
	3R RV (a)	3R Areia Branca (b)	3R Pescada (c)	3R Macau (d)	3R Candeias (e)	3R FZB (f)	3R Offshore (Peroá) (g)	3R Offshore (Papa-Terra) (h)	Total
Balances as of January 1, 2021	**-**	**-**	**118,743**	**164,098**	**-**	**-**	**-**	**-**	**282,841**
Recognition of provision	155,369	18,631	-	-	-	-	-	-	**174,000**
Updating of provision for ARO	3,419	88	2,290	8,063	-	-	-	-	**13,860**
Remeasurement of provision for abandonment	(14,805)	(9,152)	(5,264)	(36,358)	-	-	-	-	**(65,579)**
FX translation adjustment	-	-	8,842	-	-	-	-	-	**8,842**
Balance as of December 31, 2021	**143,983**	**9,567**	**124,611**	**135,803**	**-**	**-**	**-**	**-**	**413,964**
Recognition of provision	-	-	-	-	123,869	274,511	200,113	161,811	**760,304**
Amortization of the cost of abandonment	(850)	-	-	(2,406)	-	-	-	-	**(3,256)**
Updating of provision for ARO	7,223	489	5,284	6,826	14,454	8,584	7,650	-	**50,510**
Remeasurement of provision for abandonment	(57,002)	22,302	(27,878)	(37,858)	-	-	-	-	**(100,436)**
FX translation adjustment	-	-	(8,101)	-	-	-	-	-	**(8,101)**
Balance as of December 31, 2022	**93,354**	**32,358**	**93,916**	**102,365**	**138,323**	**283,095**	**207,763**	**161,811**	**1,112,985**

(a) This amount refers to the estimate of costs associated with the retirement of the assets at the end of operations in 2046. On December 31, 2022, 3R Rio Ventura identified the need to change some assumptions used in the calculation of the costs of abandonement which are estimated to be R$ 364,744 which represents R$ 93,354 using the discount rate to 6.74% p.a. (4.63% in December 2021). In the year of 2022, effective expenses were incurred with costs related to the abandonment of wells in the amount of R$ 850.

(b) This amount refers to the estimated costs associated with abandonment at the end of the operation in 2052. On December 31, 2022, 3R Areia Branca identified the need to change some of the assumptions used in the calculation of the costs of abandonement which are estimated to be R$ 88,569, which represents R$ 32,358 using the discount rate to 6.55% p.a. (4.71% in December 2021).

(c) The abandonment of Pescada and Arabaiana is estimated to occur in 2046. On December 31, 2022 3R Pescada identified the need to change some of the assumptions used in the calculation of the costs of abandonement which are estimated to be R$ 219,115, which represents R$ 93,916 using the discount rate of 6.74% p.a.(4.63% in December 2021).

(d) This amount refers to the estimated costs associated with abandonment at the end of the operation in 2052. On December 31, 2022, 3R Macau identified the need to change some of the assumptions used in the calculation of the costs of abandonement which are estimated to be R$ 329,420, which represents R$ 102,365 using the discount rate of 6.55% p.a.(4.71% in December 2021).In the year of 2022 effective costs were incurred related to the abandonment of the wells of R$ 2,406.

(e) This amount refers to the estimated costs associated with abandonment at the end of the operation in 2052, On December 31, 2022, the costs of abandonement are estimated to be R$ 464,621, which represents R$ 138,323 using the discount rate of 6.74% p.a..

(f) This amount refers to the estimated costs associated with abandonment at the end of the operation in 2046. On December 31, 2022, the costs of abandonement are estimated to be R$ 683,369 which represents R$ 283,763 using the discount rate of 6.74% p.a..

(g) This amount refers to the estimated costs associated with abandonment at the end of the operation in 2039. On December 31, 2022, the costs of abandonement are estimated to be R$ 519,740, which represents R$ 207,763 using the discount rate of 6.74% p.a..

(h) This amount refers to the estimated costs associated with abandonment at the end of the operation in 2045. On December 31, 2022, the cost of abandonement are estimated to be R$ 815,952, which represents R$ 161,811 using the discount rate of 6.74% p.a..

27. Provision for Contingencies

The Company and its subsidiaries are parties to lawsuits of a civil, tax and labor nature where the likelihood of loss, based on the opinions of its internal and external legal counsel, is ranked as probable. Further based on the opinions of these attorneys, Management considers that the provision for losses recorded is sufficient to cover probable losses, as shown below:

	Parent company		Consolidated	
	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Labor	3,589	2,855	3,589	2,855
Civil	-	-	-	693
Other	-	-	424	-
	3,589	**2,855**	**4,013**	**3,548**

As of December 31, 2022, the Company and its subsidiaries are involved in lawsuits of a civil, labor, tax and sundry nature where the likelihood of losses is ranked as possible by Management and its legal counsel, amounting to approximately R$ 1,292,482 (R$ 56,645 as of December 31, 2021).

The following table shows the amounts involved in cases ranked as possible losses, as backed up by the appraisal of the Company's external legal counsel:

	Consolidated	
	12/31/2022	12/31/2021
Civil (a)	1,278,886	1,882
Labor	7,813	12,208
Tax (b)	5,783	42,555
	1,292,482	**56,645**

(a) On December 31, 2022, 3R Offshore is the successor to Petrobras as the defendent in a public civil action filed by the National Confederation of Fishermen and Aquaculturists, whose objective is the payment of compensation for material damage (loss of profit) and pain and suffering, in the updated amount of R$ 1,277,240, allegedly suffered by unidentified fishermen due to intervention in the fishing activity, allegedly caused by the creation of an exclusion zone for fishing due to oil and gas exploration carried out by Petrobras in the Cluster Papa -Terra granted to Petrobras in October 2013. On December 23, 2022, 3R Offshore took over the operation of this field, and the purchase and sale agreement signed between 3R Offshore and Petrobras provides for compensation to 3R Offshore for losses caused by events prior to the acquisition (effective date).

(b) The Company is also a defendant in an administrative proceeding filed by the Brazilian Federal Treasury against 3R Offshore, the object of which is the drawing up of 11 (eleven) assessment notices for purported omission of revenues from investments in marketable securities in the calculation of IRPJ and CSLL, arising from triggering events for the periods from October, 2001 to July of 2003, in the amount of R$ 33,492 as of December 31, 2022. Moreover, the Company is also defendant in another administrative proceeding filed by the Federal Treasury against 3R Pescada, in the amount of R$ 5,507 as of December 31, 2022 (R$ 5,103 as of December 31, 2021), relating to an assessment notice served on it due to disallow of the deductibility of operating expenses on the grounds that the subsidiary did not submit appropriate documentation vouching for such expenses.

28. Leases

Leases - Liabilities

	Parent company								
	January 1, 2021	Additions of leases (a)	Lease Payments	Interest recognized in profit or loss	December 31, 2021	Additions of leases (a)	Lease Payments	Interest recognized in profit or loss	December 31, 2022
Administrative property (a)	-	6,550	-	-	**6,550**	13,475	(3,438)	1,557	**18,144**
	-	**6,550**	-	-	**6,550**	**13,475**	**(3,438)**	**1,557**	**18,144**

	Consolidated								
	January 1, 2021	Additions of leases (a)	Lease payments	Interest recognized in profit or loss	December 31, 2021	Additions of leases (a)	Lease payments	Interest recognized in profit or loss	December 31, 2022
Administrative property	**1,287**	8,191	(706)	294	**9,066**	12,593	(4,266)	1,755	**19,148**
Other Properties	-	149	(55)	11	**105**	325	(176)	20	**274**
Equipment - thermoelectric	-	16,554	-	-	**16,554**	16,141	(2,785)	1,234	**31,144**
	1,287	**24,894**	**(761)**	**305**	**25,725**	**29,059**	**(7,227)**	**3,009**	**50,566**

Right-of-use

	Parent company						
	January 1, 2021	Additions of leases	Depreciation	December 31, 2021	Additions of leases	Depreciation	December 31, 2022
Administrative property (a)	-	6,550	-	**6,550**	13,475	(2,803)	**17,222**
	-	**6,550**	**-**	**6,550**	**13,475**	**(2,803)**	**17,222**

	Consolidated						
	January 1, 2021	Additions of leases (a)	Depreciation	December 31, 2021	Additions of leases (a)	Depreciation	December 31, 2022
Administrative property (a)	**1,239**	8,056	(479)	**8,816**	12,593	(3,288)	**18,121**
Other property	**-**	149	(29)	**120**	325	(325)	**120**
Plant and Equipment (b)	**-**	16,554	-	**16,554**	16,141	(2,061)	**30,634**
	1,239	**24,759**	**(508)**	**25,490**	**29,059**	**(5,674)**	**48,875**

(a) In 2022, the additions refers basically to adjustement of the lease agreement for the Rio Ventura head office in Catu-BA, that was readjusted by R$ 104 according to the contractual provision for the rent; and an update to the lease agreement of 14° and 15° floors of the administrative fixed asset where the 3R's administrative headquarters are located, with average rate of discount 14.34%.

(b) In June 2022, 3R Candeias signed a contract for rent of equipments for use in Cexis and Socorro ("station"), located in Candeias and São Francisco, State of Bahia, in the amount of R$15,767, which expires on May 31, 2026, with an average rate of 16.99%. In June 2022, 3R Candeias signed a lease agreement for equipment of communication by radio, installed on the Fields of Cluster Recôncavo, in the State of Bahia, in the amount of R$308, which expires in May 2025 with an average rate of 17.29% p.a.. In September 2022, 3R Pescada signed a lease agreement for power generator, to be used in the control rooms of 3R Pescada, in the amount of R$ 72,000, which expires in February 2024 with an average rate of 15.10% p.a..

29 . Equity

Paid-in capital

As of December 31, 2021, 3R OG's paid-in capital was distributed as follows:

Shareholders	Paid-in capital	Number of shares	Percentage equity interest
FIP 3R	97,178	22,787,130	11.2%
FIP Esmeralda	87,675	19,872,259	9.8%
BTG Pactual	437,085	14,620,423	7.2%
Gerval Investimentos	298,028	12,113,829	6.0%
Other shareholders	3,226,650	133,199,437	65.8%
	4,146,616	**202,593,078**	**100%**

On November 18, 2022, Management approved the Company's capital increase in the amount of R$7,790, with the issuance of 494,554 new common shares, in compliance with the exercise of the purchase of stock options, as provided for in the second payment program based on in shares.

The shares that make up the Company's share capital are traded on the Brazilian stock exchange, with approximately 97% outstanding (free float). During the year ended December 31, 2022, there was a change in shareholding involving these shares, as follows:

On December 31, 2022, the Company's share capital was distributed as follows:

Shareholders	Paid-in capital	Number of shares	Percentage equity interest
Schroder Investment Management Brasil Ltda.	216,029	10,459,632	5.2%
Gerval Investimentos Ltd.	452,830	22,089,385	10.9%
Coronation Funds Management Ltd.	207,720	10,252,961	5.0%
Other shareholders	3,277,827	160,285,654	78.9%
	4,154,406	**203,087,632**	**100%**

Capital reserve

As of December 31, 2021 the Company's capital reserve amounts to R$ 114,976.

On April 29, 2022 the Company's Management approved, the absorption of the accumulated loss with part of the capital reserve, in the amount of R$ 111,633.

As of December 31, 2022, the amount recorded referring to transactions with share-based payments is R$ 33,793.

As of December 31, 2022, the Company's capital reserve amounts to R$ 37,136.

Accumulated translation adjustment

In the line item entitled "Accumulated translation adjustment", the Company has recorded the amount of (R$ 9,469) for the year ended December 31, 2022 (R$ 6,872 as of December 31, 2021). This is the result of translation of the functional currency of subsidiaries 3R Pescada from US$ to the group's R$ reporting currency, for a total balance of R$ 106,383 as of December 31, 2022 (R$ 115,852 as of December 31, 2021).

Dividends

The Company's bylaws provide for the percentage of 25% as the minimum mandatory dividend after the respective deductions.

Management allocated the result calculated in the year 2022 to absorb the accumulated loss, therefore there was no distribution of dividends by the Company on December 31, 2022. As of December 31, 2021, there was no distribution of dividends due to the in this year.

30. Operating segments

Operating segments are defined as components of an entity for which separate financial statements are available and are regularly appraised by the principal operational decision-maker, in order to allocate resources in the appraisal of the performance of the managers of a determined segment. Based on this definition, the Company has a single operating segment, which is exploration and production of oil and gas (O&G E&P).

31. Net Revenues

	Parent company		Consolidated	
	2022	2021	2022	2021
Sales Revenue				
Gross oil revenues	-	-	1,776,270	924,469
Deductions (taxes) from revenues	-	-	(371,044)	(229,294)
Net oil revenues	**-**	**-**	**1,405,226**	**695,175**
Gross gas revenues	-	-	387,075	45,063
Deductions (taxes) from revenues	-	-	(71,883)	(12,439)
Net gas revenues	**-**	**-**	**315,192**	**32,624**
Revenue from services rendered				
Gross revenue from services rendered	-	-	2,337	-
Deductions (taxes) from revenues	-	-	(333)	-
Net oil revenues	**-**	**-**	**2,004**	**-**
Total net Revenues	**-**	**-**	**1,722,422**	**727,799**

The Group's oil revenues are derived from the Pescada and Arabaiana fields, the Macau Cluster, the Rio Ventura Cluster, Fazenda Belém cluster, Peroá cluster, Recôncavo cluster and the Ponta do Mel and Redonda fields, Petrobras is the Group's sole oil customer.

The Group's gas revenues are derived from the Pescada and Arabaiana fields, the Macau Cluster, the Rio Ventura Cluster, Peroá cluster and Recôncavo, with Petrobras and Bahia Gás as the customers.

The Group's service revenues are composed by gas compression service and effluent treatment at the Recôncavo and Rio Ventura Clusters, with Petrobras and Petroreconcavo as the customers.

32. Cost of Products Sold

	Parent company		Consolidated	
	2022	2021	2022	2021
Operating costs (a)	-	-	(241,215)	(75,178)
Rental of area	-	-	(29,164)	(15,189)
Oil and gas royalties	-	-	(144,078)	(78,670)
Depreciation and amortization	-	-	(248,747)	(110,195)
Water treatment and electric power	-	-	(50,270)	(30,236)
Licensing and environmental expenses	-	-	(11,514)	(2,312)
Personnel costs	-	-	(36,404)	(5,887)
Gas processing and transport	-	-	(59,178)	-
Others	-	-	(14,974)	(1,863)
	-	**-**	**(835,544)**	**(319,530)**

(a) Mainly refers to third-party services used in the operation of assets.

33. General and Administrative Expense

	Parent company		Consolidated	
	2022	2021	2022	2021
Salaries and payroll charges	(89,945)	(3,731)	(169,514)	(104,818)
Outsourced services (a)	(24,562)	(10,951)	(40,023)	(19,962)
Depreciation and amortization	(4,174)	(145)	(30,555)	(7,173)
Provision for share-based payment transactions (b)	(33,793)	(3,343)	(33,793)	(3,343)
Provision for contingencies	(734)	(2,150)	(465)	(2,857)
Software and hardware maintenance and support	(14,886)	(1,284)	(20,818)	(4,301)
Sundry other expenses (c)	(17,436)	(5,517)	(43,835)	(17,128)
	(185,530)	**(27,121)**	**(339,003)**	**(159,582)**

(a) Mainly refers to legal, consultancy and audit services expenses.
(b) The Company has a payment program based on shares of a commercial nature, as a way of retaining. On December 31, 2022 16(sixteen) professionals exercised their stock options, which totaled 494,554 shares exercised.
(c) Mainly refers to travel expenses, fraternization, office supplies and tax fees.

34. Other operating (expenses) / revenues

	Parent company		Consolidated	
	2022	2021	2022	2021
Expenses on operator	-	-	-	430
Adjustment in the provision for abandonment (a)	-	-	27,878	5,264
Expenses with acquisition, data and partnerships	-	-	(18,458)	-
Expenses with transaction of assets (b)	-	-	(98,237)	-
Expenses earn out on old controller (c)	(58,706)	-	(58,706)	-
Sundry other expenses / revenues	(6,110)	(8,046)	(5,977)	245
	(64,816)	**(8,046)**	**(153,500)**	**5,939**

(a) Refers to adjustments of ARO, as per note 26.

(b) Refers mainly to expenses with mobilization for transition of assets of Peroá and Papa Terra, Reconcavo, Fazenda Belém and cluster Potiguar from Petrobras.

(c) Contingent payment linked to the calculation of taxable income for income tax and social contribution by 3R Offshore, 3R Candeias and 3R OG. Under the terms of the purchase and sale agreement for some of the clusters, if these entites of the Group are able to realize the benefits of prior period tax losses, the former controller will be entitled to the equivalent amount of up to one third of the benefit obtained as a result of its use,.

34.1. Impairment (loss)/reversal

Fields	Parent company		Consolidated	
	2022	2021	2022	2021
Pescada, Arabaiana e Dentão (a)	-	-	-	47,158
Camarão (b)	-	-	(123,318)	113,261
	-	**-**	**(123,318)**	**160,419**

(a) On December 2021, the Company identified an indicator that a previously recognized impairment loss had reversed and performed an impairment test that resulted in the reversal in the amount of R$47,158 considering the discount rate of 7.2% a.a.. This was primarily related to the increase of US$ 14.3 per barrel (or 28.2%) in the average Brent oil price for the entire period evaluated (up to the year 2046) and an increase of US$ 17.0 per barrel (or 32.6%) for the period up to 2026.

(b) On December 31, 2021, the Company identified an indicator that a previously recognized impairment loss had reversed and performed an impairment test that resulted in the reversal of the impairment value recorded in the amount of R$ 113,261 considering the discount rate of 8.56% p.a. This was primarily related to the increase in Brent price - compared to the test carried out on June 30, 2021, the estimated average Brent price was US$ 70.5 per barrel, there was an increase of US$ 7.8 per barrel (or 13.7%) in the average Brent oil price for the entire period evaluated (up to the year 2046) and an increase of US$ 8.8 per barrel (or 14.6%) for the period of the next five years (up to 2026). The price of gas was estimated at 8.2% of Brent (in US$/mmbtu), using the current contract between the Peroá field and Petrobras as a reference. Therefore, in 2025 (the year the field is expected to enter into operation), the price of gas was estimated at US$5.4/mmbtu (assuming the price of Brent at US$65.8/bbl).
The Company assumes that the consortium that owns Manati (45% Enauta, 35% Petrobras, 10% Geopark and 10% Petrorio) is interested in Camarão gas to provide flexibility to the system and additional gains in the sale of gas to the final consumer. Thus, the premise of selling gas to the consortium was adopted, with a delivery point at the arrival of the gas pipeline at the Manati platform.

On December 31, 2022, the Company performed an annually reservoir volume certification and identified an indication of impairment and performed an impairment test, which identified an impairment loss in the amount of R$ 123,318, considering the discount rate of 10.97% p.a.

The analysis carried out considered the average Brent of US$76.1/bbl in the period from 2023 to 2027, with a positive variation of US$5.6/bbl, in relation to the test carried out on December 31, 2021.

The gas price was estimated at 10% of Brent (in US$/mmbtu), having been used as a reference the current proposal received for the sale of gas in the Peroá field at a discount, as well as market analyzes by the Company's commercial team. Therefore, in 2026 (the year the field is expected to enter into operation), the price of gas was estimated at US$7.3/mmbtu (assuming the price of Brent at US$72.3/bbl).

35. Financial Income and Expenses

	Parent company		Consolidated		
	2022	2021	2022		2021
Financial income					
Yields from securities	87,452	186,304	120,849		197,894
Updating of deposits in court	14	4	92		4
(Less) Taxes	(5,209)	(8,670)		(6,953)	(6,869)
Exchange variation – debentures (b)	-	-	2,706		-
Exchange variation – interest on debentures	-	-	-		3,503
Interest on debentures – Related Parties	19,864	-		-	-
Present value adjustment	901	598	2,478		598
Exchange variation (a)	25,923	14,568	88,568		769
Gains on hedge operations (c)	-	-		106,782	-
Sundry other financial revenues	3,801	145	5,295		1,173
	132,746	**192,949**	**319,817**		**197,072**
Financial Expenses					
Increase in provision for ARO	-	-	(50,510)		(13,860)
Interest – leases	(1,557)	-	(3,009)		(305)
Interest – debentures	(40,502)	-	(44,903)		(199,649)
Interest – borrowings	(748)	-	(2,665)		(549)
Exchange variation – debentures	-	-	-		(61,105)
Exchange variation – acquisition earn out	-	-	(27,872)		(7,215)
Losses on hedge operations (c)	-	-		(348,686)	(213,270)
Losses on marketable securities	(229,748)	(137,709)	(237,301)		(139,238)
Translation adjustment	-	-		(21,108)	(17,530)
Present value adjustment	-	-	-		(323)
Exchange variation (a)	(38,302)	-	(61,021)		-
Others financial expenses	(4,534)	(1,226)	(7,932)		(3,655)
	(315,391)	**(138,935)**	**(805,007)**		**(656,699)**
Net Financial Results	**(182,645)**	**54,014**	**(485,190)**		**(459,627)**

(a) It mainly refers to the positive exchange variation in the amount of R$ 88,568, arising mainly from financial investment in an exchange investment fund and (R$ 61,021) from foreign exchange variation on liabilities, predominantly correlated to the amounts payable for acquisitions, according to explanatory note 23.

(b) On December 31, 2022, the amount recorded refers to the indexation of the 3R Areia Branca and 3R OG debentures, as per explanatory note 21.

(c) 3R Macau contracts Non-Deliverable Forward ("NDF") and Brent Collars. Hedge operations were carried out to cover part of its production for the next 24 months at an average price of US$ 83 per barrel obtained with NDFs at 3R Macau and average price of US$ 69 per barrel for NDFs at 3R Offshore and contract a floor of US$ 70 per barrel for puts and a ceiling of US$ 104 per barrel for calls.

36. Earnings (Loss) Per Share

The calculation of the Company's basic and diluted loss per share was based on the net loss attributed to the holders of common shares and the average weighted number of common shares in circulation after the adjustments for the potential dilutive common shares.

Basic earnings (loss) per share

	Consolidated	
	2022	2021
Net profit (loss) for the year	149,569	(905)
Average weighted number of common shares	202,651,341	146,675,763
Basic earnings (loss) per share – R$	0.74	(0.01)

Diluted earnings (loss) per share - R$

	Consolidated	
	2022	2021
Net profit (loss) for the year	149,569	(905)
Average weighted number of common shares	204,479,315	146,858,077
Number of diluting shares (a)	1,827,974	182,314
Diluted earnings (loss) per share - R$	0.73	(0.01)

(a) Such dilutive actions are related to the two stock option plans approved on August 31, 2020 and April 29, 2022.

37. Financial Instruments and Risk Management

a) Financial instruments

The Company's main financial instruments are cash and cash equivalents, securities, restricted cash, trade accounts receivable, accounts receivable from related parties, suppliers, loans and financing, debentures, accounts payable to related parties, amount payable to the operator, amounts payable for asset acquisitions, derivatives and other obligations.

The Company does not operate with derivative financial instruments for speculative purposes. The Company hires, through its subsidiaries 3R Macau and 3R Offshore, NDFs and Brent Collars for the purpose of protecting against fluctuations in oil prices (Brent).

Management carried out hedging operations for part of its production for the next 24 months and contracted an average purchase price of US$ 83 per barrel was obtained with the NDFs contracted by 3R Macau and an average purchase price of US$ 69 per barrel with the NDFs contracted by 3R Offshore. When contracting the Collars, a floor of US$ 70 per barrel was contracted for put options and a ceiling of US$ 104 per barrel for call options on 3R Macau.

As of December 31, 2022, the contracts provide coverage for 2,747 thousand barrels expected to be sold in the next 12 months.

Instrument	Quantity on December 31, 2022	Quantity on December 31, 2021	Fair value recorded as of December 31, 2022	2021
NDFs	2,625,000	2,052,000	(9,539)	(76,366)
Collars	122,000	588,000	352	(39,604)
Total	**2,747,000**	**2,640,000**	**(9,187)**	**(115,970)**
Current assets			**15,934**	**-**
Noncurrent assets			**7,613**	**-**
Current liabilities			**(32,734)**	**(115,970)**

As of December 31, 2022 and 2021, the following balances of derivative financial instruments refer to Non-Deliverable Forward ("NDF") operations for hedging against the fluctuation in the benchmark oil price (Brent).

3R Macau

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	2022	2021	Maturity	2022	2021	2022	2021	2022	2021
NDF	2,215,000	742,000	2023-2025	891,691	230,370	857,945	268,673	23,194	(40,904)

3R Offshore

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	2022	2021	Maturity	2022	2021	2022	2021	2022	2021
NDF	410,000	1,310,000	2023	184,049	500,173	180,518	535,634	(32,733)	(35,462)

As of December 31, 2022 and 2021, the balances of the derivative financial instruments set out below refer to operations involving options and collars for 3R Macau, for protection against fluctuations in the benchmark oil price (Brent).

	Quantity (barrels)			Benchmark amount (Notional)		Position sold		Fair value	
Instrument	2022	2021	Maturity	2022	2021	2022	2021	2022	2021
Collar	122,000	588,000	2023	(6,333)	4,546	6,686	(44,149)	352	(39,604)

Category of financial instruments

CPC 46 / IFRS 13 defines fair value as the amount that would be received on the sale of an asset or paid on the transfer of a liability in an ordinary transaction between market participants on the measurement date. The standard clarifies that fair value must be based on assumptions that market participants use when assigning a value to an asset or liability and establishes a hierarchy that prioritizes the information used to develop these assumptions. The fair value hierarchy places greater weight on available market information (in other words observable data) and less weight on information related to non-transparent data (in other words unobservable data).

CPC 46 / IFRS 13 establishes a three-level hierarchy to be used when measuring and disclosing fair value. As far as possible, the Company uses observable market data to measure the fair value of an asset or liability that are classified considering the inputs used in the valuation techniques as follows:

Level 1 - quoted prices (unadjusted) in an active market that are observable for identical assets and liabilities at the measurement date.
Level 2 – prices are other than prices practiced as determined by level 1 that are observable for the asset or liability, directly or indirectly, in an active market for similar assets or liabilities or in an inactive market for identical assets or liabilities.
Level 3 – prices arising from little or no market activity for the asset or liability that are not based on observable market data (unobservable prices).
The following table presents the carrying amounts and fair values of financial assets and liabilities, including their levels in the fair value hierarchy, when applicable:

		Parent company		Consolidated	
	Level	12/31/2022	12/31/2021	12/31/2022	12/31/2021
Financial assets measured at amortized cost					
Cash and cash equivalents	-	86,942	1,529	800,442	118,725
Securities	-	-	2,238,099	31,353	2,389,374
Restrict Cash	-	130	-	14,985	8,291
Trade accounts receivable	-	-	-	223,252	114,559
Accounts receivable from related parties	-	27,362	2	-	-
		114,434	**2,239,630**	**1,070,032**	**2,630,949**
Financial liabilities measured at amortized cost					
Suppliers	-	6,219	3,263	246,668	53,609
Trade accounts payable	-	-	-	108,223	-
Debentures	-	900,585	-	943,319	48,212
Accounts payable to related parties	-	12,605	32,534	-	-
Amounts payable to operator	-	-	1,585	-	1,429
Other obligations	-	60,566	994	90,704	24,296
		979,975	**38,376**	**1,388,914**	**127,546**
Financial assets measured at fair value through profit and loss (FVTPL)					
Derivative financial instruments	2	-	-	23,547	-
Financial liabilities measured at fair value through profit and loss (FVTPL)					
Derivative financial instruments	2	-	-	32,734	115,970
Accounts payable for acquisitions	2	32,184	34,874	832,905	423,714
		32,184	**34,874**	**865,639**	**539,684**

The carrying amount of the financial assets and liabilities measured at amortized cost shown above are a reasonable approximation of their fair values, owing to their characteristics, with the exception of the debentures. The fair value of the debentures as of December 31, 2022 is R$ 790,478, assessed at level 2 (R$ 42,248 on December 31, 2021 – level 2).

b) Management of risks

The Group's Management has overall responsibility for establishing and supervising the risk management structure. Risk management guidelines are established to identify and analyze the risks to which the Group is exposed to define appropriate risk limits and controls and to monitor risks and adherence to defined limits.

Liquidity risk

This represents the risk of shortfalls of cash and difficulty for the Group in honoring its debts, the Group seeks to align the maturity of its debts with the cash generation period to avoid mismatches and generate the need for greater leverage.

The following are the contractual maturities of financial liabilities as of December 31, 2022 and December 31, 2021, Such amounts are gross and not discounted and include payments of contractual interest charges, when applicable:

	2021				
	Parent company				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade accounts payable	3,263	3,263	-	-	-
Related parties	32,534	32,534	-	-	-
Amounts payable to operator	1,585	1,585	-	-	-
Accounts payable for acquisitions	34,874	-	42,247	-	-
Other obligations	994	-	994	-	-

	Consolidated				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade accounts payable	53,609	53,609	-	-	-
Debentures	48,212	673	32,133	22,500	-
Derivative financial instruments	115,970	115,970	-	-	-
Amounts payable to operator	1,429	1,429	-	-	-
Accounts payable for acquisitions	423,714	310,370	144,018	-	-
Other obligations	24,296	15,979	8,317	-	-

	2022				
	Parent company				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade accounts payable	6,219	6,219	-	-	-
Debentures	900,585	17,717	953,352	-	-
Related parties	12,605	12,605	-	-	-
Other obligations	60,566	1,663	197	106,012	-
Accounts payable for acquisitions	32,184	-	37,405	-	-

	Consolidated				
	Carrying amount	Up to 1 year	> 1-3 yrs	> 3-5 yrs	> 5 yrs
Financial liabilities					
Trade accounts payable	246,668	246,668	-	-	-
Loans granted	108,223	108,223	-	-	-
Debentures	943,319	39,234	980,643	-	-
Derivative financial instruments	32,734	32,734	-	-	-
Accounts payable for acquisitions	832,905	299,089	545,769	-	-
Other obligations	90,704	24,476	7,522	106,012	-

Credit risk

The risk mainly refers to the Group's cash and cash equivalents and accounts receivable. All operations are carried out with banks of recognized liquidity, with financial risks classified with a minimum rating of A1 by Standard & Poor's, minimizing their risks.

The Group's sales are mainly concentrated in Petrobras, classified Baa1 by Moody's and BB- by Standard & Poor's and Fitch. Therefore, Management considers that the risk of default on its credits is low since the Group provides a necessary input for its customers' business.

Derivatives are contracted with banks and financial institutions rated between AA- and AAA, with the aim of providing coverage against the risk of oil price volatility. These operations hedge the Group's revenues in accordance with the hedge policy approved by Management.

Interest rate risk

This risk arises from the possibility of the Group incurring losses due to fluctuations in the interest rates, increasing financial expenses relating to intercompany borrowings obtained. The Group preferably does not use derivative financial instruments to manage exposure to interest rate fluctuations.

The interest rate risk sensitivity analysis is performed for a 12-month horizon. The values referring to the possible and remote scenarios mean the total floating interest expense in the event of a variation of 25% and 50% in these interest rates, respectively, keeping all other variables constant. The table below informs, in the probable scenario, the amount to be disbursed by the Group with the payment of interest related to debts with floating interest rates on December 31, 2022.

			Consolidated
Risk	**Probable Scenario (*)**	**Probable Scenario (*) (Δ of 25%)**	**Probable Scenario (*) (Δ of 50%)**
LIBOR	70,755	72,625	74,499
CDI	17,717	21,063	24,324
Total	**88,472**	**93,688**	**98,824**

(*) The probable scenario was calculated considering the currency quotations and floating rates to which the debts are indexed.

Currency risk (exchange rate)

This risk arises from the possibility that the Company may incur losses due to fluctuations in US dollar exchange rates, which reduce nominal invoiced amounts or increase amounts raised, all transactions that involve currency risk are recorded on the Company's balance sheet.

The following table sets out the net foreign exchange exposure to US dollar:

	Consolidated	
	2022	**2021**
Assets		
Cash and cash equivalents	6,226	-
Marketable securities	19,685	2,277,704
Derivative financial instruments	23,547	-
Liabilities		
Suppliers	(18,445)	(5,829)
Loans and financing	(108,223)	-
Debentures	(42,734)	(48,213)
Derivative financial instruments	(32,734)	(115,970)
Accounts payable for assets acquisitions	(832,905)	(423,714)
Total net exchange exposure	**(985,583)**	**1,683,978**

Sensitivity analysis

A possible appreciation (devaluation) of the real against the dollar on December 31, 2022 would affect the measurement of financial instruments denominated in foreign currency with impacts between assets and liabilities shown below. The analysis assumes that all other variables, especially interest rates, remain constant and ignores any forecast impact on sales and purchases.

		Consolidated			
Assets	**Risk**	**2022**	**Probable Scenario (I)**	**Impact of Scenario (II)**	**Impact of Scenario (III)**
Banks and marketable securities – US$	Devaluation of US$	25,911	25,525	22,973	20,420

Liabilities					
Suppliers	Appreciation of US$	(18,445)	(18,170)	(19,987)	(21,804)
Loans and financing	Appreciation of US$	(108,223)	(106,611)	(117,273)	(127,934)
Debentures	Appreciation of US$	(42,734)	(42,098)	(46,307)	(50,517)
Accounts payable for assets acquisitions	Appreciation of US$	(832,905)	(820,502)	(902,552)	(984,602)
Derivative financial instruments	Appreciation of US$	(9,187)	(9,050)	(9,955)	(10,860)
Total net exposure		**(976,396)**	**(961,856)**	**(1,063,146)**	**(1,164,437)**

For calculation of the amounts in the above scenarios, the average exchange rate projection disclosed in the FOCUS report issued by BACEN for the period ended December 31, 2022 (US$ 1/R$ 5.22) was considered in the probable scenario. In scenario II this projection was increased by 10% and in scenario III the projection was increased by 20%, both in relation to the probable scenario. The Company considers that this metric is the most appropriate for the sensitivity analysis of the scenarios presented.

As of December 31, 2021, the scenarios are shown below, considering the average exchange rate projection disclosed in the FOCUS report issued by BACEN (US$ 1/R$ 5,65). In scenario II this projection was increased by 10% and in scenario III the projection was increased by 20%.

		Consolidated			
Assets	**Risk**	**2021**	**Probable Scenario (I)**	**Impact of Scenario (II) (Δ 10%)**	**Impact of Scenario (III) (Δ 20%)**
Marketable securities - US$	Devaluation of US$	2,277,704	2,306,071	2,101,312	1,701,985
Liabilities					
Suppliers	Appreciation of US$	(5,829)	(5,902)	(6,573)	(7,985)
Derivative financial instruments	Appreciation of US$	(115,970)	(117,414)	(130,764)	(158,871)
Debentures	Appreciation of US$	(48,212)	(48,812)	(54,362)	(66,047)
Accounts payable for assets acquisitions	Appreciation of US$	(423,714)	(419,906)	(461,897)	(503,888)
Total net exposure		**1,683,979**	**1,714,037**	**1,447,716**	**965,194**

Price risk

Price risks for the Company arise from changes in oil prices. The operations with derivatives had the exclusive objective of protecting part of the expected results of short-term and long-term commercial transactions.

The following sensitivity table deals with a variation in the Brent price and the effect on the result of the period of marking to market and settlement of the NDF and Collar operations, again in 3 (three) scenarios: (i) Probable Scenario, considering the last closing prices on the market for future agreements outstanding; (ii) Scenario II, considering valuation of 10% over the Scenario I prices; and (iii) Scenario III, considering valuation of 20% over the Scenario I prices. The Company's Management considers that this metric is the most appropriate for the sensitivity analysis of the scenarios presented.

	Risk	**2022**	**Probable Scenario (I)**	**Possible Scenario (II) (Δ 10%)**	**Remote Scenario (III) (Δ 20%)**
Derivative financial instruments	Valuation of Brent	(9,187)	1,120	(106,229)	(213,578)
		(9,187)	**1,120**	**(106,229)**	**(213,578)**

Liabilities	**Risk**	**2021**	**Probable Scenario (I)**	**Possible Scenario (II) (Δ 10%)**	**Remote Scenario (III) (Δ20%)**
Derivative financial instruments	Devaluation of Brent	(115,970)	(126,182)	(231,184)	(337,499)
Total net exposure		**(115,970)**	**(126,182)**	**(231,184)**	**(337,499)**

In addition to the exposures set out above, the total revenues of 3R Macau, 3R Pescada, 3R RV and 3R Areia Branca involve 98% exposure to fluctuations in the Brent price.

38. Commitments Assumed

The following are the commitments assumed by the Company as of December 31, 2022.

a) Gross Overriding Royalties Portion: Contingent payment of 3% on the gross revenue earned by the Group arising from the development of specific exploratory blocks of the Group if this occurs during a period of up to 10 years.

b) On July 9, 2020, the Company's subsidiary 3R Pescada signed an agreement for acquisition of 65% of the equity interest held by Petrobras in the Pescada, Arabaiana and Dentão fields. The sale transaction value was US$ 1.5 million, to be paid in 2 (two) installments, US$ 300 thousand, upon signing of the agreement and US$ 1.2 million upon transaction closing, without considering the agreed-upon adjustments calculated as from the effective date of January 1, 2020.

c) On November 1, 2021, the Group concluded the process of purchase and incorporation of 100% of the shares of 3R Areia Branca whereby, as of such date, it acquired from Banco BTG Pactual S.A. ("BGT Pactual") and other minority shareholders all of the 3R Areia Branca shares. The total amount of such transaction may reach as high as US$ 72.3 million, the payment commitment assumed not recorded in the financial statements refers to the further contingent portion of up to US$ 16 million, in the event of confirmation of a volume of certified 2P reserves in the Ponta do Mel and Redonda higher than 9 (nine) million barrels of oil, less the oil production calculated after 30 (thirty) months from conclusion of the cited acquisition. Thus, for calculation purposes, the Company will re-certify these Fields in June and December 2023. If the existence of a volume of 2P reserves greater than the base reserves is determined, the volume that exceeds this amount will give rise to an additional payment by the Company equivalent to US$ 2.80 for each additional barrel of certified oil, limited to US$ 16 million.

d) On January 31, 2022, the Group, through 3R Potiguar, signed a purchase and sale agreement for the 100% interest in the Potiguar Cluster with Petrobras. The total value of the transaction is US$ 1.38 billion, of which (i) US$ 110 million (R$ 591,948) is paid upon execution of the agreement for the acquisition of said asset; (ii) US$ 1.04 billion to be paid on the closing date of the transaction; and (iii) US$ 235 million in 4 annual installments of US$ 58.75 million, starting in March 2024, ending in March 2027. The amounts do not consider the adjustments due and the closing of the transaction is subject to the fulfillment of precedent conditions, such as approval by the ANP. Additionally, the transaction includes the transfer to 3R Potiguar of the cash generation related to the production and sale of oil and gas from the 22 fields in production mentioned above (upstream), as of the effective date of July 1, 2022.

e) On August 2, 2022, the Group, through 3R Lux, contracted financing with a consortium of financial institutions, led by Morgan Stanley Senior Funding Inc., as creditors, in the amount of a commitment of US$ 500 million, through the execution of a Credit and Guarantee Agreement between the debtor, the creditor financial institutions, the Company and certain subsidiaries of the Company, which will be secured by a guarantee granted by the Company and certain subsidiaries of the Company and in rem guarantees to be constituted on certain (i) receivables, (ii) shares and (iii) rights arising from concessions of certain Company subsidiaries. The primary use of funds raised is related to the conclusion of the acquisition of Cluster Potiguar and the financial receipt of said financing will be made when 3R Potiguar completes the closing of the acquisition of Cluster Potiguar.

f) On October 20, 2022, 3R Potiguar celebrated term of comitment for structure and issue of debentures a with guaranteed firm commitment in the amount of US$ 500 million, with Bank BTG Pactual S.A.("BTG Pactual"). The primary use of funds raised is related to the conclusion of the acquisition of Cluster Potiguar and the financial receipt of this debentures will be made when 3R Potiguar completes the closing of the acquisition of Cluster Potiguar.

39. Subsequent events

Sudene tax incentive for Clusters Fazenda Belém, Reconcavo and Peroá

As of January 1, 2023, the Company, through its subsidiaries 3R FZB, 3R Candeias and 3R Offshore (Peroá), is eligible for the tax incentive to reduce the additional income tax, the aforementioned frameworks allow for a 75% reduction in IRPJ by for a period of 10 years, increasing the combined IRPJ and CSLL rate from 34% to up to 15.25% on oil and natural gas production activities developed in these assets.

Reorganization of the statutory board of the Company

On January 03, 2023 the Board of Directors decided to reorganize the Company's Statutory Board. The structure now has three Executive Boards, including a Chief Executive Officer, an Exploration and Production Officer and a Financial and Investor Relations Officer. Mr. Matheus Dias (CEO), Mr. Maurício Diniz (Exploration and Production Executive Director) and Mr. Rodrigo Pizarro (Chief Financial and Investor Relations Officer). With the reorganization of the Executive Board, the Board of Directors decided to terminate the terms of sirs. Ricardo Savini, Jorge Lorenzon and Pedro Grijalba, until then Statutory Directors of the Company.

3R Petroleum Óleo e Gás S.A.

Financial Statements as of and for the Year Ended December 31, 2021 and 2020, along with the Independent Auditor's Report

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Independent auditors' report on the parent company and consolidated financial statements

To the Shareholders, Board of Directors and Management of

3R Petroleum Óleo e Gás S.A.

Rio de Janeiro – RJ

Opinion

We have audited the parent company and consolidated financial statements of 3R Petroleum Óleo e Gás S.A. ("Company"), referred to as Parent and Consolidated, respectively, which comprise the statements of financial position as of December 31, 2021, and the statements of profit or loss, comprehensive income (loss), changes in equity and cash flows for the year then ended, and notes comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying parent company and consolidated financial statements present fairly, in all material respects, the parent company and consolidated financial position of 3R Petroleum Óleo e Gás S.A., as at December 31, 2021, and its parent company and consolidated financial performance and its cash flows for the year then ended in accordance with accounting practices adopted in Brazil and with the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board - IASB.

Basis for opinion

We conducted our audit in accordance with International and Brazilian Standards on Auditing. Our responsibilities under those standards are further described in the "Auditors' responsibilities for the audit of the parent company and consolidated financial statements" section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements and are set forth in the Professional Code of Ethics for Accountants and in the professional standards issued by the Federal Accounting Council, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the parent company and consolidated financial statements of the current period. These matters were addressed in the context of our audit of the parent company and consolidated financial statements as a whole, and in forming our opinion thereon, and we do not express a separate opinion on these matters.

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Evaluation of impairment	
Refer to notes 7.h, 15 and 16 of the parent company and consolidated financial statements.	
Key audit matter	**How the matter was addressed in our audit**
For the impairment assessment of non-financial assets, the Company estimates the recoverable amounts based on a projected cash flow for the cash generated units ("CGU") of exploration and production of oil and gas and compares them to their carrying amounts. The cash flow projections used to determine the recoverable amounts are dependent on factors related to the volumes of future production and timing of recovery of the oil and gas reserves, commodities price, production costs ("OPEX"), capitalized expenditures ("CAPEX") and economic assumptions such as the discount rate and the exchange rate. Due to the level of complexity and subjectivity on the determination of the assumptions and projections used in the future cash flows for each CGU, we considered this as a key audit matter.	Our audit procedures included, among others: - Tests of design and implementation of certain internal controls related to the process of determining the recoverable amounts of exploration and production´s CGU assets, including controls related to the review and approval of the key assumptions used to estimate the recoverable amounts; - Assessment of the procedures to identify the need to record or reverse impairment; - Assessment, with the support of our corporate finance specialists, of the key assumptions used in the impairment testing such as the discount rates, future oil and natural gas prices and the exchange rates by comparing them against external market data; - Assessment of the recovery of oil and gas reserves estimates used in the discounted cash flow, and the timing of reserves´ recovery, by comparing it with volumes certified by external specialist hired by the Company and with historical data on production; - Assessment of the competency, capacity, objectivity and independence of the external specialist hired by the Company to certify the volumes of oil and gas reserves; - Assessment, for a selection of CGUs, of CAPEX and OPEX used in the cash flow projection by comparing them to the Company´s long-term budgets, and, for OPEX, to costs already incurred, when applicable; During the course of our audit procedures, we identified unrecorded adjustments that affect the measurement of the recoverable amounts of assets, which were not corrected by management, since they were considered to be immaterial. According to the evidence obtained from performing the procedures described above, we considered that the recoverable amounts for the CGUs are acceptable in the context of the parent company and consolidated financial statements taken as a whole, for the year ended December 31, 2021.

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Provision for abandonment of areas (decommissioning costs)	
Refer to notes 7.I and 23 of the parent company and consolidated financial statements.	
Key audit matter	**How the matter was addressed in our audit**
As a consequence of its operations, the Company recognizes provisions related to its obligation to remove equipment and restore areas where it operates upon abandonment. The Company's estimate of the provision for decommissioning costs includes assumptions in relation to the extent of the obligations assumed for environmental restoration and the dismantlement and removal of oil and gas production facilities as well as the timing and estimated costs of the abandonment. We identified this estimate as a key audit matter due to the level of judgment involved on determining the respective assumptions, especially the timing, estimated costs of abandonment, and the discount rates used.	Our audit procedures included, among others: – Tests of design and implementation of certain internal controls related to the process of determining the estimate of the provision for decommissioning areas, including controls related to the development, review and approval of the key assumptions such as timing of abandonment of the area and estimated costs of decommissioning; - Assessment of the economic assumptions used in the determination of inflation and discount rates; - Evaluation of the timing of abandonment based on the existing volumes of reserves and Company´s production plans; - Assessment of the competency, capacity, objectivity and independence of the external specialist hired by the Company to certify the volumes of oil and gas reserves, and the external specialist hired by the Company to assess the estimated abandonment costs, when applicable; - Evaluation of the estimated abandonment costs, by well characteristics, with the main services expected to be required upon abandonment, and, for a selection of costs, by comparing them with external industry reports or price quotes received for implementing those main services; During the course of our audit procedures, we identified unrecorded adjustments that affect the measurement of the provision for abandonment, which were not corrected by management, since they were considered to be immaterial. According to the evidence obtained from performing the procedures described above, we considered that the amount of the provision for decommissioning costs to be acceptable in the context of the parent and consolidated financial statements taken as a whole, for the year ended December 31, 2021.

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Other matters - Statements of added value

The parent company and consolidated statements of added value for the year ended December 31, 2021, prepared under the responsibility of the Company's management, and presented as supplementary information for IFRS purposes, were subject to audit procedures performed in conjunction with the audit of the Company's financial statements. In order to form our opinion, we evaluated whether these statements reconcile to the financial statements and to the accounting records, as applicable, and whether their form and content are in accordance with the criteria set out in Technical Pronouncement CPC 09 - Statement of Added Value. In our opinion, these statements of added value have been adequately prepared, in all material respects, according to the criteria set on this Technical Pronouncement and are consistent with the parent company and consolidated financial statements taken as a whole.

Responsibilities of Management and Those Charged with Governance for the Parent Company and Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these parent company and consolidated financial statements in accordance with accounting policies adopted in Brazil and with International Financial Reporting Standards (IFRS), and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the parent company and consolidated financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company and its subsidiaries, or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's and its subsidiaries' financial reporting process.

Auditors' Responsibilities for the Audit of the Parent Company and Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the parent company and consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but it is not a guarantee that an audit conducted in accordance with Brazilian and international standards on auditing will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these parent company and consolidated financial statements.

As part of an audit performed in accordance with Brazilian and international standards on auditing, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the parent company and consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting material misstatement resulting from fraud is greater than the one deriving from error, as fraud may involve the act of circumventing internal control, collusion, forgery, omission or deliberate false representations.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's and its subsidiaries' ability to continue as a going concern. If we conclude that a material uncertainty exists, then we are required to draw attention in our auditors' report to the related disclosures in the parent company and consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are substantiated by the audit evidence obtained up to the date of our report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and contents of the parent company and consolidated financial statements, including the disclosures, and whether the parent and consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the parent company and consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current year and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Rio de Janeiro, February 22, 2022

KPMG Auditores Independentes
CRC SP-014428/O-6 F-RJ

Bruno Bressan Marcondes
Accountant CRC RJ-112835/O-7

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3R Petroleum Óleo e Gás S.A.

Statement of financial position
As of December 31, 2021 and 2020
In thousands of Brazilian Reais

	Note	Parent company		Consolidated	
		2021	2020	2021	2020
Assets					
Current Assets					
Cash and cash equivalents	9	1,529	256,742	118,725	287,942
Marketable securities	9.1	2,238,099	313,571	2,389,374	417,520
Trade accounts receivable	10	-	-	114,559	44,671
Accounts receivable from related parties	21	2	645	-	-
Inventories		-	-	16,622	4,751
Prepaid expenses		3,893	1,085	11,347	2,479
Income tax, social contribution and other recoverable taxes	11	16,072	2,956	54,803	11,550
Other assets		1,838	-	8,028	2,904
Total Current Assets		**2,261,433**	**574,999**	**2,713,458**	**771,817**
Noncurrent Assets					
Restricted cash	9.2	-	-	8,291	3,692
Income tax, social contribution and other recoverable taxes	11	6	142	2,250	4,326
Deferred income tax and social contribution	13	-	-	96,718	16,489
Court deposits		128	124	2,954	2,558
Other assets		192	192	2,310	192
		326	**458**	**112,523**	**27,257**
Investments	14	1,916,039	507,571	-	-
Advances for assignment of assets	12	-	-	158,885	121,266
Property, plant and equipment	15	4,476	835	948,013	351,827
Intangible assets	16	2,379	783	1,495,112	835,658
Right-of-use	25	6,550	-	25,490	1,239
Total Noncurrent Assets		**1,929,770**	**509,647**	**2,740,023**	**1,337,247**
Total Assets		**4,191,203**	**1,084,646**	**5,453,481**	**2,109,064**

The accompanying notes are an integral part of the financial statements.

3R Petroleum Óleo e Gás S.A.

Statement of financial position
As of December 31, 2021 and 2020
In thousands of Brazilian Reais

	Notes	Parent company		Consolidated	
		2021	2020	2021	2020
Liabilities and Equity					
Current Liabilities					
Suppliers	19	3,263	1,581	53,609	22,445
Debentures	18	-	-	673	9,566
Derivative financial instruments	34	-	-	115,970	34,349
Labor obligations		108	74	16,428	3,251
Amounts payable to the operator	17	1,585	1,676	1,429	896
Income tax, social contribution and other taxes payable	20	550	1,128	52,462	25,146
Provision for royalty payments		-	-	9,232	3,082
Leases	25	1,135	-	6,690	282
Accounts payable to related parties	22	32,534	517	-	-
Accounts payable for assets acquisitions	21	-	-	294,391	-
Other liabilities		-	81	15,979	15,494
Total Current Liabilities		**39,175**	**5,057**	**566,863**	**114,511**
Noncurrent Liabilities					
Debentures	18	-	-	47,539	623,219
Provision for abandonment	23	-	-	413,964	282,841
Deferred income tax and social contribution	13	-	-	89,447	-
Provision for contingencies	24	2,855	706	3,548	960
Leases	25	5,415	-	19,035	1,005
Accounts payable for assets acquisitions	21	34,874	-	129,323	-
Other liabilities		994	1,783	8,317	9,428
Total Noncurrent Liabilities		**44,138**	**2,489**	**711,173**	**917,453**
Equity	26				
Capital		4,146,616	1,228,618	4,146,616	1,228,618
Capital reserve		114,976	-	114,976	-
Accumulated translation adjustment		115,852	108,980	115,852	108,980
Accumulated loss		(269,554)	(260,498)	(269,554)	(260,498)
Equity attributable to controlling shareholders		**4,107,890**	**1,077,100**	**4,107,890**	**1,077,100**
Portion attributable to non-controlling shareholders		-	-	67,555	-
Total Equity		**4,107,890**	**1,077,100**	**4,175,445**	**1,077,100**
Total Liabilities and Equity		**4,191,203**	**1,084,646**	**5,453,481**	**2,109,064**

The accompanying notes are an integral part of the financial statements.

3R Petroleum Óleo e Gás S.A.

Statement of profit or loss
For the years ended December 31, 2021 and 2020
In thousands of Brazilian Reais, except per-share data

	Notes	Parent company		Consolidated	
		2021	2020	2021	2020
Net Revenue	28	-	-	727,799	204,254
Cost of products sold	29	-	-	(319,530)	(106,235)
Gross Profit		**-**	**-**	**408,269**	**98,019**
General and administrative expense (G&A)	30	(27,121)	(5,606)	(159,582)	(59,538)
Other operating (expenses) / revenues	31	(8,046)	(1,666)	5,939	(44,078)
Impairment (loss)/reversal	31.1	-	-	160,419	(166,755)
		(35,167)	**(7,272)**	**6,776**	**(270,371)**
Share of profit (loss) of subsidiary	14	(18,914)	(212,053)	-	-
Income (loss) before financial income (Expenses)		**54,081**	**(219,325)**	**415,045**	**(172,352)**
Financial income	32	192,949	237	197,072	75,067
Financial expenses	32	(138,935)	(19,404)	(656,699)	(204,345)
		54,014	**(19,167)**	**(459,627)**	**(129,278)**
Loss before income tax and social contribution		**(67)**	**(238,492)**	**(44,582)**	**(301,630)**
Current income tax and social contribution	13	(838)	-	(3,850)	(6,229)
Deferred income tax and social contribution	13	-	14,840	64,423	31,329
Net Income (Loss) for the Year		**(905)**	**(223,652)**	**15,991**	**(276,530)**
Net income (loss) attributed to:					
Controlling shareholders		(905)	(223,652)	(905)	(259,233)
Non-controlling shareholders		-	-	16,896	(17,297)
Net Income (Loss) for the Year		**(905)**	**(223,652)**	**15,991**	**(276,530)**
Basic and Diluted Net Loss Per Share - R$	33	**(0.01)**	**(13.77)**	**(0.01)**	**(15.96)**

The accompanying notes are an integral part of the financial statements.

3R Petroleum Óleo e Gás S.A.

Statement of comprehensive income (loss)
For the years ended December 31, 2021 and 2020
In thousands of Brazilian Reais, except per-share data

	Parent company		Consolidated	
	2021	2020	2021	2020
Net Income (Loss) for the Year	(905)	(223,652)	15,991	(276,530)
Items that can subsequently be reclassified to results:				
Share-based payment transactions (note 26)	3,343	-	3,343	-
Accumulated translation adjustment	6,872	100,501	6,872	100,501
Total Comprehensive Income (Loss) for the Year	**9,310**	**(123,151)**	**26,206**	**(176,029)**

The accompanying notes are an integral part of the financial statements.

3R Petroleum Óleo e Gás S.A.

Statement of changes in equity
For the years ended December 31, 2021 and 2020
In thousands of Brazilian Reais

	Capital	Capital reserve	Treasury shares	Accumulated losses	Accumulated translation adjustment	Total	Non-controlling interest	Total equity
Balances as of January 1, 2020	**327,267**	**-**	**(118)**	**(98,835)**	**8,479**	**236,793**	**-**	**236,793**
Capital decrease	(687)	-	-	-	-	(687)	-	(687)
Capital increase through the Merger of 3R Petroleum	263,308	-	-	(2,252)	-	261,056	-	261,056
Capital increase through Roll up of the DBO shareholder	68,730	-	-	-	-	68,730	-	68,730
Capital contribution through Public Offering of Shares ("IPO")	570,000	120,000	-	-	-	690,000	-	690,000
Transactions costs associated with Public Offering of Shares	-	(55,759)	-	-	-	(55,759)	-	(55,759)
Treasury shares	-	-	118	-	-	118	-	118
Loss for the year	-	-	-	(259,233)	-	(259,233)	(17,297)	(276,530)
Absorption of capital reserve	-	(64,241)	-	64,241	-	-	-	-
Adjustments related to the consolidated presentation (note 3)	-	-	-	35,581	-	35,581	17,297	52,878
Accumulated translation adjustment	-	-	-	-	100,501	100,501	-	100,501
Balances as of December 31, 2020	**1,228,618**	**-**	**-**	**(260,498)**	**108,980**	**1,077,100**	**-**	**1,077,100**
Net income (loss) for the year	-	-	-	(905)	-	(905)	16,896	15,991
Capital increase – Supplementary public offering	559,502	263,295	-	-	-	822,797	-	822,797
Capital increase – Supplementary public offering II	2,168,100	-	-	-	-	2,168,100	-	2,168,100
Transactions costs associated with Public Offering of Shares	-	(39,118)	-	-	-	(39,118)	-	(39,118)
Transactions costs associated with Public Offering of Shares II	-	(79,905)	-	-	-	(79,905)	-	(79,905)
Share-based payment transactions (note 26)	-	3,343	-	-	-	3,343	-	3,343
Capital increase through the acquisition of Duna Energia S.A. (note 26)	190,396	(32,639)	-	-	-	190,396	-	190,396
Capital transactions (note 1)	-	-	-	(8,151)	-	(40,790)	50,659	9,869
Accumulated translation adjustment	-	-	-	-	6,872	6,872	-	6,872
Balances as of December 31, 2021	**4,146,616**	**114,976**	**-**	**(269,554)**	**115,852**	**4,107,890**	**67,555**	**4,175,445**

The accompanying notes are an integral part of the financial statements.

Statement of cash flows
For the years ended December 31, 2021 and 2020
In thousands of Brazilian Reais

	Parent company		Consolidated	
	2021	2020	2021	2020
Cash flows from operating activities				
Net Income (Loss) for the Year	**(905)**	**(223,652)**	**15,991**	**(276,530)**
Adjusted by:				
Share of profit (loss) of subsidiary	18,914	212,053	-	-
Yields from marketable securities	(48,595)	(223)	(58,656)	(8,103)
Unrealized updating of court in deposits	(4)	(3)	(4)	(3)
Interest on leases	-	47	305	91
Unrealized interest on loans, net and others	-	-	128,056	114,926
Present value adjustment	(598)	-	(275)	-
Unrealized losses on derivative financial instruments	-	-	213,270	36,705
Unrealized Exchange rate variation	(11,929)	2,029	(4,120)	51,948
Provisions for contingencies / (reversal)	2,150	(711)	2,857	(457)
Impairment loss / (reversal)	-	-	(160,420)	166,755
Write-off of property, plant and equipment (fixed assets)	-	-	2,363	2,866
Share-based payment transaction	3,343	-	3,343	-
Measurement of present value of provision for asset retirement obligation	-	-	8,596	(14,951)
Depreciation of property, plant and equipment (fixed assets)	76	95	29,720	8,100
Amortization of intangible assets	69	-	87,003	27,067
Amortization right-of-use asset	-	47	645	415
Transaction costs appropriated	-	-	52,027	6,872
Deferred income tax and social contribution	-	(14,840)	(64,423)	(31,329)
Write-off of investment	(5,513)	-	-	-
Other adjustments	-	(569)	(2)	1,670
	(42,992)	**(25,727)**	**256,276**	**86,042**
Changes in Assets and Liabilities				
Trade accounts receivable	-	-	(69,888)	(41,135)
Income tax, social contributions and other taxes	(10,200)	(746)	22,738	14,645
Other assets	(1,838)	5,669	(19,117)	11,819
Suppliers	1,682	1,432	31,164	(2,705)
Amounts payable to the operator	(91)	(21)	533	(1,782)
Court deposits	-	-	(392)	(28)
Prepaid expenses	(2,808)	(1,000)	(8,868)	(5,010)
Payroll obligations	34	(254)	13,177	2,876
Provision for royalties	-	-	6,150	2,839
Assets and liabilities held for sale	-	-	-	(16,346)
Derivative financial instruments	-	-	(131,649)	3,774
Other liabilities	(1,366)	719	(686)	2,896
Cash Provided by (Used in) Operating Activities	**(57,579)**	**(19,928)**	**99,438**	**57,885**
Taxes paid on profit	(3,358)	-	(36,599)	(2,338)
Net Cash Provided by (Used in) Operating Activities	**(60,937)**	**(19,928)**	**62,839**	**55,547**
Cash flows from investing activities				
Marketable securities	(1,875,933)	(313,571)	(1,913,198)	(417,520)
Increase in paid-in capital at subsidiary	(1,160,020)	(57,034)	-	-
Advances for assignment of assets	-	-	(44,853)	(121,266)
Acquisition of additional equity interest in subsidiary	(37,152)	-	-	-
Acquisition of property, plant and equipment (fixed assets)	(3,719)	(65)	(147,661)	(18,722)
Amount received on disposal of asset held for sale		-	-	28,192
Acquisition of intangible assets	(1,665)	-	(219,078)	(861,880)
Restrcited cash	-	-	(4,599)	15,500
Payment of principal on loans received from a related company	-	(41.526)	-	-
Transactions with related parties	410	-	-	-
Net Cash used in Investing Activities	**(3,078,079)**	**(412,196)**	**(2,329,389)**	**(1,375,696)**
Cash flows from financing activities				
Transaction costs	(119,023)	(55,759)	(119,023)	(114,658)
Issue of debentures	-	-	47,124	707,209
Payment of principal – Debentures	-	-	(733,694)	-
Interest paid on debentures	-	-	(115,852)	(61,107)
Payment of lease liabilities	-	(56)	(761)	(412)
Amount received from supplementary public offering	2,990,897	622,878	3,014,897	901,351
Increase in capital reserve	-	120,000	-	120,000
Net Cash Provided by Financing Activities	**2,871,874**	**687,063**	**2,092,691**	**1,552,383**
Net Increase (Decrease) In Cash and Cash Equivalents	**(267,142)**	**254,939**	**(173,859)**	**232,234**
Cash and cash equivalents at beginning of year	256,742	3,832	287,942	63,573
Effect of exchange variation on cash and cash equivalents	11,929	(2,029)	4,642	(7,864)
Cash and cash equivalents at end of year	1,529	256,742	118,725	287,943
Net Increase (Decrease) in Cash and Cash Equivalents	**(267,142)**	**254,939**	**(173,859)**	**232,234**

The accompanying notes are an integral part of the financial statements.

3R Petroleum Óleo e Gás S.A.

Statement of added value
For the years ended December 31, 2021 and 2020
In thousands of Brazilian Reais

	Parent company		Consolidated	
	2021	2020	2021	2020
Net Revenues	**110**	**16**	**738,098**	**205,034**
Sales of oil gas sales	-	-	727,799	204,253
Other revenues	110	16	10,299	781
Inputs acquired from third parties	**(32,189)**	**(3,626)**	**(79,234)**	**(292,371)**
Cost of products, merchandise and services sold	-	-	(102,282)	(33,831)
Materials, power, outsourced services and other supplies	(32,189)	(2,438)	(137,372)	(90,597)
Provision for expected credit loss	-	(1,188)	-	(1,188)
Impairment (loss) / reversal	-	-	160,420	(166,755)
Gross Value Added	**(32,079)**	**(3,610)**	**658,864**	**(87,337)**
Depreciation and amortization	(145)	(141)	(117,368)	(39,633)
Net Value Added Produced by the Company	**(32,224)**	**(3,751)**	**541,496**	**(126,970)**
Value Added Received in Transfer				
Equity pickup	(18,914)	(212,053)	-	-
Financial income	192,949	237	197,072	75,067
Total Value Added for Distribution	**141,811**	**(215,567)**	**738,568**	**(51,903)**
Distribution of Value Added	**141,811**	**(215,567)**	**738,568**	**(51,903)**
Personnel	**6,522**	**2,202**	**94,173**	**30,209**
Direct remuneration	6,194	1,779	53,457	27,190
Benefits	157	95	7,416	2,019
Severance pay accrual	171	328	33,300	1,000
Taxes, Fees and Contributions	**2,420**	**(13,563)**	**(38,103)**	**(17,278)**
Federal	1,817	(13,578)	(39,163)	(18,457)
State	561	-	721	1,062
Municipal	42	15	339	117
Remuneration of Third-Party Capital	**133,774**	**19,446**	**666,507**	**211,696**
Interest	273	(1,963)	280,511	123,334
Rentals	352	40	9,808	4,494
Other remuneration	133,149	21,369	376,188	83,868
Remuneration of Company Capital Invested	**(905)**	**(223,652)**	**15,991**	**(276,530)**
Net income (loss) for the year	(905)	(223,652)	15,991	(276,530)

The accompanying notes are an integral part of the financial statements.

1. Operations

3R Petroleum Óleo e Gás S.A. ("Company" or "3R OG") is a privately held joint stock corporation under Brazilian law, founded on June 17, 2020. The Company's registered offices are located at Rua Visconde de Ouro Preto, number 5, 6th floor, in the Botafogo district of the City of Rio de Janeiro, State of Rio de Janeiro (RJ). 3R OG operates in the oil and gas industry and focuses on redevelopment of mature fields located onshore, in shallow waters and offshore. It is qualified as a Grade A operator by the Brazilian National Petroleum, Natural Gas & Biofuels Agency - ANP.

The Company's stated corporate objects are to: (a) explore for, produce and sell oil and its by-products, natural gas and other hydrocarbon fluids, including, without limitation, the Brazilian sedimentary basins that the ANP has granted licenses for, as well as sedimentary basins located overseas; (b) carry out the importation and exportation of oil and any by-products thus produced; and (c) hold equity interests in other companies as partner, stockholder or shareholder, both in Brazil and abroad, that operate in activities related to the Company's corporate objects.

Corporate structure

On November 9, 2020, 3R Petroleum e Participações S.A. ("3R Petroleum") was merged upstream by 3R OG, which succeeded the former in all its rights and obligations. On this date, 3R Petroleum e Participações S.A. ("3R Petroleum") was merged upstream by 3R OG, which succeeded the former in all its rights and obligations. As such operation took place under common control, Company Management has elected to present the statement of income (loss) with the consolidated balances of 3R OG and 3R Petroleum for the entire period ended December 31, 2020, disregarding the accounting effect of the reverse upstream merger recorded as of November 9, 2020. On November 10, 2020, the Brazilian Securities Commission (CVM) granted registration of the primary distribution of common shares ("RRRP3"), through public subscription, the issue of which was approved by the Extraordinary General Meeting (EGM) of August 31, 2020, with total registered amount of R$ 690,000 and issue of 32,857,143 common shares at the price of R$ 21.00 (twenty-one Brazilian Reais) each.

On March 30, 2021, the Company's Board of Directors approved an increase in the capital of 3R OG, within the limit of its authorized capital, in the amount of R$ 822,797, through issue of 22,855,500 new common shares at the price of R$ 36.00 (thirty-six Reais) per share, with R$ 559,502 intended for the Company's capital account and R$ 263,295 intended for its capital reserve account. This capital increase was carried out: (i) with exclusion of the first refusal rights of 3R OG's shareholders upon that opportunity to subscribe to the shares issued, in conformity with the provision contained in Article 172, item I, of the Brazilian Corporation Law, as well as in Article 6, paragraph 2 of the Company's Bylaws; and (ii) after granting to the shareholders upon that opportunity the right to subscribe to as much as the entirety of the shares effectively offered by means of the Offer, and with due heed being paid to the limit of the proportion of their respective shares in the paid-in capital.

On November 1, 2021, the Company concluded acquisition of 100% of 3R Areia Branca S.A., the new legal name of Duna Energia S.A. ("Duna"), after conclusion of all conditions, both suspensive and precedent, for acquisition of all the shares issued by Duna, Banco BTG Pactual S.A. and other minority shareholders. Thus, as of that date, 3R Areia Branca S.A. became a wholly-owned subsidiary of the Company.

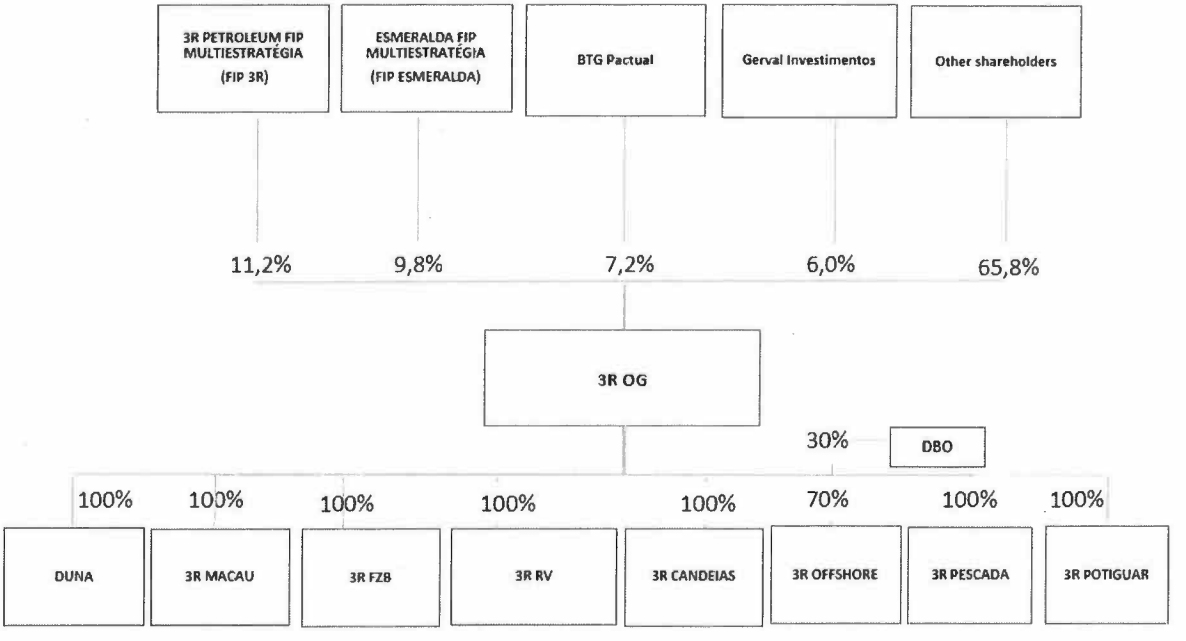
The amount of this transaction involved payment as of that date of US$ 13 million (R$ 73.359), Moreover, there was incorporation of shares representing 50.22% of Duna's voting and total paid-in capital, for which reason Duna became a wholly-owned subsidiary of 3R OG, with 4,533,236 common registered shares without par value issued by the Company. The total amount involved was US$ 36.3 million (R$ 190,396), plus the following contingent portions, by way of supplementation of the secondary acquisition price, as follows: (i) contingent portion of up to US$ 7 million, in case the average daily price of the Brent benchmark between August 2, 2021, and December 31, 2023, is higher than US$ 55 per barrel (for calculation purposes, payment of US$ 4.66 thousand will be due for every cent (US$ 0.01) per barrel of the average Brent oil price that exceeds this minimum in the pre-established period, limited to US$ 7 million); (ii) contingent portion of up to US$ 16 million, in the event of confirmation of a volume of certified 2P reserves in the Ponta do Mel and Redonda higher than 9 million barrels of oil, less the oil production calculated after 30 (thirty) months from conclusion of the cited acquisition.

On November 4, 2021, the Company's Board of Directors approved the issuance of 65,700,000 new common shares at the per-share price of R$ 33.00 (thirty-three Brazilian Reais), increasing the paid-in capital of 3R OG by R$ 2,168,100. Within the scope of the additional supplementary public offering of shares ("OPCA II"), at the Company's discretion and by mutual agreement with the offer's coordinators and the shareholders selling their shares, 7,300,000 shares of the latter were sold in the amount of R$ 240,900.

The total amount of this offer was R$ 2,409,000.

As of December 31, 2021, 3R OG holds 100% of the direct and indirect paid-in capital of the following subsidiary companies: 3R Macau S.A. ("3R Macau"), the new name of SPE 3R Petroleum S.A.; 3R Fazenda Belém S.A. ("3R FZB"), the new name of SPE Fazenda Belém S.A.; 3R Rio Ventura S.A. ("3R RV"), the new name of SPE Rio Ventura S.A.; 3R Candeias S.A. ("3R Candeias"), the new name of Candeias Óleo e Gás S.A.; 3R Pescada Ltda. ("3R Pescada"), the new name of OP Pescada Óleo e Gás Ltda.; 3R Areia Branca S.A., the new name of Duna Energia S.A. ("Duna"); and 3R Potiguar S.A. ("3R Potiguar"). Furthermore, 3R OG holds 70% of the paid-in capital of 3R Petroleum Offshore S.A. ("3R Offshore"), the new name of OP Energia Ltda.

The current corporate structure is shown in the following organization chart:



3R OG

The Company has 100% interest in the block known as BAR-M-387, located in the Barreirinhas basin in the Northeast State of Maranhão, acquired in the 11th round of ANP competitive public bidding processes, having paid R$ 778 by way of subscription bonus. As of December 31, 2021, the Company had completed 98% of the Minimum Exploratory Program ("PEM") for such block.

3R Macau (Macau Cluster)

The Macau Cluster encompasses the fields of Aratum, Macau, Serra, Salina Cristal, Lagoa Aroeira, Porto Carão and Sanhaçu. 3R Macau has operated these fields with 100% operating interest since May 28, 2020 and, on April 8, 2021, the ANP approved the petition for annexation of the Serra and Aratum fields to the area of the Macau field, which means that this cluster now encompasses 5 concessions: Macau, Salina Cristal, Lagoa Aroeira, Porto Carão and Sanhaçu. As of December 31, 2021, 3R Macau acquired the remaining 50% of the latter concession from Petrogal Brasil S.A. ("Petrogal"). The average production of the Macau Cluster from January through December of 2021 was roughly 5,737 barrels of oil equivalent per day ("boe/d"). The Company plans to produce through the year 2052, in line with its expectations for economically viable production and corroborated by the renowned consulting firm DeGolyer & MacNaughton in its report on certification of reserves.

3R FZB (Fazenda Belém Cluster)

This cluster consists of the onshore fields of Fazenda Belém and Icapuí, located in the Potiguar Basin in the Northeast Brazilian State of Ceará (CE). Average daily production of the Fazenda Belém Cluster from January through December of 2021 was approximately 684 boe/d. Expectations for closing this acquisition is the first half of 2022.

3R RV (Rio Ventura Cluster)
Rio Ventura Cluster is comprised of 8 onshore fields: Água Grande, Bonsucesso, Fazenda Alto das Pedras, Pedrinhas, Pojuca, Rio Pojuca, Tapiranga and Tapiranga Norte, in the Recôncavo Basin in the Northeast Brazilian State of Bahia (BA). Average daily production from this cluster from January through December of 2021 was approximately 1,032 boe/d.

On July 14, 2021, immediately after the ANP granted its approval, the acquisition of this cluster occurred and, accordingly, 3R RV became the operator of these fields as from July 15, 2021.

3R Candeias (Recôncavo Cluster)
The Company's subsidiary 3R Candeias is the operator with 100% equity interest in block PN-T-114, located in the Parnaíba basin in the State of Maranhão (MA), acquired in the 11th round of bidding conducted by the ANP, with the Company having paid R$ 6,000 for the subscription bonus and fulfilling 100% of the PEM for such block. On March 24, 2020, 3R Candeias began the process of returning this concession agreement to the ANP and is currently still awaiting the latter agency's approval.

Later in the year 2020, on December 17, 3R Candeias signed an agreement for purchase of the total equity interest held by Petrobras in 14 onshore production fields, denominated the Recôncavo Cluster, located in the State of Bahia (BA). The Recôncavo Cluster encompasses the onshore production fields of Aratu, Ilha de Bimbarra, Mapele, Massuí, Candeias, Cexis, Socorro, Dom João, Dom João Mar, Pariri, Socorro Extensão, São Domingos, Cambacica and Guanambi. At present, Petrobras is the operator with 100% stake in these concessions, except for Cambacica and Guanambi, in which it has majority stakes of 75% (25% belongs to Sonangol Hidrocarbonetos Brasil Ltda.) and 80% (20% owned by Sonangol Guanambi Exploracao e Producao de Petroleo Ltda.), respectively. The average daily production of the Recôncavo Cluster from January through December of 2021 was roughly 4,788 boe/d. As in the case set out above, expectations are that the closing of this acquisition will occur in the first half of 2022.

3R Pescada (Pescada and Arabaiana)
This subsidiary holds 35% equity interest in the fields known as Pescada, Arabaiana and Dentão. The Pescada and Arabaiana fields are located on the continental shelf of the State of Rio Grande do Norte (RN), in the Potiguar basin, around 31 kilometers from the coast of Areia Branca (RN), are already in the production phase and are operated by Petrobras. The average daily production from the Pescada and Arabaiana fields from January through December of 2021 was about 435 boe/d (35%). The Pescada and Arabaiana fields are producers of gas and condensed hydrocarbons. The Dentão field is inactive.

On July 9, 2020, through its subsidiary 3R Pescada, the Company signed an agreement for acquisition of the remaining 65% of Petrobras's equity interest in the Pescada, Arabaiana and Dentão fields. The transaction sale amount was US$ 1.5 million, to be paid in two installments, the first in the amount of US$ 300 thousand upon signature of the agreement and US$ 1.2 million upon closing of the transaction, without considering the agreed-upon adjustments calculated as from the effective date (January 1, 2020).

The transaction also calls for additional payment by way of sharing in the costs of the asset retirement obligations (ARO) of wells, pipelines and rigs, to be paid by the seller to the buyer, according to the parameters and schedule set out in the decommissioning agreement signed by the parties. Expectations are that the closing of this acquisition will occur in April of 2022.

On May 6, 2021, 3R Offshore sold the ownership units that it held in 3R Pescada to the Company. In the wake of this transaction, the Company now holds a 100% direct equity interest in 3R Pescada.

3R Offshore
3R Offshore holds a 20% equity interest in exploratory blocks BM-CAL-312 and BM- CAL-372, which are part of the BM-CAL-12 concession area, and 100% equity interest in the Pinaúna and Camarão fields, both in the developmental phase and belonging to the block known as BM-CAL-4.

On April 20, 2020, 3R Offshore began the process of returning the Pinaúna field to the ANP, a request that is still awaiting approval.

Development of the Camarão field is dependent upon the process of unitization with the Federal Government, represented by the ANP, in the field known locally as Camarão Norte. The latter field is in the southern region of the block and its reservoir extends to the Camarão field in the old BM-CAL-4 block, in the Camamu-Almada basin.

Besides such assets, as of December 31, 2021, subsidiary 3R Offshore holds 30% equity interest in the Northeastern exploratory blocks known locally as POT-M-475 (Potiguar basin in the State of Rio Grande do Norte) and CE-M-603 (in the neighboring basin of the State of Ceará), from the ANP's 11th bidding round, having fulfilled 100% of the PEM in such blocks. The remaining 70% is held by AziBras Exploração de Petróleo e Gás Ltda.

On January 29, 2021, 3R Offshore signed an agreement for acquisition of 50% of the equity interest held by Petrobras in the production fields of Peroá and Cangoá and BM-ES-21 (Malombe Discovery Appraisal Plan), jointly denominated the Peroá Cluster, located in the Espírito Santo (ES) Basin in Southeast Brazil. Expectations are that such acquisition will be concluded in February of 2022. At present, Petrobras is the operator of this asset, with 100% equity interest. The total amount of the transaction is US$ 55 million, with (i) US$ 5 million, equivalent to R$ 13,456, already having been paid on January 29, 2021; (ii) US$ 7.5 million due upon transaction closing; and (iii) US$ 42.5 million being contingent payments called for in the agreement, which are divided into: (a) US$ 20 million to be paid in case a declaration of commerciality occurs with respect to the Malombe field, (b) US$ 12.5 million to be paid in case the international Brent oil benchmark price holds at a 12-month average of US$ 48 at any time as from the closing date for the operation, and (c) US$ 10 million if the cited Brent price holds at an average of US$ 58 on the same terms as detailed above. On that same date in January of last year, the remaining 50% stake in these fields was acquired by DBO Energia S.A. ("DBO").

Furthermore, on May 6, 2021, DBO became a shareholder of 3R Offshore to build up a partnership for potential acquisitions of Brazilian offshore assets that encompass concessions already producing or in the phase of development of such production. The Company remains the majority owner of 3R Offshore, with a 70% equity interest, while DBO retains a 30% stake, meaning the latter is the minority shareholder.

Owing to this transaction, 3R Offshore now owns 100% of the rights acquired in the Peroá Cluster (encompassing the Cangoá, Peroá and Malombe fields in the ES Basin) and potentially of other assets that may be acquired. It should be stressed that the Company is qualified as a Grade "A" operator by the ANP and thus may operate both onshore and offshore blocks and concessions, including in ultra-deep waters.

Also on May 6, 2021, 3R Offshore sold the 27,539,199 ownership units that it held in 3R Pescada, fully subscribed and paid up in Brazilian currency, to 3R OG, its parent company, in the amount of R$ 37,153. After this transaction, 3R Offshore no longer has a stake in 3R Pescada and 3R OG now holds 100% of the equity interest in 3R Pescada.

On July 9, 2021, 3R Offshore signed an agreement for acquisition of the stake held by Petrobras in the Papa-Terra Cluster, which is currently in production and is in the Campos Basin in the State of Rio de Janeiro, including the entire infrastructure and related surface and underwater systems. At present, Petrobras is the operator of the asset with a 62.5% stake, and the rest is held by Chevron Brasil Petróleo Ltda. After conclusion of the transaction, 3R Offshore will become the operator of this field.

The total amount of the transaction is US$ 105.6 million, with (i) US$ 6 million having been paid upon signing of the agreement for acquisition of the cited asset; (ii) US$ 9.6 million, to be paid on the transaction closing date; and (iii) US$ 90 million in contingent payments. The amounts in question do not consider any adjustments and/or corrections during the period, which may occur after transaction closing.

The contingent payments are divided into 11 (eleven) installments, which are conditioned to the benchmark Brent oil price and the operational performance of the asset, as follows:

a) Five (5) installments, representing 30% (thirty per cent) of the contingent total, will be due if: (a.i) the Brent price reaches the mobile average of at least US$ 50 in the subsequent 12-month period, and (a.ii) oil production reaches certain cumulative volumes, specific for each installment calculated and effective for the period between January, 2022 and December, 2032;

b) An additional five (5) installments, this time representing 54% (fifty-four per cent) of the contingent total, will be due if: (b.i) after adhering to item (a.i) above and (b.ii), the operation achieves certain daily average volumes in the subsequent 12-month period that are specific for each installment calculated and effective for the period between January, 2022 and December, 2032; and

c) One (1) final installment, which represents 17% (seventeen per cent) of the contingent total, will be due if: (c.i) the Brent price reaches the mobile average of at least US$ 65 in the 6-month period beginning upon transaction closing and finishing in 24 months.

The transaction calls for transfer of the entire stake held by Petrobras in the assets, infrastructure and systems to 3R Offshore, including all the existing wells, floating units and underwater installations, among which the following stand out: (i) FPSO P-63, which has only been used for 7 (seven) years and features high capacity for processing and storing oil, as well as the flexible lines and underwater equipment that connect to the FPSO; and (ii) the P-61 rig, which is a TLWP (Tension Leg Wellhead Platform) type and has only been in use for 6 (six) years; both units are fully imported into Brazil in the context of the Repetro-SPED tax benefit modus operandi and are currently in operation. Moreover, the acquisition agreement signed guarantees ARO cost sharing between Petrobras and 3R Offshore.

The Papa-Terra field is in deep waters in the Campos Basin, about 100km from the coast of the State of Rio de Janeiro. It was discovered in 2003 and production started up in November of 2013. The field is operated through units P-61 and P-63, with capacity for processing 140 thousand barrels of oil per day, injection capacity of 340 thousand barrels of water per day, storage capacity of 1.4 million barrels and slots to connect as many as 21 producing wells and 11 injector wells. Expectations for closing this acquisition is June 2022.

As of December 31, 2021, 3R Offshore signed an agreement with Petrobras to return the first concession mentioned above (BM-CAL-12) to the ANP and petition such agency for returning the area and winding up the original agrement with exemption from payment and financial compensation for non-fulfillment of the PEM. If the petition is accepted by the ANP, 3R Offshore will only have to cover the financial compensation in proportion to its 20% stake in the amount of no more than R$ 7,324. .

Acquisition of Duna

On November 1, 2021, the Company concluded the process of purchase and incorporation of 100% of the shares of Duna whereby, as of such date, it acquired from Banco BTG Pactual S.A. ("BGT Pactual") and other minority shareholders all of the Duna shares. The total amount of such transaction may reach as high as US$ 72.3 million, broken down as follows: (i) US$ 13 million (R$ 73,359), an amount that was paid on that date via transfer and converted into Brazilian Reais as per the exchange rate published by the Brazilian Central Bank - BACEN ("PTAX") in effect on the business day prior to the acquisition closing date; (ii) US$ 36.3 million (R$ 190,396), which payment took place by issue of 4,533,236 Company shares; (iii) a contingent portion of up to US$ 7 million (R$ 39,686), in case the average daily price of the Brent benchmark between August 2, 2021, and December 31, 2023, is higher than US$ 55 per barrel [for calculation purposes, payment of US$ 4.66 thousand will be due for every cent (US$ 0.01) per barrel of the average Brent oil price that exceeds this minimum in the pre-established period, limited to US$ 7 million]; (iv) a further contingent portion of up to US$ 16 million, in the event of confirmation of a volume of certified 2P reserves in the Ponta do Mel and Redonda higher than 9 million barrels of oil, less the oil production calculated after 30 (thirty) months from conclusion of the cited acquisition.

The fair value of the payment calculated as of the acquisition is in the amount of R$ 267,080, which is comprised as follows: R$ 73,359, paid with cash and cash equivalents as of the acquisition date; R$ 157,757, corresponding to 4,533,236 common shares, quoted at R$ 34.80 (thirty-four Reais and eighty centavos), as per the market quotation on the Brazilian stock exchange; and R$ 35,964 relating to item (iii) above – US$ 7 million (R$ 39,686) -- discounted by means of the present value adjustment at the time of the acquisition in the amount of R$ 3,722, considering an annual discount rate of 7.54% p.a.

As regards the contingent portion of item (iv), involving the amount of as much as US$ 16 million, in case there should be confirmation of a volume of certified 2P reserves in the Ponta do Mel and Redonda fields that is higher than 9 million barrels of oil (the "Basic Reserves"), the volume that exceeds such amount will give rise to an additional payment by the Company equivalent to US$ 2.80 for each additional certified barrel of oil, limited to US$ 16 million. The certification of reserves of the aforementioned fields to which this contingent portion refers will only be measured by the Company between July and December 2023. On the date of completion of the acquisition, the Company does not have elements that allow measuring this obligation, therefore this amount was not considered in the calculated payment amount.

Duna holds and is the operator of the onshore production fields of Ponta do Mel, Redonda and Carcará, all located in the township of Areia Branca, in the Potiguar Basin, in the Northeast State of Rio Grande do Norte (RN); it also holds 100% of the Crejoá concession, in the Southeast State of Espírito Santo (ES). On November 1, 2021, the main financial information related to this transaction, which was determined according to the PPA report, is described in the table below:

	2021 Duna
Acquisition date	11/01/2021
Location	Rio Grande do Norte - Brasil
Equity interest acquired (%)	100%
Value of the payment calculated total	**267,080**
Payment on purchase date	73,359
Consideration with issuance of shares by the acquirer	157,757
Accounts Payable for Acquisition	**35,964**
	Balance at fair value
Assets	
Cash and cash equivalentes	13,013
Prepaid expenses	1,124
Trade accounts receivable	6,963
Other assets	3,420
Inventories	7,091
Income tax, social contribution and other recoverable taxes	116
Court deposits	353
Deferred income tax and social contribution	18,388
Property, plant and equipment	109,286
Intangible assets	286,904
	446,658
Liabilities	
Suppliers	3,024
Payroll obligations	1,285
Income tax, social contribution and other taxes payable	1,581
Other obligations	15,658
Loans	47,129
Provision for contingences	241
Deferred income tax and social contribution	92,029
Provision for abandonment	18,631
	179,578
Total identifiable net assets	**267,080**
Contribution to consolidated net revenue from November 1, 2021	11,598
Contribution to consolidated pre-tax loss since the acquisition date	(5,122)
Net revenue from the acquired company since the beginning of the year	64,827
Loss of the acquired company before taxes since the beginning of the year	(19,232)

Acquisition of 50% of the Sanhaçu field concession

On August 18, 2021, subsidiary 3R Macau signed an agreement for acquisition of 50% of the equity interest in the Sanhaçu field of the Macau Cluster, operation of which is already being handled by 3R Macau. The operation was characterized as the acquisition of assets. The total amount of the transaction is US$ 6.0 million, with (i) US$ 1.3 million (R$ 6,720 thousand) already paid in cash; (ii) US$ 1.9 million (R$ 10,936) to be paid on the transaction closing date; and (iii) two installments in the amount of US$ 1.4 million each, to be paid within 6 and 12 months counting from the transaction closing date, respectively. As of December 31, 2021, this acquisition was concluded with payment of the US$ 1.9 million (R$ 10,936), as peer note 16b; the amount of US$ 2.8 million (R$ 16,064), as peer note 21d, will be paid in the year 2022.

2. List of the Company's Subsidiaries

As of December 31, 2021 and 2020, 3R OG held the following equity interests directly and indirectly:

	12/31/2021	12/31/2020
3R Macau	100%	100%
3R FZB	100%	100%
3R RV	100%	100%
3R Candeias	100%	100%
3R Offshore (a)	70%	100%
3R Pescada (b)	100%	100%
Duna	100%	-
3R Potiguar	100%	-

(a) The remaining 30% of the equity interest belongs to DBO.

(b) As of December 31, 202, 3R Offshore held a 40% stake in 3R Pescada and thus controlled it indirectly. As of May 6, 2021, the Company took over 100% direct control of 3R Pescada, as detailed in Note 1.

3. Basis for Preparation of the Financial Statements

Declaration of conformity

The Company's individual and consolidated financial statements for the years ended December 31, 2021 and 2020, have been prepared and are being presented in accordance with the International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB"), and also in accordance with accounting practices adopted in Brazil. They are also being presented in a manner conducive with the standards issued by the Brazilian Securities Commission (CVM), applicable to preparation of financial statements.

Management authorized publication of the Company's individual and consolidated financial statements on February 22, 2022.

All appropriate information is being evidenced as it corresponds to the information used by Management in carrying out its corporate duties.

Basis for consolidation

The financial statements of 3R OG's subsidiaries are included in the consolidated financial statements as from the date control begins through the date such control no longer exists. The accounting policies of the subsidiaries are aligned with the accounting policies adopted by the Company. In the individual financial statements, the financial information on the Company's subsidiaries is recognized under the equity method. Intergroup balances and transactions, and any revenues or expenses from intergroup transactions, are eliminated upon preparation of the consolidated financial statements. Unrealized gains resulting from transactions with the subsidiary recorded under the equity accounting method are eliminated against the investment in proportion to the Company's share in the subsidiaries. Unrealized results are eliminated in the same manner as the unrealized gains are, but only up to the point at which there is no evidence of any impairment loss.

As detailed in Note 1 above, 3R Petroleum was merged upstream by 3R OG in November of 2020. As such operation took place under common control, Company Management has elected to present the statement of income (loss) with the consolidated balances of 3R OG and 3R Petroleum for the entire period ended December 31, 2020, disregarding the accounting effect of the reverse upstream merger recorded as of November 9, 2020. In other words, the amounts presented in the 2020 consolidated column present the amounts as if they had always been consolidated. The following table shows this impact:

	3R Petroleum from 02/18/2020 to 11/09/2020 (a)	3R OG from 01/01/2020 to 12/31/2020 (b)	3R OG presented as of 12/31/2020 (a+b)
Net Revenues	120,469	83,785	204,254
Cost of products sold	(59,332)	(46,903)	(106,235)
Gross Profit	**61,137**	**36,882**	**98,019**
General and administrative (G&A) overhead expenses	(35,557)	(23,981)	(59,538)
Other operating revenues / expenses	(1,209)	(209,624)	(210,833)
	(36,766)	**(233,605)**	**(270,371)**
Operating Results	**24,371**	**(196,723)**	**(172,352)**
Financial Results	**(79,195)**	**(50,083)**	**(129,278)**
Pretax Results	**(54,824)**	**(246,806)**	**(301,630)**
Current income tax and social contribution	-	(6,229)	(6,229)
Deferred income tax and social contribution	1,946	29,383	31,329
Net Income (Loss) for the Year	**(52,878)**	**(223,652)**	**(276,530)**
Loss attributed to:			
Controlling shareholders	(35,581)	(223,652)	(259,233)
Non-controlling shareholders	(17,297)	-	(17,297)
Net Income (Loss) for the Year	**(52,878)**	**(223,652)**	**(276,530)**

4. Functional and Reporting Currency

The accompanying financial statements are presented in thousands of Brazilian Reais, which is the functional currency of the Company and all of its subsidiaries, with the exception of 3R Pescada, whose functional currency is the US Dollar. All the balances have been rounded off to the nearest thousandth, except as indicated otherwise. Subsidiary 3R Pescada continues to use the United States Dollar (US$) as its functional currency.

5. Use of Estimates and Judgments

In preparation of these financial statements, Management has used its judgment and made estimates that affect the application of the Company's accounting policies and the reported amounts of assets and liabilities, as well as the disclosures of contingent liabilities, revenues, and expenses. Actual results may be different from such estimates.

Management's estimates and premises are reviewed in an ongoing manner and any alterations therein are recognized prospectively. Nevertheless, uncertainty relating to such premises and estimates could lead to results that require significant adjustment to the carrying amount of the affected asset or liability in future periods.

Judgments

The information on judgments made in the application of the accounting policies that significantly affect the amounts reported in the financial statements is included in the following Notes:

- Note 15 – Impairment (existence of indications for impairment loss or reversal);
- Note 23 - Provision for abandonment (extent of the obligation assumed for the environmental repair needed upon future retirement);
- Note 21 – Accounts payable for acquisitions (contingent payments, linked to the oil reference price (brent) and reserve certifications);
- Note 25 - Deferred income tax and social contribution (existence of likelihood of future taxable income).
- Note 26 - Share-based payment transactions (Valuation of the value of the obligation assumed in the share-based payment plan)

Uncertainties regarding premises and estimates

The information regarding uncertainties related to premises and estimates that may have a significant effect resulting in material adjustments to the carrying amount of assets and liabilities in the next fiscal year is contained in the following Notes:

- Note 13 – Deferred income tax and social contribution (principal premises: deadline for recoverability);
- Note 15 – Property, plant and equipment (depreciation and impairment – main premises: volume of future production and period for recovery of oil and gas reserves, prices of commodities, cost of production ("OPEX"), expenditures on investments ("CAPEX") and economic premises such as discount and exchange rates);
- Note 16 – Intangible assets (amortization and impairment – principal premises: volume of future production and period for recovery of oil and gas reserves, prices of commodities, cost of production ("OPEX"), expenditures on investments ("CAPEX") and economic premises such as discount and exchange rates);
- Note 23 – Provision for abandonment (main premises: retirement deadline, estimated cost and discount rate); and
- Note 24 – Provision for contingencies (principal premises: likelihood of loss in pending cases).

6. Basis for Measurement

The individual and consolidated financial statements have been prepared based on historic cost, except for the following material items, which are measured as of each reporting date and recognized in the balance sheets:

- derivative financial instruments are measured at fair value;
- contingent payments assumed in a business combination measured at fair value.

7. Significant Accounting Policies

The Company has applied the accounting policies described on the following pages in a consistent manner for all periods presented in these financial statements, except as indicated otherwise.

a) *Foreign currency transactions*

Transactions in foreign currency are translated to the Company's functional currency at the exchange rates in effect on the transaction dates. Monetary assets and liabilities denominated and calculated in foreign currency as of the reporting date are reconverted to the functional currency according to the exchange rate in effect for that date. The differences encountered are recognized in the statements of income (loss) in the exchange variation line item. Non-monetary items that are measured based on their historical cost in foreign currency are translated at the exchange date in effect on the transaction date.

The assets and liabilities of the Company's subsidiaries whose functional currency is the US$ are converted into R$ at the reporting date exchange rate, and the corresponding statements of income (loss) are translated at the exchange rate in effect on the transaction date. The exchange differences resulting from such translation are recognized separately in shareholders' equity, in the statements of comprehensive income (loss), in the line item entitled Other comprehensive income – Accumulated translation adjustment.

b) *Cash and cash equivalents*

These current assets are maintained to meet short-term cash commitments and are comprised of the balance of cash on hand, current bank accounts and marketable securities with immediate liquidity and insignificant risk of any change in value.

c) *Restricted cash*

This item involves deposits held for the purpose of guaranteeing long-term cash commitments, consists of marketable securities with liquidity linked to fulfillment of the Company's obligations and features insignificant risk of any change in value.

d) *Trade accounts receivable*

Accounts receivable correspond to amounts receivable from the sale of oil and gas supplied in the normal course of activities of subsidiaries 3R Macau, 3R Pescada, 3R Rio Ventura and Duna, billed and not paid, are concentrated exclusively in Petrobras , rated Ba1 by Mody's, BB- by Standard & Poor's and Fitch. Therefore, Management considers that the risk of default on its credits is low, since the Company provides a basic input for the business of its only client (Petrobras).

e) *Corporate income tax (IRPJ) and social contribution on net income (CSLL)*

The federal IRPJ and CSLL for the year are calculated based on the rates for the former of 15%, plus a surtax of 10% on any taxable income that exceeds R$ 240, and 9% on taxable results for the latter, and they consider the offset of IRPJ tax losses and negative CSLL results, limited to 30% of the taxable income for the year.

The current IRPJ and CSLL expense is the tax payable or receivable estimated on the taxable income or loss for the year and any adjustment to taxes payable in relation to prior years. The amount of the current taxes payable or receivable is recognized in the balance sheet as a tax asset or liability based on the best estimate of the expected amount of the taxes to be paid or received that reflects any uncertainties relating to calculation thereof. Such amount is measured based on the tax rates in effect as of the reporting date.

f) *Deferred income tax and social contribution*

Deferred tax assets and liabilities are recognized in relation to temporary differences between the carrying amount of assets and liabilities for financial statement purposes and those used for taxation purposes. The changes in deferred tax assets and liabilities in the year are recognized as a deferred IRPJ and CSLL expense. However, deferred taxes are not recognized for:

– temporary differences on the initial recognition of assets and liabilities in a transaction that is not a business combination and affects neither taxable income or loss nor accounting results;

– temporary differences related to investments in subsidiaries, associates, and enterprises under joint control, to the extent that the Company can control the time for reversal of the temporary difference and it is probable that the temporary difference will not be reversed in the foreseeable future; or

– taxable temporary differences resulting from initial recognition of goodwill.

A deferred tax asset is recognized in relation to deductible tax losses and temporary differences not used to the extent that it is probable that future taxable profits will be available, against which they will be used. Future taxable profits are determined based on the reversal of the relevant taxable temporary differences. If the amount of the latter is insufficient to fully recognize a deferred tax asset, then the future taxable profits will be considered, adjusted for the reversal of the existing temporary differences, based on the business plans of the Company and its subsidiaries individually.

Deferred tax assets are reviewed as of every reporting date and will be deducted to the extent that realization thereof is no longer probable.

Deferred tax assets and liabilities are measured based on the rates expected to be applied to the temporary differences when they are reverted, based on the rates decreed through the reporting date, and reflect the uncertainty related to the tax on income, if any.

The measurement of deferred tax assets and liabilities reflects the tax consequences resulting from the manner whereby the Company expects to recover its assets and liabilities.

Prepayments or amounts eligible for offset are recorded under current or noncurrent assets according to the respective expectation for realization.

g) *Investments*

These noncurrent assets are recorded under the equity accounting method in the individual financial statements. Such investments are initially recognized at cost, which includes transaction expenditures. After initial recognition, the financial statements include the Company's share in the net income or loss for the period and other comprehensive income (loss) of the subsidiary through the date on which significant influence no longer exists.

Foreign currency differences generated upon translation to the reporting currency of subsidiary 3R Pescada, which has a functional currency that differs from the Company's, are recognized under other comprehensive income (loss) in the line item entitled Accumulated translation adjustment..

h) *Property, plant and equipment*

Recognition and measurement

The Company's Property, plant and equipment is shown at historical cost of acquisition, less depreciation and the provision for impairment, when applicable. Depreciation of the assets is calculated under the under the straight-line method or under the units produced methods for oil and gas assets.

Expenditures on exploration, appraisal and production development are recognized under the successful efforts method of accounting.

Costs incurred prior to obtaining the concessions and expenditures on geological and geophysical studies and surveys are charged to results when incurred.

Expenditures on exploration and discovery directly associated with an exploratory well are capitalized as exploration and appraisal assets until the well-drilling is completed and the results thereof appraised. Such costs include employee salaries, supplies and fuels used, the cost of drilling rig rental and other costs incurred with third parties.

If commercial reserves are not found, the exploratory well is written off from results. When reserves are found, the cost is maintained under assets until the conclusion of additional appraisals, which may include the drilling of additional wells, regarding the commerciality of the hydrocarbon reserves.
Exploratory assets are subject to technical, commercial and financial reveiews at least once a year to confirm Management's intent to develop and produce hydrocarbons in the area. If such intention is not confirmed, the costs are written off from results. When proven reserves are identified and development authorized, exploratory expenses on the area are transferred to "Oil and Gas Assets".

In the development phase, investments for construction, installation and infrastructure (like rigs, pipelines and drilling of development wells, including delimitation wells or unsuccessful development wells) are capitalized as "Oil and Gas Assets.

The costs for future retirement and dismantling of the production areas are estimated and recognized as part of the costs of such assets, with a contra entry under the provision that will support such expenditures just as soon as there is a legal or constructive obligation to dismantle the area. Such provision is presented under Property, plant and equipment with a contra entry under noncurrent liabilities. Estimates of the costs of the ARO are recognized taking into account the present value of such obligations, less the risk-free rate adjusted by the country risk premium. The estimates of retirement costs are reviewed annually or when there is indication of material changes, with the consequent review of present value calculation and adjustment to amounts of assets and liabilities. The provision for ARO is updated monthly on a prorated basis, considering the risk-free discount rate adjusted by what was discounted with a contra entry under financial expenses.

Costs of loans directly related to the acquisition, construction or production of an asset that necessarily requires significant time to be concluded for use or sale are capitalized as part of the cost of the corresponding asset. All the other costs of loans are recorded as expenses in the period in which they are incurred.

An item of 3R OG's Property, plant and equipment is written off when sold and when no future economic benefit is expected from use or sale thereof. Any gain or loss resulting from the write-off of the asset (calculated as being the difference between the net sale value and the asset's carrying amount) are included in the income statement for the year in which the asset is written off.

The residual values and useful service lives of the assets, as well as the depreciation methods, are reviewed at the closing of each year and adjusted in a forward looking manner, when such is the case.

Depreciation
The "Oil and Gas Assets", including the costs for future retirement and dismantling of the areas and assets that will benefit the entire useful economic life of the field, such as gas and oil pipelines, are depreciated under the units produced method, based on the ratio between the production of oil and gas from each field in the period and the respective proven reserves developed.

With the exception of the capitalizable exploratory expenditures mentioned above, the Company's Property, plant and equipment are depreciated under the straight-line method in results for the year based on the useful economic life estimated for each component.

The Property, plant and equipment are depreciated as from the day on which they are installed and are available for use or, in the case of assets constructed internally, from the day on which the construction is finalized and the asset available for use.

Depreciation is calculated on the depreciable amount, which is the cost of an asset, or other amount replacing the cost, in accordance with the rates and criteria mentioned in Note 15.

The depreciation method, useful lives and residual values are reviewed as of every reporting date and adjusted if needed.

Provision (reversal) for impairment of non-financial assets
The carrying amount of the Company's non-financial assets are reviewed as of each reporting date to calculate whether there provision of impairment. If there is such indication, then the recoverable amount of the asset is estimated.

An impairment loss is recognized if the carrying amount of the asset or cash generating unit ("CGU") exceeds its recoverable value.

The recoverable value of an asset or CGU is the greater of the respective value in use and the fair value less selling expenses. In the appraisal conducted by the Company's Management of the value in use, the estimated future cash flows are discounted to their present values by using the pretax discount rate that reflects prevailing market conditions regarding the capital recoverability period and the specific risks of the asset or CGU. For the purpose of testing recoverable value, assets than cannot be tested individually are brought together to form the smallest group of assets that generate cash inflows from continual use. Such assets are largely independent of other assets or groups of assets (CGU).

Impairment losses are recognized in results. Losses recognized in relation to CGUs are initially allocated in the reduction of any goodwill allocated to this CGU (or group of CGUs) and subsequently in the reduction of the other assets of this CGU (or group of CGUs) in a prorated manner (see Note 15).

An impairment loss is reversed only to the extent that the carrying amount of the asset no longer exceeds the carrying amount that has been determined, net of depreciation and amortization, if no impairment loss has been recognized.

i) ***Intangible assets***

The intangible assets acquired by the Company have finite useful lives and are measured at cost, less accumulated amortization and any impairment losses, pursuant to IAS 38 the applicable standard of BR GAAP (Technical Pronouncement CPC 04).

Subsequent expenditures are capitalized only when they increase the future economic benefits incorporated to the specific asset to which they relate. All other expenditures, including expenditures on goodwill generated internally and trademarks and patents, are recognized in results as incurred.

Amortization of computer software programs, as well as of environmental licenses and studies, is calculated using the straight-line method based on the estimated useful life of the items, net of their estimated residual values. The estimated useful life of such assets is 5 (five) years. Amortization is generally recognized in General and administrative expense (G&A).

The subscription bonus and exploratory expenditures are amortized by the units produced method, considering the production of each concession and the volume of reserves. In case eco0nomically viable hydrocarbon reserves are not identified, these expenditures are charged to results.

Amortization methods, useful lives and residual values are reviewed on every reporting date and adjusted if needed, as described in item "h".

j) ***Trade accounts payable***

These current liabilities are recognized at face value and subsequently increased, when applicable, by monetary variations and corresponding charges incurred through the reporting dates.

k) ***Provision for contingencies***

The recognition, measurement and disclosure of provisions, contingent assets and liabilities and legal obligations are carried out according to the criteria defined in Brazilian Technical Pronouncement CPC 25 – Provisions, Contingent Liabilities and Contingent Assets (IFRS/IAS 37).

The provision for tax, civil and labor court cases is set up for risks where expectations are ranked as "probable losses", based on the appraisal of Management and external legal counsel, with the respective amounts recorded based on the estimated costs associated with the outcome of such cases.

l) ***Provision for abandonment***

The Company has legal obligations for removal of equipment and restoration of land or maritime areas at the end of the production period of its reserves, based on estimated volumes and production curves. The estimates of future removal and environmental recovery are made based on current information on costs of and plans for expected recovery. These obligations are recognized at their present value using a risk-free discount rate adjusted by the country risk premium. Considering the lengthy periods until the retirement date, even slight variations in the discount rate may give rise to huge variations in the amounts recognized. Calculations of such estimates are complex and involve a significant degree of judgment, in that: i) the obligations will arise long-term; ii) agreements and regulations feature subjective descriptions of removal and restoration practices and the criteria to be met upon effective removal and restoration; and iii) technologies and costs for removal of assets undergo constant alterations, as do environmental and safety regulations.

The nature of the expenditures includes mobilization and dismantling of drilling rigs, well-covering and retirement services, restoration, environmental repairs, reforestation and other such services. 3R OG constantly conducts studies to incorporate technologies and procedures so as to optimize retirement practices, considering best industry practices. Nevertheless, the respective ARO periods and future cash flow amounts are subject to significant uncertainties.

m) *Provisions*

The amounts of the provisions recorded by the Company are determined by means of the discount of the estimated future cash flows at a pre-tax rate that reflects current market appraisals of the time value of money and the specific risks for the related liability. The effects of derecognition of the discount by the passage of time are recognized in results as a financial expense.

n) *Financial instruments*

A financial asset or liability is recognized when the Company becomes party to the contractual provisions of the respective instrument.

Initial recognition

Upon initial recognition, financial assets are recognized at fair value plus or minus the transaction costs that are directly attributable to the acquisition or issue of such assets, except for trade accounts receivable that do not contain a contract.

In the case of financial liabilities, upon initial recognition they are measured at fair value plus or minus the transaction costs that are directly attributable to the acquisition or issue of such liabilities, except for financial liabilities measured at fair value.

Classification and subsequent measurement

Upon initial recognition, a financial asset is classified in the same manner as it is measured. Financial assets are not reclassified subsequent to their initial recognition, unless there are alterations in the business model for management of financial assets.

A financial liability is also classified in the same manner as it is measured upon initial recognition. Operations that require subsequent measurement are recognized in results.

Derecognition

The Company derecognizes a financial asset when the contractual rights to the asset's cash flows expire, or when it transfers the contractual rights to receive to the contractual cash flows on a financial asset in a transaction in which substantially all the risks and benefits of ownership of the financial asset are transferred or in which the Company neither transfers or substantially retains all the risks and benefits of ownership of the financial asset and also does not retain control over the financial asset.

Also, 3R OG derecognizes a financial liability when its contractual obligation is withdrawn, cancelled or expires. The Company also derecognizes a financial liability when its terms are modified, and the flows of the modified liability are substantially different. In this case, a new financial liability based on the modified terms is recognized at fair value.

Impairment of financial assets

Under the applicable standard of BR GAAP CPC 48 (IFRS/IAS 9,) provisions for expected losses are to be measured based on one of the following:

- Credit losses expected for 12 months, that is, credit losses that result from potential events of default within 12 months of the base date; and
- Credit losses expected for the entire lifespan, that is, credit losses that result from all potential events of default over the expected lifespan of a financial instrument.

o) *Revenues*

Company policy for revenue recognition is in line with Brazilian accounting standard CPC 47, (IFRS/IAS 15) which establishes a wide-ranging structure to determine if and when revenue is recognized and how it is measured. Revenue is recognized when the consumer obtains control of the goods or services.

3R OG's revenues are derived from oil and gas sales. Revenue is measured based on the consideration specified in the agreement with the customer and is recognized if: (i) the most significant risks and benefits inherent in ownership of the goods have been transferred to the buyer; (ii) if is probable that future economic and financial benefits will flow to the Company; (iii) the associated costs and possible return of the product can be reliably estimated; (iv) there is no continuing involvement with the products sold; and (v) the amount of the revenue can be reliably measured. Revenue is measured net of returns and commercial discounts, when applicable.

The Company recognizes its revenues when (or as) it satisfies its performance obligation, transferring the promised good or service to the customer.

p) *Net financial results*

Financial income represent interest and monetary variations resulting from marketable securities, discounts obtained and monetary updates of updating of financial assets. They are recognized under the accrual method when accrued or incurred by the Company. Financial expenses represent bank expenses, monetary updates of contractual obligations and interest on capital invested with respective charges, when proposed by the Company, being recognized under the accrual accounting method when incurred.

q) *Net earnings (loss) per share*

The basic / diluted earnings (loss) per share is computed by dividing the net income (loss) by the weighted average of the number of common shares in the power of the shareholders, excluding shares held in treasury in the year.

r) *Statement of Added Value ("DVA")*

The purpose of such statement is to evidence the wealth created by the Company and its distribution during a determined period. It is presented as required by Brazilian corporate legislation, as part of 3R OG's financial statements and as supplementary information thereto, although it is not a statement called for or mandatory under IFRS.

The accompanying DVA has been prepared based on the information obtained in the accounting records that serve as the basis for preparation of the financial statements and according to the provisions contained in Brazilian accounting standard CPC 09 – Statement of added value.

s) *Business combinations*

These ventures are recorded using the acquisition method when the set of activities and assets acquired meet the definition of a business and control thereof is transferred to the Company. Upon determining whether a set of activities and assets is a business, 3R OG's Management appraises whether the set of activities and assets acquired includes at least an input and a substantive process that together significantly contribute to the capacity to generate output. The Company has the option of conducting a "concentration test" that permits a simplified appraisal as to whether a set of activities and assets acquiredis not a business. The optional concentration test is passed if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets.

The consideration transferred is generally measured at fair value, as are the identifiable net assets acquired. Any goodwill resulting from the transaction is tested every year for appraisal of an impairment loss. Gains on an advantageous purchase are immediately recognized in results. Transaction costs are recorded in results as incurred, except those costs related to the issue of debt or equity instruments.

Consideration transferred does not include amounts relatin to the payment of pre-existing relations. Such amounts are generally recognized in results for the year.

Any contingent consideration payable is measured at its fair value as of the acquisition date. If the contingent consideration is classified an equity instrument, then it is not remeasured and the settlement is recorded within shareholders' equity. The remaining contingent considerations are remeasured at fair value as of each reporting date and the subsequent alterations to the fair value are recorded in results for the year.

t) *Employeed benefits*

Share-based payment agreements
The grant-date fair value of share-based payment arrangements granted to employees is recognized as personnel expenses, with a corresponding increase in equity, during the period in which employees are unconditionally entitled to the awards. The amount recognized as an expense is adjusted to reflect the number of awards for which the service and performance conditions are expected to be met, such that the final amount recognized as an expense is based on the number of awards that actually meet. to the service and performance conditions on the acquisition date (vesting date). For share-based payment awards that do not contain vesting conditions, the grant-date fair value of share-based payment awards is measured to reflect such conditions and no subsequent adjustments are made for differences. between expected and actual results.

The fair value of the amount payable to employees in respect of share appreciation rights, which are settled in cash, is recognized as an expense with a corresponding increase in the liability during the period in which the employees unconditionally acquire the right to payment. The liability is remeasured at each balance sheet date and on the settlement date, based on the fair value of the share appreciation rights. Any changes in the fair value of the liability are recognized in income as personnel expenses.

8. New Standards and Interpretations Not Yet in Effect

A series of new altered standards and interpretations will be effective for years beginning after January 1, 2021. 3R OG and its subsidiaries have not adopted such standards in the preparation of these financial statements, but even so Management has decided that the following altered standards and interpretations should not have a significant impact on the Company' consolidated financial statements:

- Onerous agreements: costs for fulfilling an agreement (alterations in CPC 25/IAS 37);
- Deferred tax related to assets and liabilities resulting from a single transaction (alterations in CPC 32/IAS 12);
- Rental concessions related to COVID-19 after June 30, 2021 (alteration in CPC 06/IFRS 16);
- Annual review of IRFS standards put into effect in the 2018-2020 period;
- Property, plant and equipment: revenues prior to intended use (alterations in CPC 27/IAS 16);
- Reference to conceptual structure (alterations in CPC 15/IFRS 3);
- Classification of liabilities as current or noncurrent (alterations in CPC 26/IAS 1);
- Insurance agreements (IFRS 17);
- Disclosure of accounting policies (alterations in CPC 26/IAS 1 and IFRS Practice Statement 2); and
- Definition of accounting estimates (alterations in CPC 23/IAS 8).

9. Cash and Cash Equivalents

As of December 31, 2021 and 2020, the amounts of these current accounts refer to the following:

	Parent company		Consolidated	
	2021	2020	2021	2020
Cash and banks	1,529	70,799	118,725	101,999
Exchange investment fund US$ (a)	-	185,943	-	185,943
	1,529	**256,742**	**118,725**	**287,942**

(a) The balance in the Exchange investment fund US$ as of December 31, 2020, initially intended for use in allowing the Company to carry on its regular operations, was redeemed and invested in a multimarket mutual fund set up for investment purposes, as explained in Note 9.1 below.

9.1 Marketable securities

		Parent company		Consolidated	
	Indexers	2021	2020	2021	2020
Exchange investment fund US$	US$ (Ptax)	2,216,210	298,038	2,277,704	298,038
Multimarket mutual fund	CDI*	21,889	15,533	111,670	119,482
		2,238,099	**313,571**	**2,389,374**	**417,520**

The Company's marketable securities are comprised of an exchange and sovereign investment fund and multimarket mutual fund set up for investment purposes and not for use to cover working capital needs.
(*) CDI = Certificate of Interbank Deposit, an indexing mechanism widely used in Brazil.

9.2 Restricted cash

	Parent company		Consolidated	
	2021	2020	2021	2020
Bank surety (a)	-	-	8,291	3,692
	-	**-**	**8,291**	**3,692**

(a) At the consolidated level the 2021 amount includes subsidiary 3R Macau's claim of R$ 4,438 referring to surface rights for which the straightening out of documents remains pending in order to receive the amount of R$ 3,853 relating to the contracting of a bank letter by 3R Offshore to guarantee suspension of the Federal Government's claim of a debt to the nation's treasury relating to employers' association contributions. As of December 31, 2020, the balance relates to a simular bank surety arrangement to again guarantee suspension of the Federal Government's claim of a debt to the nation's treasury relating to employers' association contributions.

10. Trade Accounts Receivable

The amounts refer to trade accounts receivable from Petrobras for sale of oil and gas production from the fields of Pescada and Arabaiana in the amount of R$ 4,412 (R$ 4,063 as of December 31, 2020), the Macau Cluster in the amount of R$ 86,990 (R$ 40,608 as of December 31, 2020), the Rio Ventura Cluster in the amount of R$ 16,957 and the fields of Ponta do Mel e Redonda, belonging to Duna, in the amount of R$ 6,200 (R$ 0 as of December 31, 2020). The production from such clusters/fields is fully sold to Petrobras, through the Company's subsidiaries 3R Pescada, 3R Macau, 3R RV and Duna, respectivamely.

As of December 31, 2021 and 2020, there were no overdue amounts in accounts receivable and Management appraised the expected loss and determined that there was no significant amount to be recognized by way of any provision for loss.

	Parent company		Consolidated	
	2021	2020	2021	2020
Oil sales	-	-	108,971	40,665
Gas sales	-	-	5,588	4,006
	-	**-**	**114,559**	**44,671**

11. Income tax, social contribution and other recoverable taxes

	Parent company		Consolidated	
	2021	2020	2021	2020
Withholding income tax (IRRF)	4,938	1,676	5,919	2,440
Federal IRPJ and CSLL (a)	11,133	1,272	41,512	12,482
State Value-Added Tax on Goods and Services (ICMS)	-	-	2,370	718
Federal Social Integration Program (PIS) and Social Security Finance (Cofins) contributions	7	124	6,224	201
Sundry other taxes	-	26	1,028	35
	16,078	**3,098**	**57,053**	**15,876**
Current Assets	16,072	2,956	54,803	11,550
Noncurent Assets	6	142	2,250	4,326

(a) The respective amounts of R$ 11,133 and R$ 41,512 of IRPJ/CSLL recoverable at the Company and Consolidated as of December 31, 2021, are comprised of IRPJ tax losses and negative CSLL results from prior years and prepayments made in the year 2020.

12. Advances for Assignment of Assets

	Parent company		Consolidated	
	2021	2020	2021	2020
3R Pescada (a)	-	-	1,600	1,600
3R FZB (b)	-	-	48,009	48,009
3R RV (c)	-	-	-	20,689
3R Candeias (d)	-	-	50,968	50,968
3R Offshore (e)	-	-	58,308	-
	-	-	**158,885**	**121,266**

(a) On July 9, 2020, subsidiary 3R Pescada signed an agreement for acquisition of 65% of the equity interest held by Petrobras in the Pescada, Arabaiana and Dentão fields. The amount of the transaction was US$ 1.5 million, to be paid in two installments, US$ 300 thousand, equivalent to R$ 1,600 upon agreement signing, and US$ 1.2 million upon transaction closing, as per Note 1.

(b) On August 14, 2020, subsidiary 3R FZB signed an agreement for purchase of the entire equity interest held by Petrobras in the onshore fields of Fazenda Belém and Icapuí in the Fazenda Belém Cluster in the Potiguar basin in Ceará. The total amount of the acquisition is US$ 35.2 million. Of this total amount, US$ 8.8 million, equivalent to R$ 48,009, was paid on the signing date and another US$ 16.4 million will be settled upon transaction closing. Finally, US$ 10 million will be paid 12 months after conclusion of the transaction, as per Note 1.

(c) On August 21, 2020, subsidiary 3R RV signed an agreement for purchase of the entirety of the equity interest held by Petrobras in the 8 onshore fields of Água Grande, Bonsucesso, Fazenda Alto das Pedras, Pedrinhas, Pojuca, Rio Pojuca, Tapiranga and Tapiranga Norte, which constitute the Rio Ventura Cluster in the Recôncavo Cluster in Bahia. The amount of the acquisition is US$ 94.2 million, broken down as follows: (i) US$ 3.8 million paid on the signing date, equivalent to R$ 20,689; (ii) US$ 31.2 million upon transaction closing; (iii) US$ 16 million to be paid within 30 months after transaction closing; and (iv) US$ 43.2 million in contingent payments covered by the agreement, pegged to recovery of the oil price benchmark (Brent). On July 14, 2021, acquisition of the Rio Ventura Cluster was concluded after approval by the ANP. Hence, 3R RV became the operator of these fields as from July 15, 2021, as per Note 1.

(d) On December 8, 2020, subsidiary 3R Candeias signed an agreement for purchase of the Recôncavo Cluster, which comprises the onshore fields of Aratu, Ilha de Bimbarra, Mapele, Massuí, Candeias, Cexis, Socorro, Dom João, Dom João Mar, Pariri, Socorro Extensão, São Domingos, Cambacica and Guanambi. The total amount of the transaction is US$ 250 million, with (i) US$ 10 million paid on the signing date, equivalent to R$ 50,968; and (ii) US$ 240 million upon transaction closing, further subject to fulfillment of conditions precedent such as approval by the ANP, as per Note 1.

(e) On January 29, 2021, subsidiary 3R Offshore signed an agreement for acquisition of 50% of the equity interest held by Petrobras in the production fields of Peroá and Cangoá and BM-ES-21 (Malombe Discovery Appraisal Plan), jointly referred to as the Peroá Cluster, located in the Espírito Santo Basin. 3R Offshore became the operator of the fields. The total amount of the transaction is US$ 55 million, with (i) US$ 5 million, equivalent to R$ 13,456, having been paid on the signing date; (ii) US$ 7.5 million upon transaction closing; and (iii) US$ 42.5 million in contingent payments covered in the agreement. The latter two amounts do not consider potential adjustments and corrections through the transaction closing. On May 6, 2021, DBO assigned credit as part of its capital injection to become a Company shareholder, as per Note 1. Moreover, on July 9, 2021, 3R Offshore signed an agreement for acquisition of the stake held by Petrobras in the Papa-Terra Cluster, which is currently in production and is in the Campos Basin in the State of Rio de Janeiro, including the entire infrastructure and related surface and underwater systems. The total amount of the transaction is US$ 105.6 million, with (i) US$ 6 million having been paid upon signing of the agreement for acquisition of the cited asset; (ii) US$ 9.6 million, to be paid on the transaction closing date; and (iii) US$ 90 million in contingent payments, still subject to the fulfillment of conditions precedent, such as approval by the ANP, as per explanatory note 1.

13. Deferred income tax and social contribution

The deferred tax assets set up as of December 31, 2021, are the result of 34% of deductible temporary differences in the amount of R$ 57,839 and tax losses and negative base in the amount of R$ 38,879 (as of December 31, 2020, temporary differences in the amount of R$ 16,489). It is expected by Company Management that use of the deferred tax assets set up as of December 31, 2021 will take place during the year 2022.

The deferred tax liabilities set up as of December 31, 2021 result from the added value of Property, plant and equipment fixed and intangible assets calculated upon acquisition of Duna, in the amount of R$ 89,447.

The deferred tax assets and liabilities are broken down as follows:

	Parent company		Consolidated	
	2021	2020	2021	2020
Deferred tax assets on temporary differences	-	-	57,839	16,489
Deferred tax assets on tax losses	-	-	38,879	-
Total deferred tax assets	-	-	**96,718**	**16,489**
Deferred tax liabilities on added value of assets upon acquisition of Duna	-	-	(89,447)	-
Total deferred tax liabilities	-	-	**(89,447)**	-
Net deferred taxes	-	-	**7,271**	**16,489**

The Company and its subsidiaries have tax losses offset against future taxable income that have not been recorded in the amount of R$ 355,729 as of December 31, 2021 (R$ 347,584 as of December 31, 2020) by way of tax losses and negative base, since it is not possible to state that realization thereof is currently considered probable.

When the financial model adopted in the general business plan approved by the Company's Board of Directors demonstrate that its deferred tax credits resulting from IRPJ tax losses and negative CSLL results and temporary additions are deemed to be probably realizable, the Company and its subsidiaries will

record these tax credits.

As of December 31, 2021	3R OG	3R Offshore	3R Candeias	Total
IRPJ tax losses and negative CSLL results	145,772	825,999	74,491	1,046,263
25% IRPJ	36,443	206,500	18,623	261,566
9% CSLL	13,119	74,340	6,704	94,164
	49,562	**280,840**	**25,327**	**355,729**

As of December 31, 2020	3R OG	3R Offshore	3R Candeias	Total
IRPJ tax losses and negative CSLL results	139,097	808,215	74,994	1,022,306
25% IRPJ	34,774	202,054	18,749	255,576
9% CSLL	12,519	72,739	6,749	92,008
	47,293	**274,793**	**25,498**	**347,584**

Under the terms of the purchase and sale agreement signed between the current and the former controlling shareholder, if the Company and its subsidiaries, listed above, take advantage of the tax losses described above, the former controlling shareholder may be entitled, by way of earn-out, to the amount equivalent to as much as 30% (thirty per cent) of the benefit accrued by 3R OG as a result of utilization thereof.

Amounts recognized in results

	Parent company		Consolidated	
	2021	2020	2021	2020
Current IRPJ and CSLL expenses	**(838)**	**-**	**(3,850)**	**(6,229)**
Current year expenses	(838)	-	(3,850)	(6,229)
Deferred IRPJ and CSLL expenses	**-**	**14,840**	**64,423**	**31,329**
Temporary differences	-	19,801	44,724	34,325
Tax losses	-	(4,961)	19,699	(2,996)
Total tax expenses	**(838)**	**14,840**	**60,573**	**25,100**

Reconciliation of effective tax rate

Reconciliation of the expense calculated through application of the currently effective combined statutory rates and the IRPJ and CSLL expense calculated in results is broken down as follows:

	Parent company		Consolidated	
	2021	2020	2021	2020
Loss before IRPJ and CSLL (pretax loss)	**(67)**	**(238,492)**	**(44,582)**	**(301,630)**
Currently effective combined statutory rate	34%	34%	34%	34%
IRPJ and CSLL calculated at effective rate	**23**	**81,087**	**15,158**	**102,554**
Effect of (additions) exclusions in tax calculations	**(861)**	**(66,247)**	**45,415**	**(77,454)**
Permanent differences	1,494	(167)	16,416	(12,486)
Share of profit (loss) of subsidiary	(6,431)	(72,098)	-	(5,847)
Temporary differences for which no deferred tax assets have been set up	4,076	512	31,081	6,220
Setting up / write-off of deferred IRPJ/CSLL in prior years	-	14,840	261	16,979
Tax loss for the year for which no deferred tax assets have been set up	-	(9,334)	(2,343)	(82,320)
IRPJ and CSLL deferred in the year	**(838)**	**14,840**	**60,573**	**25,100**
Current income tax and social contribution	(838)	-	(3,850)	(6,229)
Deferred income tax and social contribution	-	14,840	64,423	31,329
Effective rates	**-1242%**	**6%**	**136%**	**8%**

14. Investments

		Parent company	
	Direct stake	12/31/2021	12/31/2020
3R Offshore	70%	157,629	96,873
3R Pescada	100%	159,969	55,864
3R Candeias	100%	87,450	50,596
3R Macau	100%	983,538	233,267
3R RV	100%	195,321	21,986
3R FZB	100%	48,801	48,985
Duna	100%	282,331	-
3R Potiguar	100%	1,000	-
		1,916,039	**507,571**

Changes in the balances of investments in the years ended December 31, 2021 and 2020, are broken down as follows:

	3R Offshore	3R Pescada	3R Candeias	3R Macau	3R RV	3R FZB	Duna	3R Potiguar	Total
Balances as of January 1, 2020	218,133	69,708	37	-	-	-	-	-	287,878
Capital increase	6,000	-	51,034	-	-	-	-	-	57,034
Impact of merger - 3R Participações	-	-	-	203,224	21,996	48,991	-	-	274,211
Share of profit (loss) of subsidiary	(210,313)	(31,292)	(475)	30,043	(10)	(6)	-	-	(212,053)
Accumulated translation adjustment	83,053	17,448	-	-	-	-	-	-	100,501
Balances as of December 31, 2020	96,873	55,864	50,596	233,267	21,986	48,985	-	-	507,571
Capital increase	30,456	-	36,055	827,000	204,400	-	20,000	1,000	1,118,911
Relative BDO stake	(8,147)	981	-	-	-	-	-	-	(7,166)
Acquisition of 40% stake in 3R Pescada	-	37,152	-	-	-	-	-	-	37,152
Equity pickup	39,425	53,589	799	(76,729)	(31,065)	(184)	(4,749)	-	(18,914)
Shareholders' equity at acquisition	-	-	-	-	-	-	267,080	-	267,080
Accumulated translation adjustment	(978)	12,383	-	-	-	-	-	-	11,405
Balances as of December 31, 2021	157,629	159,969	87,450	983,538	195,321	48,801	282,331	1,000	1,916,039

Summary financial information on the subsidiaries as of December 31, 2021 and 2020 is as set out below and on the following page:

		12/31/2020						
	Equity interest	Current assets	Noncurrent assets	Current liabilities	Noncurrent liabilities	Shareholders' equity	Impact of reverse merger - 3R Petroleum	Income (loss)
3R Offshore	100%	4,945	118,615	26,434	254	96,873	-	(210,313)
3R Pescada	60%	113,025	107,956	9,132	118,743	55,864	-	(31,292)
3R Candeias	100%	51,006	-	410	-	50,596	-	(475)
3R Macau	100%	84,902	1,024,576	87,890	788,321	233,267	(52,861)	30,043
3R RV	100%	21,988	-	1	-	21,986	(6)	(10)
3R FZB	100%	48,986	-	-	-	48,985	(11)	(6)
		324,852	**1,251,147**	**123,867**	**907,318**	**507,751**	**(52,878)**	**(212,053)**

	2021							
	Equity interest	Current assets	Noncurrent assets	Current liabilities	Noncurrent liabilities	Shareholders' equity	Added Value upon acquisition de Duna (i)	Income (loss)
3R Offshore	70%	67,161	137,025	45,799	758	157,629	-	39,425
3R Pescada	100%	111,372	178,775	5,567	124,611	159,969	-	53,589
Candeias	100%	88,094	647	1,291	-	87,450	-	799
3R Macau	100%	218,613	1,109,917	196,523	148,468	983,538	-	(76,729)
3R RV	100%	31,077	680,640	277,403	238,994	195,321	-	(31,065)
3R FZB	100%	48,664	235	98	-	48,801	-	(184)
Duna	100%	53,292	133,957	21,443	57,106	108,700	173,631	(4,749)
Potiguar	100%	1,000	-	-	-	1,000	-	-
		619,273	**2,241,196**	**548,124**	**569,937**	**1,742,408**	**173,631**	**(18,914)**

(i) Refers to the capital gain on the acquisition of Duna as follows:

Fair value of property, plant and equipment and intangible assets in the business combination	270,674
(-) Deferred tax on capital gains on business combinations	(92,029)
Amortization/depreciation of Property, plant and equipment acquired in the business combination	(7,597)
(-) Impact on deferred tax on the reduction of base differences due to the amortization/depreciation of Property, plant and equipment acquired in the business combination	2,583
Value added upon acquisition of Duna	**173,631**

15. Property, plant and equipment

Parent company

	Cost						
	Balances as of January 1, 2020	Addition	Write-off	Balances as of December 31, 2020	Addition	Write-off	Balances as of December 31, 2021
Administrative fixed assets	**2,085**	**3**	(1,827)	**261**	3,644	(73)	**3,833**
Other fixed assets	**694**	62	-	**756**	75	-	**831**
	2,779	**65**	**(1,827)**	**1,017**	**3,719**	**(73)**	**4,664**

	Accumulated depreciation						
	Balances as of January 1, 2020	Addition	Write-off	Balances as of December 31, 2020	Addition	Write-off	Balances as of December 31, 2021
Administrative fixed assets	**(1,977)**	(33)	1,828	**(182)**	(76)	70	**(188)**
	(1,977)	**(33)**	**1,828**	**(182)**	**(76)**	**70**	**(188)**
Net balances of fixed assets	**802**			**835**			**4,476**

Consolidated

	Cost														
	Balances as of January 1, 2020	Addition	Provision for ARO - 3R Macau (*)	Write-off	Revision of ARO (*)	Accumulated translation adjustment	Balances as of December 31, 2020	Addition	Acquisition of Duna	Provision for ARO - 3R Rio Ventura (**)	Added Value	Write-off	Revision of ARO	Cumul. translat. adjust.	Balances as of December 31, 2021
Pescada and Arabaiana	**720,206**	1,422	-	(1,161)	-	32,511	**752,978**	7,906	-	-	-	(1,318)	-	(173.746)	**585.820**
Camarão	**115,569**	28	-	(1,516)	-	48,517	**162,598**	33	-	-	-	-	-	-	**162.631**
Macau cluster	-	16,299	135,411	(18)	24,906	-	**176,598**	106,086	-	-	-	(1,095)	(36,358)	-	**245,231**
Rio Ventura	-	-	-	-	-	-	-	123,612	-	155,369	-	-	(14,805)	-	**264,176**
Duna	-	-	-	-	-	-	-	80	183,719	-	19,418	-	(9,152)	-	**194.065**
Other fields	**181.694**	963	-	(171)	-	17.096	**199.582**	594	-	-	-	-	-	-	**200.176**
Administrative fixed assets	**27.748**	10	-	(8.945)	-	(10.865)	**7.948**	4.386	-	-	-	(534)	-	-	**11.800**
	1.045.217	**18.722**	**135.411**	**(11.811)**	**24.906**	**87.259**	**1.299.704**	**242.697**	**183.719**	**155.369**	**19.418**	**2.947**	**(60.315)**	**(173.746)**	**1.663.899**

	Accumulated impairment														
	Balances as of January 1, 2020	Addition	Provision for ARO - 3R Macau	Write-off	Revision of ARO	Accumulated translation adjustment	Balances as of December 31, 2020	Addition	Acquisition of Duna	Provision for ARO - 3R Rio Ventura (**)	Added Value	Reversal	Revision of ARO	Cumul. translat. adjust.	Balances as of December 31, 2021
Pescada and Arabaiana	**(195.020)**	(46.130)	-	-	-	-	**(241.150)**	-	-	-	-	47.158	-	193.992	-
Camarão	-	(113.505)	-	-	-	-	**(113.505)**	-	-	-	-	113.261	-	-	**(244)**
Other fields	**(163.145)**	(7.120)	-	-	-	-	**(170.265)**	-	-	-	-	-	-	-	**(170.265)**
	(358.165)	**(166.755)**	-	-	-	-	**(524.920)**	-	-	-	-	**160.419**	-	**193.992**	**(170.509)**

	Accumulated depreciation														
	Balances as of January 1, 2020	Addition	Provision for ARO - 3R Macau (*)	Write-off	Revision of ARO	Cumulative translation adjustment	Balances as of December 31, 2020	Addition	Acquisition of Duna	Provision for ARO - 3R Rio Ventura (**)	Value added	Write-off	Revision of ARO	Cumul. translat. adjust.	Balances as of December 31, 2021
Pescada and Arabaiana	**(413.473)**	(3.108)	-	-	-	-	**(416.581)**	(4.562)	-	-	-	-	-	-	**(421.143)**
Macau cluster	**-**	(4.627)	-	-	-	-	**(4.627)**	(13.560)	-	-	-	52	-	-	**(18.135)**
Rio Ventura	**-**	-	-	-	-	-	**-**	(9.002)	-	-	-	-	-	-	**(9.002)**
Duna	**-**	-	-	-	-	-	**-**	(1.907)	(93.284)	-	(346)	-	-	-	**(95.536)**
Fazenda Belém	**-**	-	-	-	-	-	**-**	(1)	-	-	-	-	-	-	**(1)**
Candeias	**-**	-	-	-	-	-	**-**	(9)	-	-	-	-	-	-	**(9)**
Administrative fixed assets	**(10.329)**	(365)	-	8.945	-	-	**(1.749)**	(333)	-	-	-	532	-	-	**(1.550)**
	(423.802)	**(8.100)**	**-**	**8.945**	**-**	**-**	**(422.957)**	**(29.374)**	**(93.284)**	**-**	**(346)**	**584**	**-**	**-**	**(545.377)**
Net balance of fixed assets	**263.250**						**351.827**								**948.013**

(*) Setting up of provision for ARO at 3R Macau, as per Note 23, item a.
(**) Setting up of provision for ARO at 3R RV, as per Note 23, item b.

The administrative fixed assets encompass the balances of lands, furniture and fixtures, installations, machinery and equipment and data processing equipment, which are depreciated over the course of the following estimated useful lifespans:

Furniture and fixtures	10 years
Machinery and equipment	10 years
Data processing equipment	5 years
Installations	5 years

3R Pescada (Pescada and Arabaiana)

In the year ended December 31, 2020, impairment was recorded in the amount of R$ 46,130 to recognize the reduction in the recoverable amount of this asset, essentially due to the reduction in the US$/R$ exchange rate from R$ 5.74 per US$ 1.00 as of December 31, 2019 to R$ 5.20 as of December 31, 2020.

As of December 31, 2021, however, the Company's Management identified indications that led to the reversal of the amount of the impairment recorded in the amount of R$ 47,158, chiefly caused by: (i) a projected world-wide rise of US$ 14.30 per barrel (or 28.2%) in the average Brent oil price for the entire period appraised (up to the year 2046); and (ii) a forecast increase of US$ 17 per barrel (or 32.6%) for the forthcoming 5-year period (up to 2026). This upward trend noted contrasts with the last test carried out as of December 31, 2020.

The additions to the fixed assets between January and December of 2021 mostly relate to the revitalization of production outflow lines in the amount of R$ 7,865.

3R Offshore (Camarão)

The Camarão field is conditioned to its unitization with the Camarão Norte field, with the latter being a Federal Government area. Hence, the ANP will define whether it will put it on permanent offer or carrying out unitization directly with 3R Offshore.

In appraisal of the alternatives for monetization of this asset, Management calculated its value in use for the year ended December 31, 2020 and identified the need for recording impairment in the total amount of R$ 113,505, considering the projected 12-year production period as from 2023 at the discount rate of 7.59% p.a.

As of December 31, 2021, nevertheless, Management identified indications that led to reversal of the impairment recorded a year earlier in the amount of R$ 113,261, considering a discount rate of 8.56% p.a. based on an analysis carried out considering a new business model for the Manati oil field whereby the rig covers all its operating costs with storage hub services. This business model provides flexibility for the system and additional gains for sale of gas to the final consumer. Thus, the premise of gas sales was adopted, with a delivery outlet at the arrival of the gas pipeline on the Manati rig.

Compared with the last test conducted on June 30, 2021, there is a projected rise of US$ 7.80 per barrel (or 13.7%) in the average Brent oil price for the entire period appraised (up to the year 2046); and a forecast increase of US$ 8.80 per barrel (or 14.6%) for the forthcoming 5-year period (up to 2026), a noteworthy upward trend.

The price of gas (measured in US$ per million British Thermal Units "mmbtu") has been conservatively estimated at 8.2% of the Brent oil barrel price, with the benchmark used being based on the current agreement between the Peroá field and Petrobras. Accordingly, in 2025 (the year the field is slated to start operating) the price of gas has been estimated at US$ 5.4/mmbtu (assuming a Brent price at US$ 65.8/bbl).

3R Macau (Macau cluster)

Subsidiary 3R Macau has acquired 100% equity interest in all the concessions of the Macau cluster.

As of December 31, 2021, Management has not identified indications that this cluster's operations have undergone any devaluation.

In 2020, the Company prepared an appraisal study of the obligation for demobilization of the Macau cluster assets based on the following premises: estimated initial costs associated with the retirement of the assets in the total amount of R$ 342,248, a 43-year production period at the discount rate of 5.03% p.a., which represents R$ 148,320 as of December 31, 2020.

As of December 31, 2021, Management carried out a new appraisal to calculate the estimated initial costs associated with retirement of the assets, totalling R$ 331,770 for the same 43-year production period at the discount rate of 4.71% p.a., which represents R$ 135,802 at the 2021 year end. The obligation for demobilization of the assets (provision for ARO) is described in Note 23.

The additions to the fixed assets between January and December of 2021 principally relate to the revitalization of production outflow lines in the amount of R$ 29,837, the construction of two water processing and debottlenecking plants, in the combined amount of R$ 41,227, and a warehouse to store supplies for revitalization of wells, in the amount of R$ 12,778.

3R RV (Rio Ventura cluster)

Subsidiary 3R RV has now acquired 100% equity interest in all the concessions of the RV cluster.

As of December 31, 2021, Management has not identified indications that this cluster's operations have undergone any devaluation.

On July 15, 2021, Management carried out an appraisal of the obligation for demobilization of the RV cluster, with the following premises: estimated initial costs associated with retirement of the assets, in the total amount of R$ 426,093 and a 26-year production period at the discount rate of 5.41% p.a., which represents R$ 155,369.

As of December 31, 2021, Management carried out a new appraisal to calculate the estimated initial costs associated with retirement of the assets, totalling R$ 400,277 for the same 26-year production period at the discount rate of 4.63% p.a., representing R$ 143,983 at the end of the year 2021. In this case too, the obligation for demobilization of the assets (provision for ARO) is described in Note 23.

On July 15, 2021, 3R RV became the operator of the Rio Ventura cluster. When the subsidiary's operations started up at this asset, Petrobras transferred to it the installations and equipment in the amount of R$ 95,034, which is part of the cost of acquisition of this asset. The other acquisitions of fixed assets are mainly comprised of revitalization of wells, in the amount of R$ 21,163, IT and telecom infrastructure, in the amount of R$ 1,678, and a warehouse to store supplies for revitalization of wells, in the amount of R$ 4,953.

Duna (Ponta do Mel and Redonda fields)

On November 1, 2021, 3R OG concluded the process for purchase of Duna. The net fixed assets recorded on Duna's balance sheet as of the acquisition date totaled R$ 90,435, with the acquisition amount of the fixed assets tagged at R$ 169,358, along with accumulated depreciation in the amount of R$ 93,284 and the initial costs associated with retirement of the assets in the amount of R$ 14,361. The fair value of the fixed assets that were calculated on the date on which the Company acquired control over Duna generated value added of R$ 19,418, for which reason the total amount of the net fixed assets of Duna as of November 1, 2021, totaled R$ 109,853.

As of December 31, 2021, the Company's Management has not identified indications that would lead to any changes in the amount of the impairment recorded.

With respect to the estimated initial costs associated with retirement of the assets, as of December 31, 2021, Management carried out a new appraisal to calculate them, totalling R$ 19,127, for a 31-year production perioc at the discount rate of 4.71% p.a., which represents R$ 9,567 at the end of the year 2021. Once again, the obligation for demobilization of the assets (provision for ARO) is described in Note 23.

Other fields

The Company's other fields refer to the Pinaúna field, block BM-ES-5, block BM-ES-5 PAD Versailles, block CAL-M-312 and block CAL-M-372. The impairment recorded for these fields/blocks is in the amount of R$ 170,265, essentially due to expectations for return thereof to the ANP in the forthcoming periods.

As of December 31, 2021, Management has not identified indications that might lead to change in the amount of the respective impairment recorded, inasmuch as these fields/blocks are in the process of being returned to the ANP.

16. Intangible Assets

Parent Company

	Cost								
	Balances as of January 1, 2020	**Addition**	**Write-off**	**Amortization**	**Balances as of December 31, 2020**	**Addition**	**Write-off**	**Amortization**	**Balances as of December 31, 2021**
Software and licences	**67**	-	-	(62)	**5**	1.665	-	(69)	**1.601**
Other intangible assets	**778**	-	-	-	**778**	-	-	-	**778**
	845	-	-	**(62)**	**783**	**1.665**	-	**(69)**	**2.379**
Cost	9.256	255	(204)	-	9.307	1.665	-	-	10.972
Amortization	(8.411)	(255)	204	(62)	(8.524)	-	-	(69)	(8.593)

Fields	Balances as of January 1, 2020	Addition	Write-off	Amortization	Balances as of December 31, 2020	Addition	Acquisition Duna	Added value	Amortization	Amortization Added Value	Balances as of December 31, 2021
Block BAR-M-387 (a)	**778**	-	-	-	**778**	-	-	-	-	-	**778**
Macau cluster (b)	**-**	861.880	-	(27.006)	**834.874**	33.720	-	-	(59.075)	-	**819.519**
Rio Ventura cluster (c)	**-**	-	-	-	**-**	422.582	-	-	(13.726)	-	**408.856**
Duna (d)	**-**	-	-	-	**-**	-	35.082	251.257	(6.857)	(7.251)	**272.231**
Software and licences	**67**	-	-	(61)	**6**	3.816	-	-	(94)	-	**3.728**
	845	**861.880**	**-**	**(27.067)**	**835.658**	**460.118**	**35.082**	**251.257**	**(79.752)**	**(7.251)**	**1.495.112**
Cost	10.445	861.880	(204)	**-**	872.121	460.118	36.414	251.257			1.619.910
Impairment	(7.517)	-	-	-	(7.517)		(452)				(7.969)
Amortization	(2.083)	-	204	(27.067)	(28.946)		(880)		(79.752)	(7.251)	(116.829)

Consolidated

(a) As described in Note 1, the Company paid a subscription bonus in the amount of R$ 778.

(b) On May 28, 2020, subsidiary 3R Macau concluded its acquisition of the Macau cluster for the amount of US$ 191,103. Considering the installments paid to Petrobras upon the signing and closing of the Sales and Purchase Agreement, the total amount of the transaction came to R$ 861,880. As of December 31, 2021, 3R Macau acquired the remaining 50% of the Sanhaçu field, as per Note 1. Considering the amounts paid under the agreement signed with Petrogal, the amount of the transaction totalled R$ 33,720. As of December 31, 2021, the Company's Management has not identified indications that could lead to the need for conducting impairment testing.

(c) On July 15, 2021, subsidiary 3R RV concluded the acquisition of the Rio Ventura Cluster for the amount of US$ 94,203 (R$ 520,550), with (i) US$ 3,800 (R$ 20,689) having been paid to Petrobras upon signing; (ii) US$ 31,200 (R$ 176,920) upon the closing of the Sale and Purchase Agreement for the Rio Ventura Cluster; (iii) US$ 16,000 (R$ 87,277) to be paid in 30 months after transaction closing; and (iv) US$ 43,203 (R$ 235,664) to be paid -- as provided under the agreement -- as contingent payments pegged to the Brent oil price benchmark, in the event the mobile average thereof is at least US$ 48 and US$ 58 per barrel, respectively, gauged in a 12-month period at any time as from conclusion of acquisition of the assets. Upon closing of the acquisition of the Rio Ventura Cluster, the Company's Management calculated – based on economic-financial models -- that it was probable that the mobile average of the Brent benchmark price would be higher than US$ 58 per barrel over a 12-month period and, therefore, it considered that the amount of R$ 235,664 would be due in August of the year 2022. Included in the acquisition amount of R$ 520.549 were installations and equipment tagged at R$ 95,034, which have been classified as fixed assets, as per Note 15. The adjustment to present value recorded for item (iii) above, R$ 87,277, to be paid in 30 months after transaction closing, was R$ 3,377, considering a discount rate of 7.59% p.a. Accordingly, the amount recognized under intangible assets is R$ 422,582.

(d) On November 1, 2021, the Company concluded the process of its acquisition of Duna. The net intangible assets recorded in Duna's balance sheet as of the acquisition date refer to the assignment of the right to use the Ponta do Mel and Redonda fields that were acquired by the Company from Petrobras, which acquisition occurred in June of 2020, in the amount of R$ 35,082. The fair value of the intangible assets calculated as of the date on which the Company acquired control of Duna generated value added in the amount of R$ 251,257. The total amount of Duna's net intangible assets as of November 1, 2021 totaled R$ 286,339.

17. Amounts Payable to Operator

	Parent company		Consolidated	
	2021	2020	2021	2020
Petrobras	1,585	1,676	1,429	896
	1,585	**1,676**	**1,429**	**896**

The above amounts payable to operator Petrobras were incurred in the following blocks relating to services and inputs that were acquired in the normal course of business: Pescada and Arabaiana, REC-T-194, REC-T-208, REC-T-225, REC-T-239, REC-T-240, REC-T-253 and REC-T-254. (The latter 7 blocks with the "REC" prefix are 3R OG blocks in the Recôncavo Basin in Bahia. The operator approves an annual budget that is shared with the partners and the amounts are charged every month. The outstanding balance refers to amounts that will be paid by the Company.

18. Debentures

Debentures at subsidiary 3R Macau

Issue of debentures under the Deed for the Second Issue of simple non-share-convertible debentures of the Mortgage Guaranty type, in a single series with the following characteristics ("BTG Debentures"):

Holder of Debentures – Planner Trustee Distribuidora de Títulos and Valores Mobiliários Ltda.
Total issue amount - R$ 708,071
Quantity – 708,071
Unit value – R$ 1 (one thousand Brazilian Reais) as of the issue date
Issue date – May 27, 2020
Due date - April 27, 2025
Payment of interest – Quarterly and monthly as from the 25th month
Guarantee – chattel mortgage of shares, chattel mortgage of receivables, pledge of rights derived from concession agreements and pledge of oil and gas production
Early Payment – after the 24th month from the issue, the Company can amortize the outstanding amount in either a total or partial manner
Remuneration – The face value will be subject to monetary restatement at the amount of the closing quotation for sale of the US$ by the Brazilian Central Bank (BACEN). The interest on the updated face value will be charged at a rate of 15.00% p.a., with the effective rate being 18.65% once the transaction costs are discounted.

On the last business day of 2021 (December 30), payment of these debentures took place. The amount paid for settlement of this debenture issue was R$ 782,257, including principal, cumulative interest by way of remuneration to the debenture-holder and prepayment costs as set out in the respective agreement.

Debenture at subsidiary Duna
Issue of debenture under the Deed for the First Issue of one simple non-share-convertible debenture of the Mortgage Guaranty type, in a single series with the following characteristics ("BTG Duna Debentures"):

Holder of debenture – BTG Pactual Services Financeiros S.A.
Total issue amount - R$ 41,124
Quantity – 1
Unit value – R$ 41,124 as of the issue date
Issue date – September 21, 2021
Due date – November 1, 2024
Payment of interest – Quarterly
Guarantee – chattel mortgage of all shares and pledge of rights derived from concession agreements
Early payment – at any time, the Company can amortize the outstanding amount in either a total or partial manner
Remuneration – The face value will be subject to monetary restatement at the amount of the closing quotation for sale of the US$ by the BACEN. Interest on the updated par value will be charged at a rate of 8.5% p.a., resulting in an effective rate of 8.81% p.a.

	Parent company		3R Macau		Duna		Consolidated	
	12/31/2021	12/31/2020	12/31/2021	12/31/2020	12/31/2021	12/31/2020	12/31/2021	12/31/2020
Opening balance	-	-	**632.785**	-	-	-	**832.785**	-
Issue of BGT debentures	-	-	-	707.209	47.124	-	47.124	707.209
Reimursement of transaction costs	-	-	-	(58.899)	-	-	-	(58.899)
Transaction costs appropriated	-	-	52.027	6.872	-	-	52.027	6.872
Interest appropriated	-	-	105.748	61.655	668	-	106.417	61.655
Interest paid	-	-	(115.852)	(61.107)	-	-	(115.852)	(61.107)
Settlement of principal			(733.694)	-	-	-	(733.694)	-
Monetary updating	-	-	58.986	(22.945)	420	-	59.405	(22.945)
	-	-	-	**632.785**	**48.212**	-	**48.212**	**632.785**
Current liabilities	-	-	-	9.566	673	-	673	9.566
Noncurrent liabilities	-	-	-	623.219	47.539	-	47.539	623.219

The breakdown of the transaction costs incurred is as follows:

	Parent company		3R Macau		Duna		Consolidated	
	12/31/2021	12/31/2020	12/31/2021	12/31/2020	12/31/2021	12/31/2020	12/31/2021	12/31/2020
Opening balance	-		**(52.027)**	-	-	-	**(52.027)**	-
Reserve commission	-	-	-	(57.718)	-	-	-	(57.718)
Issue expenses	-	-	-	(551)	-	-	-	(551)
Settlement expenses	-	-	-	(630)	-	-	-	(630)
Transaction costs	-	-	**(52.027)**	**(58.899)**	-	-	**(52.027)**	**(58.899)**
Costs appropriated	-	-	52.027	6.872	-	-	52.027	6.872
Total	-	-	-	**(52.027)**	-	-	-	**(52.027)**

19. Suppliers

	Parent company		Consolidated	
	2021	**2020**	**2021**	**2020**
Domestic suppliers (a)	2,196	1,581	32,898	22,300
Foreign suppliers	835	-	5,829	145
Suppliers billable	232	-	14,882	-
Total	**3,263**	**1,581**	**53,609**	**22,445**

(a) Increase relating to start-up of operations at the RV Cluster and to the acquisition of Duna. The main balances involve operating services, treatment of crude oil, electric power and equipment.

20. Income tax, social contribution and other taxes payable

	Parent company		Consolidated	
	2021	2020	2021	2020
Federal PIS/Cofins contributions	7	265	6,090	3,100
Federal IRPJ and CSLL taxes	370	-	1,084	1,849
State ICMS tax	-	-	33,248	13,721
Federal WIT (IRRF)	168	770	10,232	5,773
Sundry other taxes and contributions	5	93	1,808	703
	550	**1,128**	**52,462**	**25,146**

21. Accounts payable for assets acquisitions

	Parent company		Consolidated	
	2021	2020	2021	2020
Acquisition of RV cluster (a)	-	-	357,724	-
Acquisition of Duna (b)	34,874	-	34,874	-
Acquisition of Ponta do Mel and Redonda fields (c)	-	-	15,481	-
Acquisition of Sanhaçu (50%) (d)	-	-	15,635	-
	34,874	**-**	**423,714**	**-**
Current	-	-	294,391	-
Noncurrent	34,874	-	129,323	-

(a) This item refers to the obligation to pay for the acquisition of the Rio Ventura Cluster, with US$ 16 million (R$ 95,502) to be paid in 30 months after transaction closing, and US$ 43,203 (R$ 263,276) to be paid, as provided under the agreement, by way of contingent payments pegged to the Brent oil price benchmark. In the event the mobile average of the latter is at least US$ 48 and US$ 58 per barrel, respectively, gauged in a 12-month period at any time as from conclusion of acquisition of the assets, updated at the LIBOR and the quotation for the US$ at the closing of the period. The adjustment to present value recognized for the US$ 16 million (R$ 97,502) to be paid in 30 months after transaction closing was R$ 3,054, considering a discount rate of 7.54% p.a. Accordingly, the remaining amount to be paid for acquisition of the RV Cluster as of December 31, 2021 is R$ 357,724.

(b) This refers to the contingent portion to be paid for the acquisition of Duna in the amount of up to US$ 7 million (R$ 39,686), less the present value adjustment at the time of acquisition in the amount of R$ 3,722, in case the average daily price of the Brent benchmark between August 2, 2021 and December 31, 2023 is higher than US$ 55 per barrel [for calculation purposes, payment of US$ 4.66 thousand will be due for every cent (US$ 0.01) per barrel of the average Brent oil price that exceeds this minimum in the pre-established period, limited to US$ 7 million], considering a discount rate of 7.54% p.a. Thus, the amount remaining to be paid for the acquisition of Duna as of December 31, 2021 is R$ 34,874.

(c) This refers to the obligation to pay for the acquisition of the Ponta do Mel and Redonda fields previously belonging to Duna Such acquisition took place in July, 2020, and involved a total amount of US$ 7.2 million (R$ 38,513), broken down into 4 installments: US$ 200 thousand on July 15, 2020, US$ 2.8 million on November 17, 2020, US$ 2.1 million on April 11, 2021, and a final US$ 2.1 million on January 6, 2022, updated at a fixed rate of 9% p.a. Hence, the remaining amount to be paid to Duna for the acquisition of the Ponta do Mel and Redonda fields as of December 31, 2021 is R$ 15,481.

(d) Reference here is to the obligation to pay for the acquisition by 3R Macau of the remaining 50% of the Sanhaçu field, which occurred as of December 31, 2021. The two US$ 1.4 million installments due will be paid in 6 and 12 months, counting from the transaction closing, for a total in Brazilian currency of R$ 16,064, updated at the monthly LIBOR rate. Accordingly, the remaining amount to be paid for this acquisition as of December 31, 2021 is R$ 15,635.

22. Transactions with Related Parties

The changes in the balances of borrowings and loans payable and receivable involving the Company and the associated profits or losses refer to the settlement of intercompany loan agreements, reimbursement of expenses and paying in of capital, as shown in the following two tables:

Accounts payable

	3R OG	3R Offshore	Total
Balances as of January 1, 2020	**-**	**41,526**	**41,526**
3R Pescada	-	(41,526)	(41,526)
3R Macau	517	-	517
Balances as of December 31, 2020	**517**	**-**	**517**
3R Macau	11,718	-	11,718
3R Duna	20,049	-	20,049
3R Potiguar	250	-	250
Balances as of December 31, 2021	**32,534**	**-**	**32,354**

Accounts receivable

	3R OG	3R Offshore	Total
Balances as of January 1, 2020	**-**	**-**	**-**
3R Macau	645	-	645
Balances as of December 31, 2020	**645**	**-**	**645**
3R Macau	(643)	-	(643)
Balances as of December 31, 2021	**2**	**-**	**2**

Remuneration of key personnel

Under Brazil's Corporation Law (No. 6.404/76) and 3R OG's Bylaws, it is the responsibility of share-holders at their General Meeting to set the total amount for the annual remuneration of administrators, with the Board of Directors carrying out the distribution of the funds among the administrators.

The Company is managed by a Board of Directors made up of at least 5 (five) and no more than 11 (eleven) members, all elected and dismissible by the General Meeting of Shareholders, with a unified term of office of 2 (two) years. The Board of Directors in turn appoints an Executive Officers Committee made up of at least 3 (three) and no more than 7 members, one a President & CEO, another an Investor Relations Office, yet another a CFO and the rest without specific designation. The total annual remuneration of the members of the Board of Directors and Executive Officers Committee for the years ended December 31, 2021 and 2020 is set out in the following table:

	2021	2020
Remuneration and benefits	24,549	31,044
Payroll charges	4,749	5,427
Total	**29,343**	**36,471**

As of December 31, 2021 and 2020, the Company's Executive Officers Committee is made up of 9 (nine) officers.

23. Provision for abandonment

The amounts of the provision for the asset retirement obligation (ARO) are measured according to the project concession term and are brought to present value for purposes of initial recognition. The ARO liability is updated annually or when there is objective evidence that its value may be materially inadequate. Revisions in the basis for calculation of the estimates of the expenditures are recognized as cost of the fixed assets and the effects of the passage of time (denominated reversal of discount) in the model for calculation of the future obligation are allocated directly to results for the year (net financial results).

The changes in the balance of the provision for ARO are shown in the following table:

	Parent company		Consolidated	
	2021	2020	2021	2020
Opening balance	-	-	**282,841**	**106,630**
Setting up of provision - 3R Macau (a)	-	-	-	135,411
Setting up of provision - 3R RV (b)	-	-	155,369	-
Setting up of provision for Duna on acquisition (c)	-	-	18,631	-
Review of premises - 3R Pescada (d)	-	-	(5,264)	(21,486)
Review of premises - 3R Macau (e)	-	-	(36,358)	24,906
Review of premises – 3R Rio Ventura (f)	-	-	(14,805)	-
Review of premises – Duna (g)	-	-	(9,152)	-
Updating of provision for ARO	-	-	13,860	6,535
Translation adjustment - 3R Pescada	-	-	8,842	30,845
	-			
Saldo final	-	-	**413,964**	**282,841**

(a) This amount refers to the estimate of initial costs associated with the retirement of the assets at the end of operations in 2052, including the total amount of R$ 68,857 to be reimbursed by Petrobras to the Company by way of sharing the cost of the decommissioning of determined wells and rigs.

(b) This amount refers to the estimate of costs associated with the retirement of the assets at the end of operations in 2046, including the total amount of R$ 171,220 to be reimbursed by Petrobras to the Company by way of sharing the cost of the decommissioning of determined wells. The discount rate used was 5.41% p.a.

(c) As concerns this amount, the reference here is to the estimated costs associated with retirement at the end of the operation in 2052, recorded by the Company as of the Duna acquisition date. The discount rate used was 3.50% p.a.

(d) The provision for ARO for Pescada and Arabaiana is linked to the estimated termination of operations in 2046. As of December 31, 2020, the discount rate was revised to 4.34% p.a. Even so, as of December 31, 2021, 3R OG's Management identified the need to alter the premises used in the calculations made as of December 31, 2020, adjusting the discount rate to 4.63% p.a. and altering the estimated costs of retirement as well.

(e) The discount rate of the provision for ARO for the Macau Cluster was revised from 5.73% p.a. as of May 28, 2020, the date on which Company operations began at such cluster, to 5.03% p.a. as of December 31, 2020, and the estimated restated cost for inflation. As of December 31, 2021, Management identified the need to alter the premises used in the calculation made as of the previous year-end, altering both the discount rate (changing it to 4.71%) and the estimated costs of retirement.

(f) The provision for ARO of the Rio Ventura asset is based on the estimated termination of operations in 2046. As of December 31, 2021, Management identified the need to alter the premises used in the calculation made in July of 2021, revising the discount rate (to 4.63% p.a.) and the estimated costs of retirement too.

(g) In the case of Duna, the provison for ARO is calculated based on the estimated termination of operations in 2052. As of December 31, 2021, the Company's Management identified a need to change the premises used in its previous calculation and revised the discount rate to 4.71% p.a.

24. Provision for Contingencies

The Company and its subsidiaries are parties to lawsuits of a civil, tax and labor nature where the likelihood of loss, based on the opinions of its internal and external legal counsel, is ranked as probable. Further based on the opinions of these attorneys, Management considers that the provision for losses recorded is sufficient to cover probable losses, as shown below:

	Parent company		Consolidated	
	2021	**2020**	**2021**	**2020**
Labor	2,855	706	2,855	706
Civil	-	-	693	254
	2,855	**706**	**3,548**	**960**

As of December 31, 2021, the Company and its subsidiaries are involved in lawsuits of a civil, labor, tax and sundry nature where the likelihood of losses is ranked as possible by Management and its legal counsel, amounting to about R$ 56,646 (R$ 53,298 as of December 31, 2020).

The following table shows the amounts involved in cases ranked as possible losses, as backed up by the appraisal of the Company's external legal counsel:

	Consolidated	
	2021	**2020**
Civil	1,882	940
Labor	12,208	10,238
Tax (a)	42,555	41,658
Sundry other cases	-	462
	56,645	**53,298**

(a) The Company is also a defendant in an administrative proceeding filed by the Brazilian Federal Treasury against 3R Offshore, the object of which is the drawing up of 11 (eleven) assessment notices for purported omission of revenues from investments in marketable securities in the calculation of IRPJ and CSLL, arising from triggering events for the periods from October, 2001 to July of 2003, in the amount of R$ 33,053 as of December 31, 2021 (R$ 33,053 as of December 31, 2020). Moreover, the Company is also defendant in another administrative proceeding filed by the Federal Treasury against 3R Pescada, in the amount of R$ 5,103 as of December 31, 2021 (R$ 4,970 as of December 31, 2020), relating to an assessment notice served on it due to disallowal of the deductibility of operating

expenses on the grounds that the subsidiary did not submit appropriate documentation vouching for such expenses.

25. Leases

Leases - Liabilities

	Parent company	Consolidated
Balances as of January 1, 2020	**1,608**	**1,608**
Lease payments	(56)	(412)
Interest recognized in results for year	47	91
Transfer to 3R Macau	(1,599)	-
Balances as of December 31, 2020	**-**	**1,287**
Additions of leases (a)	6,550	24,894
Lease payments	-	(761)
Interest recognized in results for period	-	305
Balances as of December 31, 2021	**6,550**	**25,725**
Current	1,135	6,690
Noncurrent	5,415	19,035

(a) In February 2021, the lease agreement for the administrative building with 3R Macau was readjusted by R$ 188 according to the contractual provision for the lease, the lease liability installments will expire on December 31, 2022. In March 2021, 3R Macau signed a shed rental agreement, in the municipality of Macau, in the state of Rio Grande do Norte, for the purpose of an equipment workshop and material storage, in the amount of R$ 149, which will expire on September 30, 2023. Also in March 2021, 3R RV signed a property lease agreement for an operational base in the municipality of Catu, in the state of Bahia, in the amount of R$ 793, due on January 31, 2026. In June 2021, 3R Macau signed an equipment lease agreement for the implementation of a thermoelectric power plant, in the amount of R$ 16,554, which expires in June 2024. In September 2021, 3R OG signed rental agreement with Fundação Getúlio Vargas refer located on the 16th floor of the building, in the amount of R$ 6,550, due on August 11, 2026, still in September 2021. 3R Offshore signed a property lease agreement for administrative base in the municipality of Vitória, in the state do Espírito Santo, in the amount of R$ 660, due in August 2024.

Right-of-use

	Parent company	Consolidated
	Properties	Properties
Balances as of January 1, 2020	**1,654**	**1,654**
Depreciation	(47)	(415)
Transfer to 3R Macau	(1,607)	-
Balances as of December 31, 2020	**-**	**1,239**
Lease additions	6,550	24,759
Depreciation	-	(508)
Balances as of December 31, 2021	**6,550**	**25,490**

As of December 31, 2020, the Company had a lease agreement for rental of its registered offices, the main one of which refers to office rental and has a lease term of 48 months. The amount recognized was measured by discounting the remaining minimum contractual payments to present value, using the average discount rate of 10.15 %. In March of 2021, there were additions to leases at 3R RV and 3R Macau, relating to rental of the property for an operational base, with a lease term of 60 months, as well as rental of a warehouse for storage of equipment and supplies, with a term of 31 months, using the respective average discount rates of 11.60% and 11%. In June of 2021, there was a lease addition at 3R Macau, relating to lease of equipment for implementation of a thermoelectric power plant; such lease calls for a term of 36 months and uses a discount rate of 11.80%. Finally, in September of 2021, there was a lease addition at 3R OG, relating to the rental of the 16th floor of the building, with a lease term of 60 months and a discount rate of 14.35%.

26. Equity

Paid-in capital

As of January 1, 2020, the Company's paid-in capital stood at R$ 327,267, divided into 42,806,662 shares.

In February of 2020, Ônix acquired 100% of the Company's shares from Angel Fundo de Investimento em Participações Multiestrategia, decreasing the paid-in capital by R$ 687.

On August 31, 2020, the Company's General Meeting of Shareholders approved the proposal of Management to group shares in the proportion of 1/36. Hence, the paid-in capital remained at R$ 326,580, divided into 1,189,074 common registered shares without par value.

On November 9, 2020, the reverse merger of 3R Participações S.A., a subsidiary company, occurred, involving the same economic group. This event increased the Company's capital by R$ 263,308, with 60,741,863 common shares being issued. Next, there was a roll-up of the shares of DBO, the former shareholder of 3R Macau, which upon the reverse merger became a Company shareholder, increasing its capital by R$ 68,730 with the issue of 4,716,262 new common shares.

Also on that same date in November, 2020, Management approved a capital increase at the Company in the amount of R$ 600,000, with R$ 480,000 being intended for the paid-in capital account and R$ 120,000 intended for the capital reserve account, with issue of 28,571,429 new common shares pursuant to the IPO.

Then, on December 11, 2020, there was exercise in full of the option for supplementary shares arising from the IPO carried out by the Company on November 13, 2020, increasing the paid-in capital by R$ 90,000 with issue of 4,285,714 new common shares.

As of December 31, 2020, the Company's paid-in capital was distributed as follows:

Shareholders	Paid-in capital	Number of shares	Percentage equity interest
FIP 3R	140,155	31,757,365	29.010%
FIP Esmeralda	103,759	23,517,759	21.477%
Starônix	325,991	1,189,074	1.086%
DBO	68,730	14,716,262	13.439%
Other shareholders	589,983	38,323,882	34.988%
	1,228,618	**109,504,342**	**100%**

On March 30, 2021, Management approved an increase in the Company's paid-in capital, in the amount of R$ 822,797, with R$ 559,502 intended for the Company's capital account and R$ 263,295 intended for its capital reserve account, with issue of 22,855,500 new common shares pursuant to the supplementary public offering of shares (OPCA).

Later in 2021, on October 29, Management approved a capital incease in the amount of R$ 190,396, with issue of 4,533,236 common registered shares without par value, as a means of payment of part of the amount owed for the acquisition da Duna.

Slightly less than a week later, on November 4, 2021, Management approved a much larger capital increase, in the amount of R$ 2,168,100, with issue of 65,700,000 new common shares, pursuant to the additional supplementary public offering of shares (OPCA II).

As of December 31, 2021, 3R OG's paid-in capital was distributed as follows:

Shareholders	Paid-in capital	Number of shares	Percentage equity interest
FIP 3R	97,178	22,787,130	11.2%
FIP Esmeralda	87,675	19,872,259	9.8%
BTG Pactual	437,085	14,620,423	7.2%
Gerval Investments	298,028	12,113,829	6.0%
Other shareholders	3,226,650	133,199,437	65.8%
	4,146,616	**202,593,078**	**100%**

Capital reserve

On March 31, 2021, when Company Management approved the capital increase cited above, purusant to the OPCA, in the amount of R$ 822,798, it also allocated R$ 263,296, to the capital reserve account.

The transaction costs incurred to carry out this event, in the amount of (R$ 39,118), were recorded as capital reserve for absorption of the premium arising from the subscription of shares.

Company Management's approval, on October 29, 2021, of the capital increase in the amount of R$ 190,396, with issue of 4,533,236 common registered shares without par value, as a means of payment of part of the amount owed for the acquisition da Duna.. This price was equivalent to the approximate simple average of the closing price of 3R OG's shares in the 10 (ten) days prior to June 18, 2021, as provided in Article 170, paragraph 1, item III, of the Brazilian Corporation Law. However, on November 1, 2021, when the Company concluded the acquisition of Duna, the price of each of its share on the Brazilian stock market was down to R$ 34.80 (thirty-four Reais and eighty centavos), so the market value of the 4,533,236 dipped to R$ 157,757. The difference between the value of the shares as of the issue date and that upon conclusion of the Duna acquisition constitutes an adjustment to the market value upon issue thereof, in the amount of R$ 32,639.

On November 4, 2021, upon the occasion of OPCA II, transaction costs for carrying out this event were incurred in the amount of (R$ 79,905).

As of December 31, 2021, the amount recorded referring to transactions with share-based payments is R$3,343.

In 2021, the Company's Management approved the second, third and fourth share-based payment programs, in which the Company grants its Managers and certain Company employees (granted) options to purchase 3,346,961 Company shares. Each option grants the right to acquire a registered common share with no par value, not creating an obligation for the grantee to exercise the options granted by the Company.

The stock options granted will become exercisable gradually over four years, in the period between August 31, 2020 and August 31, 2024, and on August 31, 2022, the grantee will be able to exercise the option to 50% of its vested shares and the option of 25% of its vested shares on August 31, 2023 and 2024, respectively.

The option exercise price is R$ 15.75 reais and the grantees must pay the corresponding exercise price in a single installment in cash, as a condition of receiving the shares.

As of December 31, 2021, the fair value of granting share-based payment agreements granted to employees is R$3,343.

As of December 31, 2021, the Company's capital amounts to R$ 114,976.

Accumulated translation adjustment

In the line item entitled "Accumulated translation adjustment", the Company has recorded the amount of R$ 6,872 for the year ended December 31, 2021 (R$ 100,501 as of December 31, 2020). This is the result of translation of the translation of the functional currency of subsidiaries 3R Pescada and 3R Offshore from US$ to the group's R$ functional and reporting currency, for a total balance of R$ 115,852 at year-end 2021 (R$ 108,980 as of December 31, 2020).

Dividends

The Company's Bylaws call for a minimum mandatory dividend of 0.0001%, and distribution of additional profits is to be decided by the shareholders after their meeting. No Company dividends have been distributed in relation to either December 31, 2021 or December 31, 2020.

27. Operating Segments

Operating segments are defined as components of an entity for which separate financial statements are available and are regularly appraised by the principal operational decision-maker, in order to allocate resources in the appraisal of the performance of the managers of a determined segment. Based on this definition, the Company has a single operating segment, which is exploration and production of oil and gas (O&G E&P). Therefore, it is not presenting segmented information.

28. Net Revenues

	Parent company		Consolidated	
	2021	2020	2021	2020
Gross oil revenues	-	-	924,469	234,873
Deductions (taxes) from revenues	-	-	(229,294)	(62,989)
Net oil revenues	**-**	**-**	**695,175**	**171,884**
Gross gas revenues	-	-	45,063	41,539
Deductions (taxes) from revenues	-	-	(12,439)	(9,169)
Net gas revenues	**-**	**-**	**32,624**	**32,370**
Total Net Revenues	**-**	**-**	**727,799**	**204,254**

The Company's consolidated net revenues are derived from the Pescada and Arabaiana fields, the Macau Cluster, the Rio Ventura Cluster, and the Ponta do Mel and Redonda fields previously belonging to Duna. Petrobras is the 3R OG group's its sole customer.

For the year ended December 31, 2021, the Company's net revenues, when compared with the amounts recorded for the year ended December 31, 2020, are impacted by the operations of the Macau Cluster, which began on May 28, 2020, by the Rio Ventura Cluster, which started up July 15, 2021, and by the acquisition of the Ponta do Mel and Redonda fields acquired from Duna as from November 1, 2021 (R$ 11,598).

29. Cost of Products Sold

	Parent company		Consolidated	
	2021	2019	2021	2020
Operating costs	-	-	(16,966)	(12,592)
Maintenance and repair costs	-	-	(4,358)	(862)
Rental of area	-	-	(10,831)	(1,263)
Oil and gas royaltes	-	-	(78,670)	(20,180)
Depreciation and amortization	-	-	(110,195)	(38,253)
Water treatment and electric power	-	-	(30,236)	(12,064)
Outsourced services	-	-	(58,212)	(16,459)
Petroleum risks insurance	-	-	(976)	(3,235)
Personnel costs	-	-	(5,887)	-
Sundry other costs	-	-	(3,199)	(1,327)
	-	**-**	**(319,530)**	**(106,235)**

For the year ended December 31, 2021, the Company's cost of products sold (CPS), when compared with the amounts recorded for the year ended December 31, 2020, are impacted by the operations of the Macau Cluster, which began on May 28, 2020, by the Rio Ventura Cluster, which started up July 15, 2021, and by the acquisition of the Ponta do Mel and Redonda fields acquired from Duna as from November 1, 2021.

30. General and Administrative Expense (G&A)

	Parent company		Consolidated	
	2021	2020	2021	2020
Fees paid to officers and board members	(2,504)	(2,104)	(11,232)	(4,036)
Salaries and payroll charges	(976)	(1,342)	(57,390)	(19,360)
Annual bonus	(156)	-	(29,092)	-
Premium and bonus pegged to the IPO	-	-	-	(9,994)
Share-based payment transactions	(3,343)	-	(3,343)	-
Employee benefits	(31)	(97)	(7,047)	(2,051)
Office rental and maintenance	(526)	-	(1,171)	-
Outsourced services	(11,015)	(1,915)	(20,019)	(12,387)
Depreciation and amortization	(145)	(141)	(7,173)	(1,380)
Provision for contingencies	(2,150)	711	(2,857)	457
Cost sharing	-	973	-	-
Tax expenses	(968)	(816)	(2,263)	(2,840)
Software and hardware maintenance and support	(1,284)	-	(4,301)	-
Travel expenses	(329)	-	(2,985)	-
Insurance	(1,643)	-	(1,651)	(429)
Sundry other expenses	(2,051)	(875)	(9,058)	(7,518)
	(27,121)	**(5,606)**	**(159,582)**	**(59,538)**

For the year ended December 31, 2021, the Company's G&A overhead expenses, when compared with the amounts recorded for the year ended December 31, 2020, are impacted by the operations of the Macau Cluster, which began on May 28, 2020, by the Rio Ventura Cluster, which started up July 15, 2021, and by the acquisition of the Ponta do Mel and Redonda fields acquired from Duna as from November 1, 2021.

31. Other Operating (Expenses) / Revenues

	Parent company		Consolidated	
	2021	2020	2021	2020
Expenses on operator (a)	-	-	430	(42,838)
Petroleum risks insurance	(1,914)	-	(1,914)	-
Provision for abandonment – 3R Pescada	-	-	5,264	21,486
Accumulated translation adjustment – 3R Offshore	-	-	-	(5,803)
Sundry other expenses / revenues	(6,132)	(1,666)	2,159	(16,923)
	(8,046)	**(1,666)**	**5,939**	**(44,078)**

(a) Amount paid to the former owner relating to the agreement for sale of 3R OG in the amount of R$ 29,454 and rendering of accounts to Petrobrás in the amount of R$ 7,323 and R$ 6,061 regarding the return of blocks B-CAM-40, sale of Camarupim and others.

31.1 Impairment (loss)/reversal

	Parent company		Consolidated	
	2021	2020	2021	2020
Pescada and Arabaiana (a)	-	-	47,158	(46,130)
Camarão (b)	-	-	113,261	(113,505)
Fazenda Pinaúna (c)	-	-	-	(7,120)
	-	**-**	**160,419**	**(166,755)**

(a) Reversal of the impairment set up in relation to the cash generating unit (CGU) that constitutes the Pescada and Arabaiana fields, considering the forecast rise of US$ 14.30 (or 28.2%) in the average per-barrel price for Brent oil for the entire period appraised (up to the year 2046), and projected increase of US$ 17 per barrel (or 32,6%) for the same world-wide benchmark price in the forthcoming five years (up to 2026), using the discounted cash flow technique for determination of the value in use of this asset. The amount of the impairment set up for this CGU as of December 31, 2020, was R$ 46,130.

(b) Reversal of the impairment previously recorded with respect to the Camarão field CGU, considering a new business model for Manati whereby the rig covers all its operating costs with storage hub services. This business model provides flexibility for the system and additional gains for sale of gas to the final consumer. There has been a projected rise of US$ 7.80 per barrel (or 13.7%) in the average Brent oil price for the entire period appraised (up to the year 2046); and a forecast increase of US$ 8.80 per barrel (or 14.6%) for the forthcoming 5-year period (up to 2026), a noteworthy upward trend. The price of gas (measured in US$/mmbtu) has been conservatively estimated at 8.2% of the Brent oil barrel price, with the benchmark used being based on the current agreement between the Peroá field and Petrobras. Accordingly, in 2025 (the year the field is slated to start operating) the price of gas has been estimated at US$ 5.4/mmbtu (assuming a Brent price at US$ 65.8/bbl). This has all resulted in reversal of the impairment recorded as of December 31, 2020, in the amount of R$ 113,505 as of December 31, 2020, using the discounted cash flow technique for determination of the value of this CGU in use.

(c) Impairment recorded in relation to the Fazenda Pinaúna CGU, involving an out-of-court settlement to wind up case 0179509-24.2016.8.19.0001, in which was appraised at R$ 15,000, determining impairment of R$ 7,120.

32. Financial Income and Expenses

	Parent company		Consolidated	
	2021	2020	2021	2020
Financial Revenues				
Yields from marketable securities	186,304	223	197,894	8,103
Updating of deposits in court	4	3	4	3
Monetary updating – Debentures	-	-	-	51,337
Exchange variation – Interest on debentures	-	-	3,503	-
(Less) Taxes	(8,670)	(12)	(6,869)	(2,747)
Present value adjustment	598	-	598	-
Net exchange variation	14,568	-	769	-
Gains on hedge operations	-	-	-	14,151
Sundry other financial revenues	145	23	1,173	4,220
	192,949	**237**	**197,072**	**75,067**

	Parent company		Consolidated	
	2021	2020	2021	2020
Financial Expenses				
Increase in provision for ARO	-	-	(13,860)	(6,621)
Interest – Borrowings	-	-	(549)	-
Interest – Leases	-	(6)	(305)	(98)
Interest – Debentures	-	-	(199,649)	(61,807)
Monetary variation – Debentures	-	-	(61,105)	(28,392)
Monetary variantion – Acquisition of Rio Ventura	-	-	(7,215)	-
Losses on hedge operations	-	-	(213,270)	(52,768)
Losses on marketable securities	(137,709)	-	(139,238)	-
Accumulated translation adjustment	-	-	(17,530)	-
Present value adjustment	-	-	(323)	-
Net exchange variation	-	(19,339)	-	(45,989)
Sundry other financial expenses	(1,226)	(59)	(3,655)	(8,670)
	(138,935)	**(19,404)**	**(656,699)**	**(204,345)**
Net Financial Results	**54,014**	**(19,167)**	**(459,627)**	**(129,728)**

33. Basic and Diluted Net (Loss) Per Share

As shown in the following table, the calculation of the Company's basic and diluted loss per share was based on the net loss attributed to the holders of common shares and the average weighted number of common shares in circulation after the adjustments for the potential dilutive common shares. There is no difference between the calculation of results per basic and diluted share, due to the non-existence of potential dilutive shares.

	Parent company		Consolidated	
	2021	2020	2021	2020
Loss for the year	(905)	(223,652)	(905)	(259,233)
Average weighted number of common shares	146,675,763	16,244,556	146,675,763	16,244,556
Basic and diluted net loss per share - R$ and centavos	**(0.01)**	**(13.77)**	**(0.01)**	**(15.96)**

34. Financial Instruments and Risk Management

a) Accounting classification and fair values

Insofar as possible, the Company uses observable market data to measure the fair value of assets or liabilities and they are classified considering the levels used in the appraisal techniques, as follows:

Level 1	quoted prices (not adjusted) in active markets for identical assets and liabilities.
Level 2	inputs, except the quoted prices included in Level 1, which are observable for the asset or liability, directly or indirectly.
Level 3	inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The following table shows both the carrying and fair values of 3R OG's financial assets and liabilities, including their levels in the hierarchy of fair value, when applicable:

		Parent company		Consolidated	
	Level	2021	2020	2021	2020
Financial assets measured at amortized cost					
Cash and cash equivalents	-	1,529	256,742	118,725	287,942
Marketable securities	-	2,238,099	313,571	2,389,374	417,520
Trade accounts receivable	-	-	-	114,559	44,671
Accounts receivable from related parties	-	2	645	-	-
		2,239,630	**570,958**	**2,622,658**	**750,133**
Financial liabilities measured at amortized cost					
Trade accounts payable	-	3,263	1,581	53,609	22,445
Debentures	-	-	-	48,212	632,785
Accounts payable to related parties	-	32,534	517	-	-
Amounts payable to operator	-	1,585	1,676	1,429	896
Accounts payable for acquisitions	-	34,874	-	423,714	-
Other obligations	-	994	1,864	24,296	24,922
		73,250	**5,638**	**551,260**	**681,048**
Financial liabilities measured at fair value through profit and loss (FVTPL)					
Derivative financial instruments	2	-	-	115,970	34,349
		-	**-**	**115,970**	**34,349**

The carrying amount of the financial assets and liabilities measured at amortized cost shown above are similar to their fair values, owing to their characteristics, with the exception of the debentures. The fair value of the debentures as of December 31, 2021 is R$ 42,248 (R$ 892,179 as of December 31, 2020) (Level 2).

Pursuant to the Company's hedging policy, as required by its main creditor, Management carried out hedge operations for part of its production for the next 12 months. An average price of US$ 60 per barrel was obtained with Non-Deliverable Forward ("NDF") on 3R Macau and average price of US$ 68 per barrel for NDF on 3R Offshore, and a floor of US$50 per barrel for PUTs and a cap of US$ 67 per barrel for CALLs at 3R Macau.

As of December 31, 2021, the hedge agreements provided coverage for the 2,640 thousand barrels expected to be sold in the next 12 months (i.e., the year of 2022).

Instrument	Quantity	Fair value recorded as of December 31, 2021	2020
NDFs	2,052,000	(76,366)	(17,338)
Collars	588,000	(39,604)	(17,011)
Total	**2,640,000**	**(115,970)**	**(34,349)**

As of December 31, 2021 and 2020, the following balances of derivative financial instruments refer to Non-Deliverable Forward ("NDF") operations for hedging against the fluctuation in the benchmark oil price (Brent).

3R Macau

	Quantity (barrels)			Benchmark amount (Notional)		Fair value of NDF position sold		Provision for loss on net provision at fair value	
Instrument	2021	2020	Maturity	2021	2020	2021	2020	2021	2020
NDF	-	-	1/4/2021	-	8.784	-	10.441	-	(1.657)
NDF	-	-	2/1/2021	-	11.251	-	13.394	-	(2.143)
NDF	-	-	3/1/2021	-	11.274	-	13.388	-	(2.114)
NDF	-	-	4/1/2021	-	10.382	-	12.036	-	(1.654)
NDF	-	-	5/3/2021	-	10.411	-	12.008	-	(1.597)
NDF	-	-	6/1/2021	-	7.961	-	9.306	-	(1.345)
NDF	-	55.000	7/1/2021	-	7.996	-	9.274	-	(1.277)
NDF	-	55.000	8/2/2021	-	8.016	-	9.242	-	(1.226)
NDF	-	55.000	9/1/2021	-	8.019	-	9.208	-	(1.190)
NDF	-	55.000	10/1/2021	-	8.036	-	9.176	-	(1.140)
NDF	-	20.000	11/1/2021	-	-	-	-	-	-
NDF	-	20.000	12/1/2021	-	9.567	-	10.414	-	(847)
NDF	90.000	90.000	1/3/2022	24.121	-	37.561	-	(13.441)	-
NDF	10.000	10.000	2/1/2022	3.555	-	4.336	-	(781)	-
NDF	50.000	50.000	2/25/2022	16.203	-	21.549	-	(5.346)	-
NDF	50.000	50.000	4/1/2022	16.088	19.603	21.411	20.751	(5.324)	(1.148)
NDF	55.000	55.000	5/2/2022	18.929	-	23.455	-	(4.526)	-
NDF	55.000	55.000	6/1/2022	19.033	-	23.278	-	(4.245)	-
NDF	100.000	100.000	8/1/2022	37.006	-	41.600	-	(4.594)	-
NDF	143.000	50.000	11/1/2022	19.535	-	19.490	-	(1.178)	-
NDF	93.000	45.000	10/4/2022	37.591	-	37.477	-	(1.262)	-
NDF	96.000	-	12/30/2022	38.309	-	38.516	-	(208)	-
Total	**742.000**	**765.000**		**230.370**	**121.300**	**268.673**	**138.638**	**(40.905)**	**(17.338)**

3R Offshore

Instrument	Quantity (barrels) 2021	Quantity (barrels) 2020	Maturity	Benchmark amount (Notional) 2021	Benchmark amount (Notional) 2020	Fair value of NDF position sold 2021	Fair value of NDF position sold 2020	Provision for loss on net position at fair value 2021	Provision for loss on net position at fair value 2020
NDF	40.000	-	1/31/2022	15.342	-	17.343	-	(2.001)	-
NDF	60.000	-	2/25/2022	22.786	-	25.810	-	(3.114)	-
NDF	60.000	-	3/31/2022	22.639	-	25.773	-	(3.134)	-
NDF	80.000	-	4/29/2022	22.491	-	25.593	-	(3.102)	-
NDF	60.000	-	5/31/2022	22.368	-	25.401	-	(3.034)	-
NDF	70.000	-	6/30/2022	26.754	-	29.314	-	(2.560)	-
NDF	70.000	-	7/29/2022	26.617	-	29.076	-	(2.459)	-
NDF	80.000	-	8/31/2022	31.685	-	33.113	-	(1.427)	-
NDF	100.000	-	9/30/2022	38.721	-	41.133	-	(2.413)	-
NDF	100.000	-	10/31/2022	38.423	-	40.818	-	(2.395)	-
NDF	100.000	-	11/30/2022	38.227	-	40.513	-	(2.286)	-
NDF	100.000	-	12/29/2022	37.801	-	40.221	-	(2.420)	-
NDF	50.000	-	1/2/2023	19.171	-	20.061	-	(890)	-
NDF	80.000	-	21/2023	23.284	-	23.912	-	(629)	-
NDF	60.000	-	3/1/2023	23.101	-	23.776	-	(674)	-
NDF	60.000	-	4/3/2023	22.932	-	23.627	-	(695)	-
NDF	60.000	-	5/2/2023	22.914	-	23.486	-	(572)	-
NDF	60.000	-	6/1/2023	22.591	-	23.346	-	(755)	-
NDF	60.000	-	7/3/2023	22.316	-	23.218	-	(902)	-
Total	**1.310.000**	**-**		**500.173**	**-**	**535.634**	**-**	**(35.462)**	**-**

As of December 31, 2021 and 2020, the balances of the derivative financial instruments set out below refer to operations involving options and collars without cost for 3R Macau, for protection against fluctuations in the benchmark oil price (Brent).

Instrument	Quantity (barrels) 2021	Quantity (barrels) 2020	Maturity	Fair value of PUT options for positions bought 2021	Fair value of PUT options for positions bought 2020	Fair value of CALL options for positions sold 2021	Fair value of CALL options for positions sold 2020	Provision for loss on net position at fair value 2021	Provision for loss on net position at fair value 2020
Collar	-	-	4/1/2021	-	64	-	(1.351)	-	(1.287)
Collar	-	-	5/3/2021	-	109	-	(1.442)	-	(1.333)
Collar	-	-	6/1/2021	-	154	-	(1.473)	-	(1.319)
Collar	-	44.000	7/1/2021	-	201	-	(1.511)	-	(1.310)
Collar	-	44.000	8/2/2021	-	222	-	(1.590)	-	(1.368)
Collar	-	44.000	9/1/2021	-	239	-	(1.617)	-	(1.378)
Collar	-	43.000	10/1/2021	-	241	-	(1.626)	-	(1.385)
Collar	-	80.000	11/1/2021	-	636	-	(3.620)	-	(2.984)
Collar	-	80.000	12/1/2021	-	719	-	(2.761)	-	(2.042)
Collar	10.000	10.000	1/4/2022	-	-	(913)	(618)	(913)	(618)
Collar	100.000	100.000	2/1/2022	0,04252	-	(12.055)	(937)	(12.055)	(937)
Collar	50.000	50.000	3/1/2022	13,10827	17	(5.476)	(1.067)	(5.463)	(1.050)
Collar	60.000	60.000	4/1/2022	146,32782	-	(5.266)	-	(5.120)	-
Collar	55.000	55.000	5/2/2022	228,58139	-	(3.614)	-	(3.386)	-
Collar	55.000	55.000	6/1/2022	343,1726	-	(3.960)	-	(3.616)	-
Collar	110.000	110.000	7/1/2022	1209,582	-	(4.723)	-	(3.513)	-
Collar	98.000	98.000	9/1/2022	1633,2709	-	(4.979)	-	(3.346)	-
Collar	50.000	50.000	10/1/2022	971,75391	-	(3.163)	-	(2.192)	-
Total	**588.000**	**923.000**		**4.546**	**2.602**	**(44.149)**	**(19.613)**	**(39.604)**	**(17.011)**

b) Management of financial risks

The Company is exposed to the following risks resulting from financial instruments:

- Credit risk;
- Liquidity risk; and
- Market risk.

i. Structure of risk management

Company Management has overall responsibility for the establishment and supervision of the structure of risk management.

The risk management policies are established to identify and analyze the risks to which the Company is exposed, to define appropriate limits of risks and controls and to monitor both the risks and adherence to the limits defined.

ii. Credit risk

This risk mainly relates to the Company's cash and cash equivalents and trade accounts receivable. All operations are carried out with banks with renowned liquidity, to minimize their risks. 3R OG's sales policy is directly associated with the level of credit risk to which it is exposed and subject to in the normal course of its business. Company sales are substantially concentrated in Petrobras, which has Baa2 and BB- ratings of Moody's Standard & Poor's and Fitch, respectively. Accordingly, Management considers that the risk of default on its credits is low, since the Company provides basic raw materials for the business of its sole customer (Petrobras).

i. Derivative financial instruments

These derivatives are concentrated at banks and financial institutions that have ratings between AA- and AA+, based on the credit rating agency. Such operations protect the Company's revenues to the tune of 60%, as per the hedge policy approved by Management.

ii. Liquidity risk

This represents the risk of shortfalls of cash and difficulty for the Company in honoring its debts. 3R Petroleum seeks to align the maturity of its debts with the cash generation period to avoid mismatches and generate the need for greater leverage.

The following are the contractual maturities of financial liabilities as of December 31, 2021 and 2020. Such amounts are gross and not discounted and include payments of contractual interest charges, when applicable:

2021					
	Parent company				
	Carrying amount	Up to 1 year	> 1-3 yrs.	> 3-5 yrs.	> 5 yrs.
Financial liabilities					
Trade acccounts payable	3,263	3,263	-	-	-
Related parties	32,534	32,534	-	-	-
Amounts payable to operator	1,585	1,585	-	-	-
Accounts payable for acquisitions	34,874	-	34,874	-	-
Other obligations	994	-	994	-	-

	Consolidated				
	Carrying amount	Up to 1 year	> 1-3 yrs.	> 3-5 yrs.	> 5 yrs.
Financial liabilities					
Trade accounts payable	53,609	53,609	-	-	-
Debentures	48,212	673	32,133	22,500	-
Derivative financial instruments	115,970	115,970	-	-	-
Amounts payable to operator	1,429	1,429	-	-	-
Accounts payable for acquisitions	432,016	310,370	144,018	-	-
Other obligations	994	-	994	-	-

2020					
	Parent company				
	Carrying amount	Up to 1 year	> 1-3 yrs.	> 3-5 yrs.	> 5 yrs.
Financial liabilities					
Trade acccounts payable	1,581	1,581	-	-	-
Related parties	517	517	-	-	-
Amounts payable to operator	1,676	1,676	-	-	-
Other obligations	1,864	81	1,783	-	-

	Consolidated				
	Carrying amount	Up to 1 year	> 1-3 yrs.	> 3-5 yrs.	> 5 yrs.
Financial liabilities					
Trade accounts payable	22,445	22,445	-	-	-
Debentures	632,785	107,494	523,910	337,859	-
Derivative financial instruments	34,349	34,349	-	-	-
Amounts payable to operator	896	896	-	-	-
Other obligations	9,922	494	9,428	-	-

iii. Market risks

These risks involve possible changes in market prices that may affect future cash flows and/or the fair value of the Company's financial instruments.

The market risks are as follows:

- Currency risk (exchange rate);
- Interest rate risk; and
- Price risk.

- **Interest rate risk**

This risk arises from the possibility of the Company incurring losses due to fluctuations in the interest rates, increasing financial expenses relating to intercompany borrowings obtained. Nevertheless, this risk is not considered material for the Company.

iv. Currency risk (exchange rate)

This risk arises from the possibility that the Company may incur losses owing to fluctuations in exchange rates for the US$. All 3R OG's transactions that involve currency risk are recorded in the Company's balance sheet. The Company's treasury invests a material portion of its financial resources available in a multimarket sovereign exchange mutual fund, in that 3R Macau conttracted debt pegged to the US$ as a natural hedge strategy for these investments versus the dollar-denominated debt that was paid on December 30, 2021, as per Note 18. Duna likewise contracted debt pegged to the US$ on September 21, 2021, as Management believes that the decision to invest its available financial resources as described above also applies as a natural hedge strategy for this debt.

The following table sets out the net exchange exposure to which the Company is subject as of December 31, 2021 and 2020:

	Consolidated	
	2021	**2020**
Assets		
Cash and cash equivalents	-	185,943
Marketable securities	2,277,704	298,038
Liabilities		
Trade accounts payable	(5,829)	(145)
Accounts payable for acquisitions	(15,480)	-
Debentures	(48,213)	(684,812)
Total net exchange exposure	**2,208,182**	**(200,976)**

Sensitivity analysis

The Company and its subsidiaries are to present a sensitivity analysis for each type of market risk considered material by Managment, arising from its financial instruments, to which it is exposed.

Reasonably possible appreciation (devaluation) of the R$ against the US$ and all other currencies as of December 31, 2021 would have affected meaandsurement of the financial instruments denominated in foreign currency, and also would have affected shareholders' equity and results in the amounts shown below. This analysis considers that all other variables, especially interest rates, remain constant and ignores any impact of forecast sales and purchases.

		Consolidated			
	Risk	2020	Probable Scenario (I)	Impact of Scenario (II)	Impact of Scenario (III)
Assets					
Marketable securities – US$	Devaluation of US$	2,277,704	2,306,071	2,101,312	1,701,985
Liabilities					
Trade accounts payable	Appreciation of US$	(5,829)	(5,902)	(6,573)	(7,985)
Derivative financial instruments	Appreciation of US$	(115,970)	(117,414)	(130,764)	(158,871)
Debentures	Appreciation of US$	(48,212)	(48,812)	(54,362)	(66,047)
Total net exposure		**2,107,693**	**2,133,943**	**1,909,613**	**1,469,081**

For calculation of the amounts in the above scenarios, the most probable scenario (I) was considered as the projection of the average exchange rate disclosed in the FOCUS report issued by the BACEN for the year ended December 31, 2021 (US$ 1.00/R$ 5.65). In scenario II, this projection is increased by 10% and in scenario III by 20%, both in relation to the probable scenario (I). 3R OG's Management considers that this metric is the most appropriate for the sensitivity analysis of the scenarios presented.

As of December 31, 2020, the scenarios shown below consider the projection of the average exchange rate disclosed in the FOCUS report issued by the BACEN for the year ended December 31, 2020 (US$ 1.00/R$ 5.15). In scenario II, this projection is increased by 10% and in scenario III by 20% (in last year's annual report, the respective projection for scenario II was increased by 25% and for scenario III by 50%).

		Consolidated			
	Risk	2020	Probable Scenario (I)	Impact of Scenario (II) (Δ 10%)	Impact of Scenario (III) (Δ 20%)
Assets					
Cash and cash equivalents - US$	Devaluation of US$	185,943	184,272	165,845	147,418
Marketable securities - US$	Devaluation of US$	298,038	295,360	265,824	236,288
Liabilities					
Derivative financial instruments	Appreciation of US$	(34,349)	(34,040)	(37,444)	(40,848)
Debentures	Appreciation of US$	(684,812)	(678,658)	(746,525)	(814,391)
Total net exposure		**(235,180)**	**(233,066)**	**(352,300)**	**(471,533)**

- **Price risk**

Price risks for the Company arise from changes in oil prices. The operations with derivatives had the exclusive objective of protecting part of the expected results of short-term commercial transactions (up to 12 months).

The following sensitivity table deals with a variation in the Brent price and the effect on shareholders' equity of marking to market and settlement of the NDF and Collar operations, again in 3 (three) scenarios: (i) Probable Scenario, considering the last closing prices on the market for future agreements outstanding; (ii) Scenario II, considering valuation of 10% over the Scenario I prices; and (iii) Scenario III, considering valuation of 20% over the Scenario I prices. The Company's Management considers that this metric is the most appropriate for the sensitivity analysis of the scenarios presented.

Liabilities	Risk	2020	Probable Scenario (I)	Possible Scenario (II) (Δ 10%)	Remote Scenario (III) (Δ20%)
Derivative financial instruments	Brent price increase	(115,970)	(126,182)	(231,184)	(337,499)
Total net exposure		**(115,970)**	**(126,182)**	**(231,184)**	**(337,499)**

The total revenues of 3R Macau, 3R Pescada, 3R RV and Duna involve 95% exposure to fluctuations in the Brent price.

As described in Note 36 (e), (h) and (j), as well as elsewhere in this report, the acquisitions of the Rio Ventura cluster by 3R RV, of the Peroá cluster by 3R Offshore and of Duna may give rise to payment of contingent portions pegged to the Brent price.

35. Insurance Coverage

The Company has a program for management of risks to delimit same, seeking out on the market insurance coverage compatible with its size and the type of operations it conducts. Coverage has been contracted to cover any accidents and claims, considering the nature of its activities, the risks involved in its operations and the guidance of its insurance consultants.

Company Management believes that the amounts insured are sufficient to cover all the risks that may exist.

As of December 31, 2021, the Company has taken out the following main insurance policies from third parties:

Types of insurance	Insured sum	Expiration date
Civil liability	US$ 5 million	8/28/2022
Operational risks	US$ 20 million	8/28/2022
Operator costs	US$ 10 million	8/28/2022
Civil liability - officers / shareholders	R$ 60,000	5/2/2022
Rental security deposit	R$ 6,193	8/11/2026
Property insurance	R$ 34,439	9/27/2022
Posi	R$ 11,125	11/82022

36. Commitments Assumed

The following are the commitments assumed by the Company as of December 31, 2021:

a) Portion of gross overriding royalties: Contingent payment of 3% on the gross revenue accrued by the Company derived from the development of specific exploratory blocks, in the event this should occur during a period of no more than 10 (ten) years.

b) Earn-out installment: Contingent payment linked to the potential for calculating taxable income by 3R Offshore, 3R Candeias and 3R OG, in case there is offsetting of tax losses and negative basis of income tax and social contribution on profit. Under the terms of the purchase and sale agreement signed between the current and the former controlling shareholder if the Company and its Subsidiaries, listed above, take advantage of tax losses, the former controlling shareholder may be entitled to the equivalent amount of up to 30 % of the benefit earned as a result of its use.

c) On July 9, 2020, the Company's subsidiary 3R Pescada signed an agreement for acquisition of 65% of the equity interest held by Petrobras in the Pescada, Arabaiana and Dentão fields. The sale transaction value was US$ 1,500,000.00 (one million, five hundred thousand United States Dollars), to be paid in 2 (two) installments, US$ 300,000.00 (three hundred thousand United States Dollars) upon signing of the agreement and US$ 1,200,000.00 (one million, two hundred thousand United States Dollars) upon transaction closing, without considering the agreed-upon adjustments calculated as from the effective date of January 1, 2020.

d) On August 14, 2020, 3R FZB signed an agreement for outright purchase of the equity interest held by Petrobras in the onshore fields of Fazenda Belém and Icapuí and the Fazenda Belém Cluster, located in the Potiguar basin in the State of Ceará. The acquisition amount is US$ 35,200,000.00 (thirty-five million, two hundred thousand United States Dollars). Out of this total, US$ 8.8 million (R$ 49,000) was paid on the signing date (August 14, 2020) and another US$ 16,400,000.00 (sixteen million, four hundred thousand United States Dollars) will be settled upon the closing of the transaction. Finally, US$ 10,000,000.00 (ten million United States Dollars) is to be paid 12 (twelve) months after conclusion of the transaction.

e) On December 17, 2020, the Company's subsidiary 3R Candeias signed an agreement for purchase of the entire equity interest held by Petrobras in 14 (fourteen) onshore production fields denominated the Recôncavo Cluster, located in the state of Bahia. The total amount of the transaction is US$ 250,000,00 (hundred and fifty million United States Dollars), with (i) US$ 10,000,000.00 (ten million United States Dollars) having been paid in December of 2020; and (ii) US$ 240,000,000.00 (two hundred and forty million United States Dollars) owed upon transaction closing, further such to the fulfillment of conditions precedent, such as approval by the ANP.

f) On January 29, 2021, Company's subsidiary 3R Offshore signed an agreement for acquisition of half (50%) of the equity interest held by Petrobras in the production fields of Peroá and Cangoá and BM-ES-21 (Malombe Discovery Appraisal Plan), jointly denominated the Peroá Cluster, located in the Espírito Santo basin in Southeast Brazil. The total amount of the transaction is US$ 55,000,000.00 (fifty-million United States Dollars), with (i) US$ 5,000,000.00 (five million United States Dollars) having been paid up front; (ii) US$ 7,500,000.00 (seven million, five hundred thousand United States Dollars) owed upon closing of the transaction; and (iii) US$ 42.5 million in contingent payments called for in the agreement, with 50% of the amount to be honored by 3R and 50% by DBO. The contingent payments are divided as follows: (a) US$ 20 million to be paid in case commercial viability of the Malombe field is declared, (b) US$ 12.5 million to be paid if the benchmark Brent price reaches US$ 48 on the average of 12 months at any time as from the operation closing date, and (b.1) renewal of the concession agreements for the fields or (b.2) the occurrence of hypothesis (a) above; and (c) US$ 10 million if the Brent price reaches US$ 58 in the average detailed above.

g) On July 9, 2021, through 3R Petroleum Offshore S.A. ("3R Offshore"), the Company committed itself by signing an agreement for acquisition of the stake held by Petrobras in the Papa-Terra Cluster, which is currently in production and is in the Campos Basin in the State of Rio de Janeiro, including the entire infrastructure and related surface and underwater systems. At present, Petrobras is the operator of the asset with a 62.5% stake, and the rest is held by Chevron Brasil Petróleo Ltda. After conclusion of the transaction, 3R Offshore will become the operator of this field. The total amount of the transaction is US$ 105,600.00 (one hundred and five million, six hundred thousand United States Dollars, with (i) US$ 6,000,000.00 (six million United States Dollars) having been paid upon signing of the agreement for acquisition of the cited asset; (ii) US$ 9,600,000.00 (nine million, six hundred thousand United States Dollars) to be paid on the transaction closing date; and (iii) US$ 90,000,00 (ninety million United States Dollars) in contingent payments. The amounts in question do not consider any adjustments and/or corrections during the period, which may occur after transaction closing. The contingent payments are divided into 11 (eleven) installments, which are conditioned to the benchmark Brent oil price and the operational performance of the assets, as follows: (a) Five (5) installments, which represent 30% (thirty

per cent) of the contingent total, will be due if: (a.i) the Brent price reaches the mobile average of at least US$ 50 in the subsequent 12-month period, and (a.ii) oil production reaches certain cumulative volumes, specific for each installment calculated and effective for the period between January, 2022 and December, 2032; (b) Five (5) installments, representing 54% (fifty-four per cent) of the contingent total, will be due if: (b.i) after adhering to item (a.i) above and (b.ii) the operation achieves certain daily average volumes in the subsequent 12-month period, specific for each installment calculated and effective for the period between January, 2022 and December, 2032; and (c) One (1) installment, representing 17% (seventeen per cent) of the contingent total, will be due if: (c.i) the Brent price reaches the mobile average of at least US$ 65 in the 6-month period beginning upon transaction closing and finishing in 24 (twenty-four) months.

h) On November 1, 2021, the Company concluded the process of purchase and incorporation of 100% of the shares of Duna whereby, as of such date, it acquired from Banco BTG Pactual S.A. ("BGT Pactual") and other minority shareholders all of the Duna shares. The total amount of such transaction may reach as high as US$ 72,300,000.00 (seventy-two million, three hundred thousand United States Dollars), the payment commitment assumed not recorded in the financial statements refers to the further contingent portion of up to US$ 16,000,000.00 (sixteen million United States Dollars), in the event of confirmation of a volume of certified 2P reserves in the Ponta do Mel and Redonda higher than 9 (nine) million barrels of oil, less the oil production calculated after 30 (thirty) months from conclusion of the cited acquisition. Thus, for calculation purposes, the Company will re-certify these Fields in June and December 2023. If the existence of a volume of 2P reserves greater than the Base Reserves is determined, the volume that exceeds this amount will give rise to an additional payment by the Company equivalent to US$ 2.80 for each additional barrel of certified oil, limited to US$ 16 million.

37. COVID-19

Backed by the recommendations of the World Health Organization (WHO) and the Brazilian Ministry of Health, the Company has announced steps to preserve the health of its collaborators and support prevention of the Covid-19 pandemic in its administrative areas, by means of making home office work an operational reality. To this end, it is providing all the structure needed for collaborators to make the model implemented efficient, as well as the total support of the human resources department in appraisal of the mental health of collaborators in the period. In the operational areas, when implementation of the home office system proved to be impractical, a strict plan for hygienic cleansing of workspaces was developed and personal protective equipment (PPE) was distributed.

Even with the atypical and challenging scenario brought on by the Covid-19 pandemic, there were no material impacts on operations. The Company's gas sales are carried out according to a fixed price agreement that was not impacted by the pandemic, chiefly due gas sales being independent of changes in oil prices. This mitigates the Company's market risks and protects cash Generation. As regards the sale of oil, there was a significant impact, considering that international oil prices dropped to levels below US$ 30 per barrel in April and May of 2020. However, in the second half of 2020 and in 2021, per barrel oil prices recovered considerably, reaching averages of US$ 70 per barrel. Even despite the impact on oil-derived revenues, both 3R Pescada and 3R Macau posted increases in net revenues compared with the same period of 2020; this was due to higher production levels, the rise in the benchmark Brent price and the fixed-price gas agreement.

It behooves Management to point out that the Company has not had a single case of dismissal or reassignment of any employee due to the context set out above.

As regards the safety of its employees, the Company constantly appraises the best practices to ensure their security, always in line with the recommendations of the WHO and the Brazilian Health Ministry. The Company has announced steps to preserve the health of its collaborators and prevent spread of the pandemic in its operating and administrative areas, including:

- Alteration of presence at work through use of the home office modality, when possible;

- Lockdown, monitoring of health and testing;
- General checkups carried out by health-care professionals at the production units;
- Use of face masks and alcohol gel at the production units;
- Consciousness-raising campaigns through the means of communication employed at the production units; and
- Measures to prevent agglomerations at the production units.

The measures Management has adopted, which are constantly being reappraised, seek to maintain both operational quality and the safety and well-being of the Company's collaborators, suppliers and customers, as well as society as a whole, and they are in line with the measures determined by the public authorities. The Company will continue working proactively to preserve the health of all and will remain constantly vigilant and ready to make course corrections as the situation evolves.

38. Subsequente events

Acquisition of the Potiguar Cluster

On January 31, 2022, through subsidiary 3R Potiguar, the Company signed an agreement of sale with Petrobras for acquisition of 100% of the Potiguar Cluster.

The agreement calls for assignment of the concession agreements for a set of 22 (twenty-two) fields already in production and transfer of ths entire infrastructure and pipeline systems that support the operation of this cluster. Also included in the agreement is the Guamaré Industrial Asset ("AIG"), which encompasses natural gas processing units (UPGNs), the Clara Camarão refinery and the privately used Guamaré waterway terminal, with considerfable storage capacity and sysems that permit exportation and importation of oil and its by-products.

The total amount of the transaction is US$ 1,380,000,000.00 (one billion, three hundred and eighty million United States Dollars), broken down as follows: (i) US$ 110 million (R$ 591,948), which was paid upon signing the acquisition agreement for such asset; (ii) US$ 1,040,000,000.00 (one billion, forty million United States Dollars), to be paid on the transaction closing date; and (iii) US$ 235 (two hundred and thirty-fiv million United States Dollars), payable in 4 (four) annual installments of US$ 58,750,000.00 (fifty-eight million, seven hundred and fifty thousand United States Dollars), beginning March, 2024 and ending in March of the year 2027. These amounts do not consider the adjustments due, and the transaction closing is further subject to the fulfillment of conditions precedent, such as approval by the ANP. Moreover, the transaction includes transfer to 3R Potiguar of the cash generation relating to the production and sale of oil and gas from the 22 upstream production fields mentioned above, as from the effective date of July 1, 2022.

The Potiguar Cluster contains 3 (three) sub-clusters of concessions: (i) Canto do Amaro, which is made up of 12 (twelve) onshore production concessions; (ii) Alto do Rodrigues, which consists of 7 (seven) onshore production concessions; and (iii) Ubarana, mde up of 3 (three) shallow water concessions, located between 10 (ten) and 22 (twenty-two) kilometers from the shoreline of the municipality (township) of Guamaré. The Cluster's logistics are already optimized, since all the oil and gas production is piped to the processing installations located in AIG.

The three sub-clusters feature complete infrastructure to support the operations, among which the following stand out: (i) manifold, compression and water injection stations; (ii) electric power substations; (iii) a system for steam generation with pipelines and generation and injection stations; (iv) offshore rigs connected the AIG installations by pipelines; (v) a system for distribution of the onshore and offshore production; and (vi) operational bases, laboratories to conduct analyses, maintenance sheds and warehouses for storing supplies.

In addition, the AIG encompasses the entire infrastructure needed for processing, treatment, refining, logistics and storage of oil and gas piped from all the onshore and offshore fields located in the State of Rio Grande do Norte (RN), including those already acquired by the Company in the region (Macau, Duna and Pescada clusters), besides the fields operated by other O&G companies.

The following structures that make up the AIG deserve highlighting, as follows:

• Oil and water treatment stations with total capacity of over 750,000 (seven hundred and fifty thousand) barrels of fluids per day;

• Tanks with storage capacity of more than 1,800,00 (one million, eight hundred thousand) barrels of oil and by-products, which means that can store the entire oil production from all the RN fields for more than 20 (twenty) days;

• The Clara Camarão refinery, with rated capacity for refining 39,600 (thirty-nine thousand, six hundred) barrels of oil per day, which serves for markets for gasoline, diesel and bunker fuel and jet fuel for 3 (three) Northeast Brazilian states (RN, Ceará and Paraíba), with potential for expanding the Company's activities in such markets and even reach other nearby state;

• Natural gas processing units (UPGNs) with capacitdy for handling 1,800,000 (one million, eight hundred thousand m^3 of gas per day, besides comprssors for exporation of gas that ar connected to the gas pipeline grids in Brazil's Northeast and Southeast regions;

• The Guamaré waterway terminal, with tremendous capacity for exportation, importation and coastal trade of oil and by-products.

Change in Relevant Equity Interest

On February 1, 2022, Starboard Asset Ltda. ("Starboard" or "Manager"), the manager of 3R Petroleum Fundo de Investment em Participações Multiestratégia ("FIP 3R"), sold 22,787,130 (twenty-two million, seven hundred and eighty-seven thousand, one hundred and thirty) common shares issued by the Company on the Brazilian stock market. These shares are equivalent to roughly 11.25% (eleven and a quarter per cent) of the Company's paid-in capital. Even so, this operation was exclusively financial and did not alter either 3R OG's corporate structure or management. Moreover, the other mutual funds managed by Starboard are long-tertm Company shareholders and did not sell their equity interests in this operation.

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REPORT
as of
DECEMBER 31, 2022
on
RESERVES and REVENUE
and
CONTINGENT RESOURCES and POTENTIAL REVENUE
of
CERTAIN FIELDS
in
BRAZIL
for
3R PETROLEUM S.A.

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FOREWORD

Scope of Investigation

This report presents estimates, as of December 31, 2022, of the extent of the proved, probable, and possible oil, condensate, natural gas liquids (NGL), and gas reserves and estimates of the value of the proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves of certain properties located in Brazil. This report also presents the estimates, as of December 31, 2022, of the extent and potential value of the gas contingent resources in the Malombe field in the Espiritu Santo Basin, Brazil. 3R Petroleum S.A. (3R Petroleum) has represented that it holds a working interest in certain properties, and in others, is in the process of acquiring a working interest as presented in Table 1 of this report.

3R Petroleum has represented that it is in the process of acquiring a 65-percent working interest from Petrobras in the Pescada-Arabaiana Cluster and a 100-percent working interest from Petrobras in the Alto do Rodrigues, Canto do Amaro, and Ubarana Clusters. These transactions are expected to be completed over the first half of 2023. 3R Petroleum has represented that signed with Petrobras a Sales and Purchase Agreement (SPA) to acquire these working interests and as a result, since the effective date of the SPA, 3R Petroleum owns the cash generation of the properties. Pescada Cluster's SPA effective date was

on January 1, 2020 and the SPA of the Alto do Rodrigues, Canto do Amaro, and Ubarana Clusters effective date was on July 1, 2022.

Estimates of reserves and contingent resources presented in this report have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers. The reserves definitions are discussed in detail in the Definition of Reserves section of this report. The contingent resources definitions are discussed in detail in the Definition of Contingent Resources section of this report.

Reserves estimated in this report are gross reserves and net reserves. Gross reserves are defined as the total estimated petroleum remaining to be produced from these properties after December 31, 2022. Net reserves are defined as that portion of the gross reserves attributable to the evaluated interests after deducting all interests held by others. 3R Petroleum has advised that the government royalty obligation is paid in cash; therefore, net reserves have not been reduced in consideration of this royalty obligation. For the purposes of this report, 3R Petroleum has requested that a 100-percent working interest be evaluated herein; therefore, net reserves are equal to gross reserves and are expressed herein as net reserves.

This report presents values for proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves that were estimated using prices, expenses, and costs provided by 3R Petroleum. Prices, expenses, and costs were provided in Brazilian reais (R$) and United States dollars (U.S.$). All values were estimated in U.S.$, and all prices, expenses, costs, and revenue shown in this report are expressed in U.S.$. A detailed explanation of the forecast price, expense, and cost assumptions is included in the Valuation of Reserves section of this report.

Values for proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves in this report are expressed in terms of future gross revenue, future net revenue, and present worth. Future gross revenue is defined as that revenue which will accrue to the evaluated interests from the production and sale of the estimated net reserves. Future net revenue is calculated by deducting royalties paid in cash, operating expenses, capital costs,

special participation fees, indirect taxes, and Brazilian income taxes from future gross revenue. Operating expenses include field operating expenses, transportation and processing expenses, and an allocation of overhead that directly relates to production activities. At the request of 3R Petroleum, the operating expenses presented herein also include certain contingency costs associated with taking over operatorship and were not reduced in consideration of potential synergies with other nearby fields. Capital costs include drilling and completion costs, facilities costs, and field maintenance costs. Abandonment costs are represented by 3R Petroleum to be inclusive of those costs associated with the removal of equipment, plugging of wells, and reclamation and restoration associated with the abandonment. Abandonment costs have been included as operating expenses the year following cessation of production. Present worth is defined as the future net revenue discounted at a specified arbitrary discount rate compounded monthly over the expected period of realization. Present worth should not be construed as fair market value because no consideration was given to additional factors that influence the prices at which properties are bought and sold. In this report, present worth values using a discount rate of 10 percent are reported in detail and values using discount rates of 8, 12, 15, and 20 percent are reported as totals.

Contingent resources estimated in this report are gross contingent resources and net contingent resources. Gross contingent resources are defined as the total estimated petroleum that is potentially recoverable from known accumulations after December 31, 2022. Net contingent resources are defined as that portion of the gross contingent resources attributable to the evaluated interests after deducting all interests held by others. 3R Petroleum has advised that the government royalty obligation is paid in cash; therefore, net contingent resources have not been reduced in consideration of this royalty obligation. 3R Petroleum has represented that it holds a 100-percent working interest in the properties evaluated herein; therefore, net contingent resources are equal to gross contingent resources and are expressed herein as net contingent resource.

The contingent resources estimated herein are those quantities of petroleum that are potentially recoverable from known accumulations but which are not currently considered to be commercially recoverable. Because of the uncertainty of commerciality, the contingent resources estimated herein cannot be classified as reserves. The contingent resources estimates in this report are provided as a means of comparison to other contingent resources and do not provide a means of direct comparison to reserves. A detailed explanation of the contingent resources estimated herein is included in the Estimation of Contingent Resources section of this report.

Contingent resources quantities should not be confused with those quantities that are associated with reserves due to the additional risks involved. The quantities that might actually be recovered should they be developed may differ significantly from the estimates presented herein. There is no certainty that it will be commercially viable to produce any portion of the contingent resources evaluated herein.

Potential values for contingent resources in this report are expressed in terms of potential future gross revenue, potential future net revenue, and potential present worth. Potential future gross revenue is defined as that revenue which will accrue to the evaluated interests from the production and sale of the estimated net contingent resources. Potential future net revenue is calculated by deducting royalties paid in cash, operating expenses, capital costs, special participation fees, indirect taxes, and Brazilian income taxes from potential future gross revenue. Operating expenses include field operating expenses, transportation and processing expenses, retention area fees, and an allocation of overhead that directly relates to production activities. Capital costs include drilling and completion costs, facilities costs, and field maintenance costs. Abandonment costs are represented by 3R Petroleum to be inclusive of those costs associated with the removal of equipment, plugging of wells, and reclamation and restoration associated with the abandonment. Abandonment costs have been included as operating expenses the year following cessation of production. Potential present worth is defined as the potential future net revenue discounted at a specified arbitrary discount rate compounded monthly over the expected period of realization. Potential present worth should not be construed as fair market value because no consideration was given to additional factors that influence the prices at which properties are bought and sold. In this report, potential present worth values using a discount rate of 10 percent are reported in detail and values using discount rates of 8, 12, 15, and 20 percent are reported as totals.

Estimates of reserves and revenue and contingent resources and potential revenue should be regarded only as estimates that may change as further production history and additional information become available. Not only are such estimates based on that information which is currently available, but such estimates are also subject to the uncertainties inherent in the application of judgmental factors in interpreting such information.

Authority

This report was authorized by Mr. Matheus Dias, Chief Executive Officer, 3R Petroleum S.A.

Source of Information

Information used in the preparation of this report was obtained from 3R Petroleum. In the preparation of this report we have relied, without independent verification, upon information furnished by 3R Petroleum with respect to the property interests being evaluated, production from such properties, current costs of operation and development, current prices for production, agreements relating to current and future operations and sale of production, and various other information and data that were accepted as represented. A field examination was not considered necessary for the purposes of this report.

DEFINITION of RESERVES

Estimates of proved, probable, and possible reserves presented in this report have been prepared in accordance with the PRMS approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers. The petroleum reserves are defined as follows:

Reserves are those quantities of petroleum anticipated to be commercially recoverable by application of development projects to known accumulations from a given date forward under defined conditions. Reserves must satisfy four criteria: discovered, recoverable, commercial, and remaining (as of the evaluation's effective date) based on the development project(s) applied. Reserves are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by development and production status.

> *Proved Reserves* are those quantities of petroleum that, by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be commercially recoverable from a given date forward from known reservoirs and under defined economic conditions, operating methods, and government regulations. If deterministic methods are used, the term "reasonable certainty" is intended to express a high degree of confidence that the quantities will be recovered. If probabilistic methods are used, there should be at least a 90% probability (P90) that the quantities actually recovered will equal or exceed the estimate.
>
> *Probable Reserves* are those additional Reserves which analysis of geoscience and engineering data indicate are less likely to be recovered than Proved Reserves but more certain to be recovered than Possible Reserves. It is equally likely that actual remaining quantities recovered will be greater than or less than the sum of the estimated Proved plus Probable Reserves (2P). In this context, when probabilistic methods are used, there should be at least a 50% probability [P50] that the actual quantities recovered will equal or exceed the 2P estimate.

Possible Reserves are those additional reserves that analysis of geoscience and engineering data indicates are less likely to be recoverable than Probable Reserves. The total quantities ultimately recovered from the project have a low probability to exceed the sum of Proved plus Probable plus Possible (3P), which is equivalent to the high-estimate scenario. When probabilistic methods are used, there should be at least a 10% probability (P10) that the actual quantities recovered will equal or exceed the 3P estimate.

Once projects satisfy commercial maturity, the associated quantities are classified as Reserves. These quantities may be allocated to the following subdivisions based on the funding and operational status of wells and associated facilities within the reservoir development plan:

Developed Reserves are quantities expected to be recovered from existing wells and facilities. Reserves are considered developed only after the necessary equipment has been installed, or when the costs to do so are relatively minor compared to the cost of a well. Where required facilities become unavailable, it may be necessary to reclassify Developed Reserves as Undeveloped. Developed Reserves may be further sub-classified as Producing or Non-Producing.

Developed Producing Reserves are expected quantities to be recovered from completion intervals that are open and producing at the effective date of the estimate. Improved recovery Reserves are considered producing only after the improved recovery project is in operation.

Developed Non-Producing Reserves include shut-in and behind-pipe reserves. Shut-in Reserves are expected to be recovered from (1) completion intervals that are open at the time of the estimate but which have not yet started producing, (2) wells which were shut-in for market conditions or pipeline connections, or (3) wells not capable of production for mechanical reasons. Behind-pipe Reserves are expected to be recovered from zones in existing wells that will require additional completion work or future re-completion before start of production with minor cost to access these reserves. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

> *Undeveloped Reserves* are quantities expected to be recovered through future significant investments. Undeveloped Reserves are to be produced (1) from new wells on undrilled acreage in known accumulations, (2) from deepening existing wells to a different (but known) reservoir, (3) from infill wells that will increase recovery, or (4) where a relatively large expenditure (e.g., when compared to the cost of drilling a new well) is required to (a) recomplete an existing well or (b) install production or transportation facilities for primary or improved recovery projects.

The extent to which probable and possible reserves ultimately may be recategorized as proved reserves is dependent upon future drilling, testing, and well performance. The degree of risk to be applied in evaluating probable and possible reserves is influenced by economic and technological factors as well as the time element. Estimates of probable and possible reserves in this report have not been adjusted in consideration of these additional risks to make them comparable to estimates of proved reserves.

ESTIMATION of RESERVES

Estimates of reserves were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry and in accordance with definitions established by the PRMS. The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

Based on the current stage of field development, production performance, the development plans provided by 3R Petroleum, and analyses of areas offsetting existing wells with test or production data, reserves were categorized as proved, probable, or possible.

The undeveloped reserves estimates were based on opportunities identified in the plan of development provided by 3R Petroleum. Developed non-producing reserves include those quantities associated with the reactivation of shut-in wells and include minor remaining capital expenditure as compared to the cost of a new well.

3R Petroleum has represented that its senior management is committed to the development plan provided by 3R Petroleum and that 3R Petroleum has the financial capability to execute the development plan, including the drilling and completion of wells and the installation of equipment and facilities.

For depletion-type reservoirs or those whose performance disclosed a reliable decline in producing-rate trends or other diagnostic characteristics, reserves were estimated by the application of appropriate decline curves or other performance relationships.

In certain cases, reserves were estimated by incorporating elements of analogy with similar wells or reservoirs for which more complete data were available.

In the evaluation of developed non-producing and undeveloped reserves, type-well analysis was performed using well data from analogous reservoirs for which more complete historical performance data were available.

3R Petroleum has advised that it has reasonable certainty that the extensions of the concessions of all properties will be obtained. In Brazil, a 27-year concession extension is granted as determined by the Agência Nacional do Petróleo, Gás Natural e Biocombustíveis (ANP) if certain conditions are met by the company operating the concession. 3R Petroleum has represented that it will meet the conditions required by the ANP to obtain the concession extensions. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, to the expiration date of the concession extensions as advised by 3R Petroleum, or to the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.

Data provided by 3R Petroleum from wells drilled through December 31, 2022, and made available for this evaluation were used to prepare the reserves estimates herein. These reserves estimates were based on consideration of monthly production data available through December 31, 2022. Cumulative production, as of December 31, 2022, was deducted from the estimated gross ultimate recovery to estimate gross reserves.

Oil and condensate reserves estimated herein are to be recovered by normal field separation. NGL quantities estimated herein include pentanes and heavier fractions (C_{5+}) and liquefied petroleum gas (LPG), which consists primarily of propane and butane fractions, and are the result of low-temperature plant processing. Oil, condensate, C_{5+}, and LPG reserves included in this report are expressed in thousands of barrels (10^3bbl). In these estimates, 1 barrel equals 42 United States gallons. For reporting purposes, oil, and condensate reserves have been estimated separately and are presented herein as a summed quantity.

Gas quantities estimated herein are expressed as sales gas. Sales gas is defined as the total gas to be produced from the reservoirs, measured at the point of delivery, after reduction for fuel usage, flare, and shrinkage resulting from field separation and processing. Gas reserves estimated herein are reported as sales gas. Gas quantities are expressed at a temperature base of 20 degrees Celsius (°C) and at a pressure base of 14.696 pounds per square inch absolute (psia). Gas quantities included in this report are expressed in millions of cubic feet (10^6ft^3).

Gas quantities are identified by the type of reservoir from which the gas will be produced. Nonassociated gas is gas at initial reservoir conditions with no oil present in the reservoir. Associated gas is both

gas-cap gas and solution gas. Gas-cap gas is gas at initial reservoir conditions and is in communication with an underlying oil zone. Solution gas is gas dissolved in oil at initial reservoir conditions. Gas quantities reported herein are associated and nonassociated gas.

The reserves presented herein are associated with the development plan provided by 3R Petroleum for the evaluated properties.

The estimated gross and net proved, probable, and possible reserves of the properties evaluated herein are shown in Tables 2 and 3, respectively. Production forecasts of the gross proved developed producing, proved developed, total proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves in each basin are shown in Tables 4 through 7.

VALUATION of RESERVES

Revenue values in this report were estimated using forecast prices, expenses, and costs provided by 3R Petroleum.

In this report, values for proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves were based on projections of estimated future production and revenue prepared for these properties with no risk adjustment applied to the probable or possible reserves. Probable and possible reserves involve substantially higher risk than proved reserves. Revenue values associated with proved-plus-probable and proved-plus-probable-plus-possible reserves have not been adjusted to account for such risks; this adjustment would be necessary in order to make values associated with probable and possible reserves comparable to values associated with proved reserves.

Future net revenue was estimated in accordance with Brazilian Law n° 9,478, the Petroleum Law of 1997. The fiscal terms outlined in the Petroleum Law and assessable to 3R Petroleum, as well as other economic assumptions used in this evaluation, are presented as follows:

Brazilian Fiscal Terms

The Petroleum Law of 1997 affords the Brazilian government three elements of government take: 1) Petroleum levies consisting of royalties, a special participation fee, and surface rentals; 2) direct taxes, which are levied through the financial transaction tax, the corporate income tax, and two social contribution taxes; and 3) indirect taxes, which are levies on equipment and services used by companies engaged in exploration and production activities.

Royalties

The estimated royalties are to be paid in cash and are included in Royalties Paid in Cash in the tables of this report. The royalty rate in Brazil varies by field between 5 and 10 percent. In addition to the royalty, there is a 1-percent landlord fee payable to the landowners where onshore fields are located.

At the request of 3R Petroleum, royalty payments were considered on the developed producing reserves as presented in the table below:

Cluster	Royalty Payments (Percent)
Alto do Rodrigues	8.0
Areia Branca	9.0
Canto do Amaro	10.0
Fazenda Belem	7.8
Macau	9.5
Papa Terra	10.0
Peroa-Cangoa	8.8
Pescada-Arabaiana	8.8
Reconcavo	9.1
Rio Ventura	9.4
Ubarana	10.0

A reduced royalty payment of 5 percent was considered in all propeties evaluated except in Papa Terra field. 3R Petroleum has represented that the ANP-enacted Resolution n° 749/2018 allows for a reduction of royalty rates over incremental production in mature fields. 3R Petroleum has advised that it has reasonable certainty that the royalty reduction for the incremental production of all properties will be obtained. 3R Petroleum has represented that it will meet the conditions required by the ANP to obtain these royalty reductions.

Oil royalty is assessed on the market value of the oil, which is defined as the greater of the sales price or the market valuation as determined by the Agência Nacional do Petróleo, Gás Natural e Biocombustíveis (ANP). Gas royalty is levied on the market value of the gas production less gas injected. For the purposes of this evaluation, the royalty value was assumed to equal the market value of the oil.

Special Participation Fee

The special participation fee (SPF) is a tax assessed at the field level on a sliding-scale basis that varies depending on the location of the field (onshore or offshore), water depth, level of production, and number of years on production. For the fields evaluated herein, the SPF tax is zero.

Brazilian Income Tax

Corporate income tax in Brazil is assessed on a consolidated entity basis at a statutory rate of 34 percent. This rate consists of the base tax rate of 15 percent, a surtax of 10 percent, and a social contribution component of 9 percent. 3R Petroleum has represented that it has obtained from the Superintendência do Desenvolvimento do Nordeste (SUDENE) a reduction of the income tax from 34 percent to 15.25 percent for a period of 10 years starting in 2021 in the Areia Branca and Macau Clusters, 2022 in the Rio Ventura Cluster, 2023 in the Reconcavo, Fazenda Belem, and Peroa-Cangoa Clusters, and 2024 in the remaining evaluated properties except for the Papa Terra field in the Campos Basin, which is not liable for this benefit.

Social Contribution Taxes

Two social contribution taxes are levied on the market value of oil and gas sales. The Contribution for the Worker's Social Integration Program (PIS) is assessed at a rate of 1.65 percent and the Contribution for Social Security Funding (COFINS) is levied at a 7.6-percent rate. These taxes have been netted out of the product prices.

Tax on Commerce and Services

The Tax on Commerce and Services (ICMS) varies depending on the Federal State where the service provider is located and also depends on the product. The ICMS is assessed at a rate of 9.6 percent for sales gas. This tax has been netted out of the product prices.

Oil, Condensate, and C_{5+} Prices

Forecasts of the oil, condensate and C_{5+} prices were provided by 3R Petroleum on a cluster basis. Below are presented on a basin basis, using the arithmetic average prices by cluster, expressed in United States dollars per barrel (U.S.$/bbl):

Year	Brent (U.S.$/bbl)	Campos Basin (U.S.$/bbl)	Espiritu Santo Basin (U.S.$/bbl)	Potiguar Basin (U.S.$/bbl)	Reconcavo Basin (U.S.$/bbl)
2023	85.63	73.63	87.13	81.57	83.38
2024	79.80	67.80	81.30	75.81	77.55
2025	75.86	63.86	77.36	71.91	73.61
2026	73.15	61.15	74.65	69.23	70.90
2027	71.17	59.17	72.67	67.27	68.92
2028	69.72	57.72	71.22	65.83	67.47
2029 forward	69.05	57.05	70.55	65.17	66.80

Oil, condensate, and C_{5+} prices were based on the Brent price forecast shown above. Field-specific quality differentials and transportation fees, provided by 3R Petroleum, were deducted from the marker price.

LPG Prices

A forecast of the LPG prices was provided by 3R Petroleum as presented in the following table, expressed in United States dollars per barrel (U.S.$/bbl):

Year	LPG Price (U.S.$/bbl)
2023	86.13
2024	80.30
2025	76.36
2026	73.65
2027	71.67
2028	60.22
2029 forward	69.55

Gas Prices

Forecasts of the gas prices was provided by 3R Petroleum on a cluster basis. Below are presented on a basin basis, using the arithmetic average prices by cluster, expressed in United States dollars per thousand cubic feet (U.S.$/10^{3}ft^3):

Year	Campos Basin (U.S.$/10^{3}ft^3)	Espiritu Santo Basin (U.S.$/10^{3}ft^3)	Potiguar Basin (U.S.$/10^{3}ft^3)	Reconcavo Basin (U.S.$/10^{3}ft^3)
2023	6.17	8.56	6.17	6.21
2024	5.75	7.98	5.75	6.10
2025	5.46	7.59	5.46	6.02
2026	5.27	7.31	5.27	5.96
2027	5.12	7.12	5.12	5.92
2028	5.02	6.97	5.02	5.89
2029 forward	4.97	6.90	4.97	5.88

Operating Expenses, Capital Costs, and Abandonment Costs

Estimates of future operating expenses and capital costs were based on information provided by 3R Petroleum. Operating expenses include field operating expenses, transportation and processing expenses, and an allocation of overhead that is directly related to production activities. At the request of 3R Petroleum, the operating expenses presented herein also include certain contingency costs associated with taking over operatorship and were not reduced in consideration of potential synergies with other nearby fields. Capital costs include projected costs related to the respective field work programs. Abandonment costs, which are those costs associated with the removal of equipment, plugging of wells, and reclamation and restoration associated with abandonment, were provided by 3R Petroleum. Abandonment costs have been included as operating expenses the year following cessation of production. 3R Petroleum has represented that it will receive a reimbursement for well abandonment costs from the previous owner of the properties evaluated herein. Abandonment costs included in the economic evaluations are net of the amount 3R Petroleum has represented will be reimbursed. Estimates of capital costs were projected in constant 2023 U.S.$ terms. No general escalation that might result from inflation was applied to the projected operating expenses. Operating expenses,

capital costs, and abandonment costs were considered, as appropriate, in determining the economic viability of the developed non-producing and undeveloped reserves estimated herein.

As advised by 3R Petroleum, operating expenses, capital costs, and abandonment costs are liable of a tax credit associated to the social contribution taxes in Brazil: 1.65% (PIS) and 7.6 (COFINS). Operating expenses, capital costs, and abandonment cost in the economic evaluations are net of this tax credit benefit.

Exchange Rate

3R Petroleum provided an exchange rate of R$5.30 per U.S.$1.00 that was used herein.

Future oil and gas producing rates estimated for this report were based on information provided by 3R Petroleum, or on actual rates considering the most recent production figures available. Production forecasts and revenue values were estimated for the proved developed producing, proved developed, total proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves.

Estimates of the future net revenue and present worth derived from the proved developed, total proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves, as of December 31, 2022, of certain petroleum interests attributable to 3R Petroleum discounted at rates of 5, 10, 15, and 20 percent, are presented by cluster in Table 8. Projections of future net revenue for the proved developed producing, proved developed, total proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves are presented in Tables 9 through 28.

DEFINITION of CONTINGENT RESOURCES

Estimates of contingent resources presented in this report have been prepared in accordance with the PRMS approved in March 2007 and revised in June 2018 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, the Society of Petroleum Evaluation Engineers, the Society of Exploration Geophysicists, the Society of Petrophysicists and Well Log Analysts, and the European Association of Geoscientists & Engineers. Because of the lack of commerciality or sufficient development drilling, the contingent resources estimated herein cannot be classified as reserves. The petroleum contingent resources are classified as follows:

> *Contingent Resources* are those quantities of petroleum estimated, as of a given date, to be potentially recoverable from known accumulations by application of development projects, but which are not currently considered to be commercially recoverable owing to one or more contingencies.

Contingent Resources are further categorized in accordance with the level of certainty associated with the estimates and may be sub-classified based on project maturity and/or characterized by the economic status.

> *Economically Viable Contingent Resources* are those quantities associated with technically feasible projects where cash flows are positive under reasonably forecast conditions but are not Reserves because it does not meet the other commercial criteria.
>
> *Economically Not Viable Contingent Resources* are those quantities for which development projects are not expected to yield positive cash flows under reasonable forecast conditions. May also be subject to additional unsatisfied contingencies.

Where evaluations are incomplete and it is premature to clearly define the associated cash flows, it is acceptable to note that the project economic status is “undetermined.”

The estimation of petroleum resources is subject to both technical and commercial uncertainties and, in general, may be quoted as a range. The range of uncertainty reflects a reasonable range of estimated

potentially recoverable quantities. In all cases, the range of uncertainty is dependent on the amount and quality of both technical and commercial data that are available and may change as more data become available.

1C (Low), 2C (Best), and 3C (High) Estimates – Estimates of contingent resources in this report are expressed using the terms 1C (low) estimate, 2C (best) estimate, and 3C (high) estimate to reflect the range of uncertainty.

ESTIMATION of CONTINGENT RESOURCES

Estimates of contingent resources were prepared by the use of appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry and in accordance with definitions established by the PRMS. The method or combination of methods used in the analysis of each reservoir was tempered by experience with similar reservoirs, stage of development, quality and completeness of basic data, and production history.

Based on the current stage of field development, production performance, the development plans provided by 3R Petroleum, and analyses of areas offsetting existing wells with test or production data, contingent resources were categorized as 1C, 2C, or 3C.

3R Petroleum has represented that its senior management is committed to the development plan provided by 3R Petroleum and that 3R Petroleum has the financial capability to execute the development plan, including the drilling and completion of wells and the installation of equipment and facilities.

The volumetric method was used to estimate the original gas in place (OGIP). Structure maps were prepared to delineate each reservoir, and isopach maps were constructed to estimate reservoir volume. Electrical logs, radioactivity logs, core analyses, and other available data were used to prepare these maps as well as to estimate representative values for porosity and water saturation.

Estimates of ultimate recovery were obtained after applying recovery factors to OGIP. These recovery factors were based on consideration of the type of energy inherent in the reservoirs, analyses of the petroleum, the structural positions of the properties, and the production histories.

Gas quantities associated with contingent resources estimated herein are expressed as sales gas contingent resources. Sales gas is defined as the total gas to be produced from the reservoirs, measured at the point of delivery, after reduction for fuel usage, flare, and shrinkage resulting from field separation and processing. Gas reserves estimated herein are reported as sales gas. Gas quantities are expressed at a temperature base of 20 °C and at a pressure

base of 14.696 psia. Gas quantities included in this report are expressed in millions of cubic feet ($10^6 ft^3$).

Gas quantities are identified by the type of reservoir from which the gas will be produced. Nonassociated gas is gas at initial reservoir conditions with no oil present in the reservoir. Associated gas is both gas-cap gas and solution gas. Gas-cap gas is gas at initial reservoir conditions and is in communication with an underlying oil zone. Solution gas is gas dissolved in oil at initial reservoir conditions. Gas quantities reported herein are associated and nonassociated gas.

The contingent resources estimated herein have an economic status of Economically Viable. Contingent resources include those quantities to be potentially recovered associated with the recompletion of the 1-BRSA-983-ESS discovery well.

The contingent resources estimated herein are associated with the lack of a development plan approved by the ANP. The Malombe field is currently held under the terms of an exploration contract. 3R Petroleum has represented that the declaration for commerciality of the 1-BRSA-983-ESS discovery well is expected to occur in August 1, 2023. After that event, 3R will submit a development plan to the ANP for approval.

A summary of net contingent resources is presented in Table 29. Projections of net contingent resources are presented in Table 30.

VALUATION of CONTINGENT RESOURCES

Potential revenue values in this report were estimated using forecast prices, expenses, and costs as provided by 3R Petroleum.

The estimated potential present worth of the contingent resources evaluated in this report is to be used for comparison and ranking of these contingent resources against other contingent resources only. The estimated potential present worth for the contingent resources cannot be compared directly to, equated with, or aggregated with the present worth estimates that could be realized from reserves, not are these potential present worth estimates an assessment of the fair market value of the properties evaluated herein.

Based on information provided by 3R Petroleum, the same economic assumptions described in the Valuation of Reserves section of this report used in the Peroa-Cangoa Cluster were used to estimate the potential future net revenue of contingent resources, unless noted otherwise. A 8.8 royalty payment was provided by 3R Petroleum Reductions on the royalty payments associated with all the incremental activity were not considered ion the valuation of these contingent resources.

Projections of the estimated potential future net revenue for the 1C, 2C, and 3C contingent resources associated with the Malombe field are presented in Tables 31 through 33.

SUMMARY and CONCLUSIONS

3R Petroleum has represented that it holds or plans to acquire an interest in certain properties located in Brazil evaluated herein.

The estimated net proved, probable, and possible reserves, as of December 31, 2022, of the properties evaluated herein are summarized as follows, expressed in thousands of barrels (10^3bbl) and millions of cubic feet (10^6ft^3):

	Net Reserves		
	Oil, Condensate and C_{5+} (10^3bbl)	**Sales Gas (10^6ft^3)**	**LPG (10^3bbl)**
Proved Developed			
Producing	142,011.71	135,966.00	0.00
Non-Producing	62,385.70	101,076.00	5,437.00
Total Proved Developed	**204,397.41**	**237,042.00**	**5,437.00**
Proved Undeveloped	118,778.39	33,335.00	1,652.00
Total Proved	**323,174.80**	**270,377.00**	**7,089.00**
Probable	138,332.76	90,458.00	1,896.00
Proved plus Probable	**461,508.56**	**360,835.00**	**8,985.00**
Possible	95,508.81	101,367.00	1,680.00
Proved plus Probable plus Possible	**557,017.37**	**462,202.00**	**10,665.00**

Notes:
1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, to the end of the concession extensions as advised by 3R Petroleum, or to the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected technical forecasts and estimated economic limits are beyond the expiration of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by ANP to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated herein consider the potential concession extensions.

The estimated future revenue attributable to 3R Petroleum's interest in the proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves, as of December 31, 2022, of the properties evaluated under the economic assumptions described herein is summarized as follows, expressed in thousands of United States dollars (10^3U.S.$):

	Future Net Revenue (10^3U.S.$)	**Present Worth at 10 Percent (10^3U.S.$)**
Proved Developed Producing	3,521,018	2,147,243
Proved Developed	6,115,767	3,527,039
Total Proved	9,048,888	4,803,014
Proved plus Probable	13,227,241	6,471,078
Proved plus Probable plus Possible	17,009,509	7,890,702

Note: Values for probable and possible reserves have not been risk adjusted to make them comparable to values associated with proved reserves.

The estimated net contingent resources, as of December 31, 2022, of the properties evaluated herein are summarized as follows, expressed in millions of cubic feet (10^6ft^3):

	Net Contingent Resources		
	1C	**2C**	**3C**
Sales Gas, 10^6ft^3	52,232.00	82,196.00	94,734.00

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the contingent resources evaluated herein.
3. The contingent resources estimated in this report have an economic status of Economically Viable.

The estimated potential future net revenue and potential present worth at 10 percent attributable to the evaluated interest in the contingent resources, as of December 31, 2022, of the properties evaluated under the economic assumptions described herein are summarized as follows, expressed in thousands of United States dollars (10^3U.S.$):

	Potential Future Net Revenue (10^3U.S.$)	Potential Present Worth at 10 Percent (10^3U.S.$)
1C	101,876	58,289
2C	226,943	115,668
3C	276,661	134,135

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the contingent resources evaluated herein.
3. The contingent resources estimated in this report have an economic status of Economically Viable.

While the oil and gas industry may be subject to regulatory changes from time to time that could affect an industry participant's ability to recover its reserves, we are not aware of any such governmental actions which would restrict the recovery of the December 31, 2022, estimated reserves.

DeGolyer and MacNaughton is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. Our fees were not contingent on the results of our evaluation. This report has been prepared at the request of 3R Petroleum. DeGolyer and MacNaughton has used all assumptions, procedures, data, and methods that it considers necessary to prepare this report.

Submitted,

DeGolyer and MacNaughton

DeGOLYER and MacNAUGHTON
Texas Registered Engineering Firm F-716

SIGNED: March 31, 2023



Federico Dordoni

Federico Dordoni, P.E.
Executive Vice President
DeGolyer and MacNaughton

TABLE 1
LIST of FIELDS EVALUATED
as of
DECEMBER 31, 2022
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Basin Cluster Field	Evaluated Interest (%)	Concession Expiration Date	Extension of the Concession Expiration Date
Campos			
Papa Terra			
Papa Terra	62.5	December 27, 2032	December 27, 2059
Espirito Santo			
Peroa-Cangoa			
Cangoa	100.0	August 6, 2025	August 6, 2040
Malombe	100.0	August 1, 2023*	
Peroa	100.0	August 6, 2025	August 6, 2040
Potiguar			
Alto do Rodrigues			
Alto do Rodrigues	100	December 31, 2040	December 31, 2067
Angico	100	March 26, 2028	March 26, 2055
Estreito	100	August 6, 2052	
Fazenda Pocinho	100	December 31, 2035	December 31, 2062
Guamaré	100	May 24,2037	May 24,2064
Monte Alegre	100	August 6, 2052	August 6, 2052
Serraria	100	August 6, 2052	August 6, 2052
Areia Branca			
Ponta do Mel	100	August 6, 2025	August 6, 2052
Redonda	100	August 6, 2025	August 6, 2052
Canto do Amaro			
Barrinha	100	May 24,2037	May 24,2064
Benfica	100	December 31, 2043	
Canto do Amaro	100	August 6, 2052	
Fazenda Canaan	100	December 31, 2045	December 31, 2072
Mossoró	100	December 31, 2050	December 31, 2077
Pintassilgo	100	April 30, 2047	April 30, 2074
Serra do Mel	100	August 6, 2025	August 6, 2052
Serra Vermelha	100	August 6, 2025	August 6, 2052
Fazenda Belém			
Fazenda Belém	100	Oct 30, 2025	Oct 30, 2052
Icapuí	100	Oct 30, 2025	Oct 30, 2052
Macau			
Macau	100	August 25, 2052	
Lagoa Aroeira	100	August 25, 2025	August 25, 2052
Porto Carao	100	August 25, 2025	August 25, 2052
Salina Cristal	100	August 25, 2052	
Sanhaçu	100	November 26, 2036	November 26, 2063
Pescada-Arabaiana			
Arabaiana	100	August 6, 2025	August, 2052
Dentao	100	August 6, 2025	August, 2052
Pescada	100	August 6, 2025	August, 2052
Ubarana			
Cioba	100	August 6, 2025	August 6, 2052
Oeste de Ubarana	100	August 6, 2025	August 6, 2052
Ubarana	100	December 31, 2034	August 6, 2052
Recôncavo			
Recôncavo			
Aratu	100	August 6, 2025	August 6, 2052
Mapele	100	August 6, 2025	August 6, 2052
Cambacica	100	December 24, 2036	December 24, 2063
Candeias	100	August 6, 2025	August 6, 2052
Cexis	100	August 6, 2025	August 6, 2052
Dom João	100	August 6, 2025	August 6, 2052
Dom João Mar	100	August 6, 2025	August 6, 2052
Guanambi	100	March 16, 2034	March 14, 2061
Ilha de Bimbarra	100	August 6, 2025	August 6, 2035
Massuí	100	August 6, 2025	August 6, 2035
Pariri	100	December 19, 2041	December 19, 2068
São Domingos	100	August 6, 2025	August 6, 2052
Socorro	100	February 21, 2035	August 6, 2052
Socorro Extensão	100	May 13,2037	August 6, 2052
Rio Ventura			
Agua Grande	100	August 6, 2025	August 6, 2052
Bonsuceso	100	August 6, 2025	August 6, 2052
Fazenda Alto das Pedras	100	August 6, 2025	August 6, 2052
Pedrinhas	100	August 6, 2025	August 6, 2052
Pojuca	100	March 10, 2038	December 30, 2045
Rio Pojuca	100	March 10, 2038	December 30, 2045
Tapiranga	100	March 10, 2038	December 30, 2045
Tapiranga Norte	100	March 10, 2038	December 30, 2045

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated herein consider the potential concession extensions.
3. The evaluated interest in the Papa Terra Field considers a 62.5% working interest of 3R Petroleum's subsidiary 3R Offshore. 3R Petroleum owns 85% of 3R Offshore's equity interest, which represents the equivalent of a 53,13% working interest in the Papa Terra Field.
4. The evaluated interest in the Peroá-Cangoá Cluster considers a 100% working interest of 3R Petroleum's subsidiary 3R Offshore. 3R Petroleum owns 85% of 3R Offshore's equity interest, which represents the equivalent of a 85% working interest in the Peroá-Cangoá Cluster. The Malombe field is under an exploration contract. 3R Petroleum represented that the declaration of commerciality of the discovery well 1-BRSA-983-ESS is expected to be done in August 1, 2023.
5. The evaluated interest in the Reconcavo Cluster is 100%, except for the Cambacica field, which is jointly held by 3R Petroeum's subsidiary 3R Candeias (75%) and Sonangol Hidrocarbonetos Brasil Ltda. (25%); and the Guanambi field, which is held by 3R Candeias (80%) and Sonangol Guanambi Exploração e Produção de Petróleo Ltda. (20%).
6. 3R Petroleum has represented that is in the process of acquiring a 65 percent working interest from Petrobras in the Pescada-Arabaiana Cluster and a 100 percent working interest from Petrobras in the Alto do Rodrigues, Canto do Amaro and Ubarana Clusters. These transactions are expected to be completed by June 30, 2023.

TABLE 2
SUMMARY of GROSS RESERVES
as of
DECEMBER 31, 2022
for
CERTAIN ASSETS
in
BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	Proved Developed Producing			Proved Developed			Total Proved			Proved Plus Probable			Proved Plus Probable plus Possible		
Basin	**Oil, Condensate and C5+ (10^3bbl)**	**Sales Gas (10^6ft^3)**	**LPG (10^3bbl)**	**Oil, Condensate and C5+ (10^3bbl)**	**Sales Gas (10^6ft^3)**	**LPG (10^3bbl)**	**Oil, Condensate and C5+ (10^3bbl)**	**Sales Gas (10^6ft^3)**	**LPG (10^3bbl)**	**Oil, Condensate and C5+ (10^3bbl)**	**Sales Gas (10^6ft^3)**	**LPG (10^3bbl)**	**Oil, Condensate and C5+ (10^3bbl)**	**Sales Gas (10^6ft^3)**	**LPG (10^3bbl)**
Campos	7,304.26	0.00	0.00	19,143.40	0.00	0.00	103,028.90	0.00	0.00	178,533.26	0.00	0.00	228,944.80	0.00	0.00
Espiritu Santo	216.60	33,208.00	0.00	285.43	55,062.00	0.00	285.43	55,062.00	0.00	1,259.38	68,653.00	0.00	1,455.39	72,018.00	0.00
Potiguar	124,296.08	28,466.00	0.00	163,212.91	35,018.00	0.00	219,061.05	63,375.00	0.00	286,787.71	102,253.00	0.00	331,613.91	120,946.00	0.00
Reconcavo	12,933.87	74,292.00	0.00	28,934.44	146,962.00	5,437.00	39,435.26	151,940.00	7,089.00	61,878.17	189,929.00	8,985.00	80,857.55	269,238.00	10,665.00
Total	**144,750.81**	**135,966.00**	**0.00**	**211,576.18**	**237,042.00**	**5,437.00**	**361,810.64**	**270,377.00**	**7,089.00**	**528,458.52**	**360,835.00**	**8,985.00**	**642,871.65**	**462,202.00**	**10,665.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.

TABLE 3
SUMMARY of NET RESERVES
as of
DECEMBER 31, 2022
for
CERTAIN ASSETS
in
BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	Proved Developed Producing			Proved Developed			Total Proved			Proved Plus Probable			Proved Plus Probable plus Possible		
Basin	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)
Campos	4,565.16	0.00	0.00	11,964.63	0.00	0.00	64,393.06	0.00	0.00	111,583.30	0.00	0.00	143,090.52	0.00	0.00
Espiritu Santo	216.60	33,208.00	0.00	285.43	55,062.00	0.00	285.43	55,062.00	0.00	1,259.38	68,653.00	0.00	1,455.39	72,018.00	0.00
Potiguar	124,296.08	28,466.00	0.00	163,212.91	35,018.00	0.00	219,061.05	63,375.00	0.00	286,787.71	102,253.00	0.00	331,613.91	120,946.00	0.00
Reconcavo	12,933.87	74,292.00	0.00	28,934.44	146,962.00	5,437.00	39,435.26	151,940.00	7,089.00	61,878.17	189,929.00	8,985.00	80,857.55	269,238.00	10,665.00
Total	**142,011.71**	**135,966.00**	**0.00**	**204,397.41**	**237,042.00**	**5,437.00**	**323,174.80**	**270,377.00**	**7,089.00**	**461,508.56**	**360,835.00**	**8,985.00**	**557,017.37**	**462,202.00**	**10,665.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.

TABLE 4
PROJECTION of GROSS RESERVES
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
CAMPOS BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	Proved Developed Producing			Proved Developed			Total Proved			Proved plus Probable			Proved plus Probable plus Possible		
Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)
2023	4,626.90	0.00	0.00	5,854.35	0.00	0.00	5,854.35	0.00	0.00	6,464.73	0.00	0.00	6,885.05	0.00	0.00
2024	2,677.36	0.00	0.00	5,713.02	0.00	0.00	6,300.28	0.00	0.00	7,667.63	0.00	0.00	8,620.21	0.00	0.00
2025	0.00	0.00	0.00	4,239.96	0.00	0.00	7,537.23	0.00	0.00	9,492.18	0.00	0.00	10,791.16	0.00	0.00
2026	0.00	0.00	0.00	3,336.07	0.00	0.00	9,048.32	0.00	0.00	11,374.19	0.00	0.00	12,981.63	0.00	0.00
2027	0.00	0.00	0.00	0.00	0.00	0.00	9,786.01	0.00	0.00	12,129.33	0.00	0.00	14,299.81	0.00	0.00
2028	0.00	0.00	0.00	0.00	0.00	0.00	9,135.96	0.00	0.00	11,227.58	0.00	0.00	13,464.11	0.00	0.00
2029	0.00	0.00	0.00	0.00	0.00	0.00	8,253.50	0.00	0.00	10,468.74	0.00	0.00	12,668.67	0.00	0.00
2030	0.00	0.00	0.00	0.00	0.00	0.00	7,054.66	0.00	0.00	10,064.13	0.00	0.00	12,223.49	0.00	0.00
2031	0.00	0.00	0.00	0.00	0.00	0.00	7,091.62	0.00	0.00	10,543.76	0.00	0.00	12,647.04	0.00	0.00
2032	0.00	0.00	0.00	0.00	0.00	0.00	6,516.43	0.00	0.00	9,721.62	0.00	0.00	11,737.28	0.00	0.00
2033	0.00	0.00	0.00	0.00	0.00	0.00	5,757.51	0.00	0.00	8,702.44	0.00	0.00	10,637.51	0.00	0.00
2034	0.00	0.00	0.00	0.00	0.00	0.00	5,112.09	0.00	0.00	7,854.49	0.00	0.00	9,702.35	0.00	0.00
2035	0.00	0.00	0.00	0.00	0.00	0.00	4,555.65	0.00	0.00	7,148.86	0.00	0.00	8,880.07	0.00	0.00
2036	0.00	0.00	0.00	0.00	0.00	0.00	4,077.35	0.00	0.00	6,495.18	0.00	0.00	8,167.74	0.00	0.00
2037	0.00	0.00	0.00	0.00	0.00	0.00	3,656.01	0.00	0.00	5,966.50	0.00	0.00	7,552.00	0.00	0.00
2038	0.00	0.00	0.00	0.00	0.00	0.00	3,291.93	0.00	0.00	5,518.93	0.00	0.00	7,013.17	0.00	0.00
2039	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5,122.39	0.00	0.00	6,534.40	0.00	0.00
2040	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,772.45	0.00	0.00	6,088.15	0.00	0.00
2041	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,452.66	0.00	0.00	5,694.80	0.00	0.00
2042	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,168.16	0.00	0.00	5,345.59	0.00	0.00
2043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,911.18	0.00	0.00	5,014.66	0.00	0.00
2044	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,680.98	0.00	0.00	4,742.56	0.00	0.00
2045	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,466.06	0.00	0.00	4,486.30	0.00	0.00
2046	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,897.27	0.00	0.00	3,835.54	0.00	0.00
2047	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,682.75	0.00	0.00	3,598.16	0.00	0.00
2048	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,539.07	0.00	0.00	3,417.73	0.00	0.00
2049	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,199.53	0.00	0.00
2050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3,047.70	0.00	0.00
2051	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,906.90	0.00	0.00
2052	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2,761.49	0.00	0.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**7,304.26**	**0.00**	**0.00**	**19,143.40**	**0.00**	**0.00**	**103,028.90**	**0.00**	**0.00**	**178,533.26**	**0.00**	**0.00**	**228,944.80**	**0.00**	**0.00**

Notes:
1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.

TABLE 5
PROJECTION of GROSS RESERVES
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	Proved Developed Producing			Proved Developed			Total Proved			Proved plus Probable			Proved plus Probable plus Possible		
Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)
2023	39.01	5,775.00	0.00	40.28	6,286.00	0.00	40.28	6,286.00	0.00	55.48	6,582.00	0.00	55.48	6,582.00	0.00
2024	32.84	4,921.00	0.00	37.13	6,787.00	0.00	37.13	6,787.00	0.00	61.00	7,076.00	0.00	61.00	7,076.00	0.00
2025	27.85	4,221.00	0.00	31.14	5,855.00	0.00	31.14	5,855.00	0.00	218.03	9,075.00	0.00	292.64	10,481.00	0.00
2026	23.93	3,671.00	0.00	26.49	5,116.00	0.00	26.49	5,116.00	0.00	310.74	9,551.00	0.00	396.94	11,008.00	0.00
2027	20.75	3,221.00	0.00	22.75	4,509.00	0.00	22.75	4,509.00	0.00	221.78	7,069.00	0.00	250.47	7,490.00	0.00
2028	18.18	2,857.00	0.00	19.76	4,015.00	0.00	19.76	4,015.00	0.00	164.50	5,549.00	0.00	168.94	5,607.00	0.00
2029	15.97	2,532.00	0.00	17.21	3,573.00	0.00	17.21	3,573.00	0.00	95.71	4,400.00	0.00	97.00	4,415.00	0.00
2030	14.14	2,246.00	0.00	15.13	3,190.00	0.00	15.13	3,190.00	0.00	56.60	3,620.00	0.00	57.38	3,628.00	0.00
2031	12.61	1,992.00	0.00	13.41	2,849.00	0.00	13.41	2,849.00	0.00	13.41	2,849.00	0.00	13.41	2,849.00	0.00
2032	11.32	1,772.00	0.00	12.03	2,544.00	0.00	12.03	2,544.00	0.00	12.03	2,544.00	0.00	12.03	2,544.00	0.00
2033	0.00	0.00	0.00	10.77	2,258.00	0.00	10.77	2,258.00	0.00	10.77	2,258.00	0.00	10.77	2,258.00	0.00
2034	0.00	0.00	0.00	9.66	2,010.00	0.00	9.66	2,010.00	0.00	9.66	2,010.00	0.00	9.66	2,010.00	0.00
2035	0.00	0.00	0.00	8.66	1,790.00	0.00	8.66	1,790.00	0.00	8.66	1,790.00	0.00	8.66	1,790.00	0.00
2036	0.00	0.00	0.00	7.79	1,598.00	0.00	7.79	1,598.00	0.00	7.79	1,598.00	0.00	7.79	1,598.00	0.00
2037	0.00	0.00	0.00	6.97	1,419.00	0.00	6.97	1,419.00	0.00	6.97	1,419.00	0.00	6.97	1,419.00	0.00
2038	0.00	0.00	0.00	6.25	1,263.00	0.00	6.25	1,263.00	0.00	6.25	1,263.00	0.00	6.25	1,263.00	0.00
2039	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**216.60**	**33,208.00**	**0.00**	**285.43**	**55,062.00**	**0.00**	**285.43**	**55,062.00**	**0.00**	**1,259.38**	**68,653.00**	**0.00**	**1,455.39**	**72,018.00**	**0.00**

Notes:
1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.

TABLE 6
PROJECTION of GROSS RESERVES
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
POTIGUAR BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	Proved Developed Producing			Proved Developed			Total Proved			Proved plus Probable			Proved plus Probable plus Possible		
Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)
2023	8,197.30	3,457.00	0.00	9,068.15	3,876.00	0.00	9,513.18	3,893.00	0.00	9,648.02	4,098.00	0.00	9,804.44	4,116.00	0.00
2024	7,560.17	3,209.00	0.00	10,354.08	4,009.00	0.00	12,146.06	5,690.00	0.00	12,812.76	6,116.00	0.00	13,198.30	6,445.00	0.00
2025	7,010.52	2,968.00	0.00	10,572.88	3,688.00	0.00	14,074.42	6,426.00	0.00	15,722.68	7,486.00	0.00	16,558.80	8,190.00	0.00
2026	6,540.81	2,758.00	0.00	9,862.32	3,329.00	0.00	15,079.46	5,983.00	0.00	17,486.55	7,128.00	0.00	18,523.37	7,602.00	0.00
2027	6,070.94	1,300.00	0.00	9,013.91	1,815.00	0.00	14,723.28	5,550.00	0.00	18,336.37	6,784.00	0.00	20,615.52	7,742.00	0.00
2028	5,716.51	1,211.00	0.00	8,297.31	1,659.00	0.00	13,502.24	5,083.00	0.00	18,126.80	6,589.00	0.00	20,603.86	7,318.00	0.00
2029	5,396.03	1,123.00	0.00	7,786.93	1,553.00	0.00	12,398.66	4,695.00	0.00	17,523.16	6,106.00	0.00	19,924.41	6,820.00	0.00
2030	5,112.89	1,043.00	0.00	7,274.67	1,430.00	0.00	11,229.13	3,818.00	0.00	16,392.36	5,268.00	0.00	19,420.53	6,394.00	0.00
2031	4,858.44	970.00	0.00	6,827.79	1,320.00	0.00	10,239.07	3,262.00	0.00	15,026.27	4,644.00	0.00	18,149.37	5,660.00	0.00
2032	4,630.73	903.00	0.00	6,434.27	1,221.00	0.00	9,397.11	3,008.00	0.00	13,559.14	4,252.00	0.00	16,372.85	5,083.00	0.00
2033	4,418.62	838.00	0.00	6,029.66	1,128.00	0.00	8,612.86	2,771.00	0.00	12,225.62	3,910.00	0.00	14,832.70	4,678.00	0.00
2034	4,227.52	780.00	0.00	5,657.35	1,044.00	0.00	7,916.62	2,565.00	0.00	11,052.50	3,622.00	0.00	13,414.39	4,357.00	0.00
2035	4,052.53	726.00	0.00	5,377.11	971.00	0.00	7,357.13	2,384.00	0.00	10,107.53	3,373.00	0.00	12,224.69	4,071.00	0.00
2036	3,827.54	677.00	0.00	5,148.39	906.00	0.00	6,832.07	972.00	0.00	9,331.56	3,159.00	0.00	11,250.30	3,844.00	0.00
2037	3,682.61	630.00	0.00	4,522.51	677.00	0.00	6,009.42	732.00	0.00	8,661.39	2,957.00	0.00	10,409.57	3,619.00	0.00
2038	3,550.14	589.00	0.00	4,332.36	633.00	0.00	5,648.09	678.00	0.00	8,043.38	2,782.00	0.00	9,643.79	3,425.00	0.00
2039	3,426.58	550.00	0.00	4,150.78	593.00	0.00	5,291.53	626.00	0.00	7,460.14	2,621.00	0.00	8,943.89	3,242.00	0.00
2040	3,312.71	515.00	0.00	3,979.90	556.00	0.00	4,955.56	578.00	0.00	6,945.95	2,477.00	0.00	8,326.10	3,078.00	0.00
2041	3,202.40	481.00	0.00	3,820.80	520.00	0.00	4,650.35	532.00	0.00	6,481.88	2,322.00	0.00	7,771.31	2,895.00	0.00
2042	3,100.60	450.00	0.00	3,678.56	488.00	0.00	4,409.67	496.00	0.00	6,065.11	2,200.00	0.00	7,274.01	2,755.00	0.00
2043	3,004.70	423.00	0.00	3,559.47	460.00	0.00	4,215.83	467.00	0.00	5,686.51	2,090.00	0.00	6,810.10	2,625.00	0.00
2044	2,915.83	397.00	0.00	3,449.94	433.00	0.00	4,041.48	439.00	0.00	5,378.90	1,995.00	0.00	6,411.64	2,508.00	0.00
2045	2,828.64	373.00	0.00	3,340.93	407.00	0.00	3,869.79	412.00	0.00	5,122.14	1,902.00	0.00	6,069.60	2,394.00	0.00
2046	2,747.83	352.00	0.00	3,238.03	384.00	0.00	3,707.84	388.00	0.00	4,873.90	1,803.00	0.00	5,771.81	2,266.00	0.00
2047	2,671.08	331.00	0.00	3,144.70	364.00	0.00	3,570.30	367.00	0.00	4,665.46	1,726.00	0.00	5,517.55	2,178.00	0.00
2048	2,599.67	314.00	0.00	3,057.51	344.00	0.00	3,437.10	347.00	0.00	4,459.83	1,659.00	0.00	5,262.94	2,096.00	0.00
2049	2,504.76	296.00	0.00	2,926.97	326.00	0.00	3,257.68	328.00	0.00	4,223.18	1,589.00	0.00	4,978.92	2,011.00	0.00
2050	2,438.56	281.00	0.00	2,846.85	309.00	0.00	3,119.84	310.00	0.00	3,957.34	556.00	0.00	4,766.24	1,935.00	0.00
2051	2,373.65	267.00	0.00	2,765.71	295.00	0.00	2,982.73	295.00	0.00	3,782.31	531.00	0.00	4,475.32	815.00	0.00
2052	2,315.77	254.00	0.00	2,693.07	280.00	0.00	2,872.55	280.00	0.00	3,628.97	508.00	0.00	4,287.59	784.00	0.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**124,296.08**	**28,466.00**	**0.00**	**163,212.91**	**35,018.00**	**0.00**	**219,061.05**	**63,375.00**	**0.00**	**286,787.71**	**102,253.00**	**0.00**	**331,613.91**	**120,946.00**	**0.00**

Notes:
1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.

TABLE 7
PROJECTION of GROSS RESERVES
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
RECONCAVO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	Proved Developed Producing			Proved Developed			Total Proved			Proved plus Probable			Proved plus Probable plus Possible		
Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^3bbl)
2023	1,029.01	4,806.00	0.00	1,939.47	5,465.00	0.00	1,991.54	5,469.00	0.00	2,104.97	5,714.00	0.00	2,167.83	8,135.00	0.00
2024	949.09	4,360.00	0.00	2,486.12	6,461.00	0.00	3,005.66	6,701.00	0.00	3,302.42	7,310.00	0.00	3,484.94	12,621.00	0.00
2025	875.01	3,763.00	0.00	2,419.39	6,137.00	324.00	3,312.97	6,334.00	501.00	4,088.70	8,148.00	566.00	4,668.74	14,624.00	620.00
2026	812.27	5,548.00	0.00	2,195.05	8,165.00	410.00	3,432.96	8,458.00	633.00	4,857.28	10,632.00	705.00	5,928.85	17,878.00	769.00
2027	756.69	5,014.00	0.00	1,958.36	10,237.00	381.00	3,173.63	10,451.00	599.00	4,944.67	12,778.00	698.00	6,419.81	20,703.00	767.00
2028	709.02	4,571.00	0.00	1,760.08	9,649.00	354.00	2,829.68	9,796.00	540.00	4,802.66	11,990.00	706.00	6,262.41	19,740.00	782.00
2029	662.39	4,166.00	0.00	1,563.36	9,257.00	330.00	2,475.21	9,358.00	478.00	4,484.54	11,463.00	681.00	6,029.53	18,493.00	780.00
2030	621.72	3,823.00	0.00	1,406.41	8,537.00	308.00	2,165.50	8,607.00	429.00	3,931.45	10,541.00	604.00	5,463.73	16,411.00	729.00
2031	584.89	3,521.00	0.00	1,276.87	7,949.00	287.00	1,881.83	7,996.00	388.00	3,313.33	9,769.00	528.00	4,618.87	14,465.00	652.00
2032	552.52	3,250.00	0.00	1,167.22	7,740.00	268.00	1,636.33	7,774.00	353.00	2,789.80	9,806.00	470.00	3,819.76	13,659.00	582.00
2033	519.94	3,006.00	0.00	1,070.73	7,604.00	250.00	1,450.94	7,628.00	321.00	2,431.75	9,675.00	422.00	3,304.65	12,891.00	523.00
2034	491.45	2,796.00	0.00	975.57	7,023.00	232.00	1,299.02	7,040.00	292.00	2,175.13	8,886.00	380.00	2,969.54	11,540.00	473.00
2035	464.87	2,607.00	0.00	900.78	6,212.00	217.00	1,178.61	6,231.00	268.00	1,962.20	7,901.00	344.00	2,685.69	10,071.00	427.00
2036	441.38	2,441.00	0.00	835.57	5,362.00	202.00	1,076.41	5,663.00	245.00	1,767.96	7,081.00	312.00	2,433.46	8,849.00	387.00
2037	417.35	2,277.00	0.00	777.66	4,665.00	189.00	991.50	5,242.00	224.00	1,604.24	6,356.00	283.00	2,208.12	7,660.00	351.00
2038	396.16	2,134.00	0.00	725.90	4,165.00	177.00	912.22	4,745.00	205.00	1,479.38	5,926.00	260.00	2,022.76	6,896.00	322.00
2039	376.42	2,002.00	0.00	668.18	3,742.00	166.00	824.96	4,168.00	187.00	1,359.60	5,555.00	239.00	1,861.96	6,283.00	295.00
2040	358.88	1,885.00	0.00	625.66	3,386.00	156.00	750.27	3,694.00	171.00	1,227.06	5,234.00	219.00	1,665.47	5,726.00	270.00
2041	340.38	1,766.00	0.00	585.97	3,152.00	146.00	677.89	3,397.00	158.00	1,076.53	4,768.00	202.00	1,416.40	5,416.00	248.00
2042	324.18	1,662.00	0.00	552.57	2,951.00	136.00	650.22	3,168.00	147.00	1,047.83	4,342.00	187.00	1,407.72	5,119.00	229.00
2043	308.53	1,564.00	0.00	513.24	2,738.00	127.00	605.46	2,935.00	137.00	970.76	3,932.00	172.00	1,312.12	4,788.00	211.00
2044	175.94	1,408.00	0.00	475.92	2,542.00	118.00	564.06	2,722.00	127.00	894.41	3,491.00	158.00	1,219.63	4,280.00	194.00
2045	167.48	1,325.00	0.00	446.86	2,376.00	110.00	530.53	2,540.00	118.00	823.17	3,204.00	146.00	1,129.52	3,915.00	180.00
2046	159.89	1,250.00	0.00	297.49	2,159.00	104.00	369.93	2,299.00	111.00	747.03	2,955.00	135.00	1,037.33	3,621.00	166.00
2047	152.71	1,180.00	0.00	281.04	2,026.00	97.00	346.50	2,126.00	102.00	714.65	2,740.00	126.00	998.57	3,358.00	154.00
2048	146.29	1,116.00	0.00	266.02	1,904.00	91.00	325.85	1,966.00	95.00	682.39	2,524.00	116.00	959.97	3,082.00	142.00
2049	139.41	1,051.00	0.00	251.20	1,785.00	86.00	307.69	1,835.00	88.00	647.42	2,338.00	107.00	914.59	2,860.00	132.00
2050	0.00	0.00	0.00	231.33	1,628.00	78.00	283.53	1,649.00	79.00	616.65	2,118.00	97.00	882.21	2,605.00	120.00
2051	0.00	0.00	0.00	146.71	1,028.00	49.00	198.37	1,031.00	49.00	527.40	1,461.00	65.00	795.42	1,876.00	85.00
2052	0.00	0.00	0.00	133.71	917.00	44.00	185.99	917.00	44.00	502.79	1,291.00	57.00	767.95	1,673.00	75.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**12,933.87**	**74,292.00**	**0.00**	**28,934.44**	**146,962.00**	**5,437.00**	**39,435.26**	**151,940.00**	**7,089.00**	**61,878.17**	**189,929.00**	**8,985.00**	**80,857.55**	**269,238.00**	**10,665.00**

Notes:
1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.

TABLE 8
SUMMARY of FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN ASSETS
in
BRAZIL
for
3R PETROLEUM S.A.

Basin Reserves Category	Future Net Revenue (10^3U.S.$)	Present Worth 8 Percent (10^3U.S.$)	 10 Percent (10^3U.S.$)	 15 Percent (10^3U.S.$)	 20 Percent (10^3U.S.$)
Campos Basin					
Proved Developed Producing	51,329.00	52,473.00	52,649.00	52,924.00	52,997.00
Proved Developed	175,632.00	160,706.00	157,155.00	148,621.00	140,586.00
Total Proved	845,835.00	520,827.00	465,963.00	359,265.00	284,291.00
Proved plus Probable	1,657,297.00	890,806.00	778,467.00	574,652.00	442,720.00
Proved plus Probable plus Possible	2,465,459.00	1,234,112.00	1,066,826.00	771,685.00	586,038.00
Espiritu Santo Basin					
Proved Developed Producing	68,073.00	71,198.00	70,528.00	67,665.00	63,951.00
Proved Developed	143,657.00	126,707.00	121,278.00	108,144.00	96,449.00
Total Proved	143,657.00	126,707.00	121,278.00	108,144.00	96,449.00
Proved plus Probable	269,410.00	217,201.00	204,873.00	177,025.00	153,583.00
Proved plus Probable plus Possible	301,323.00	241,753.00	227,890.00	196,641.00	170,339.00
Potiguar Basin					
Proved Developed Producing	2,993,544.00	1,922,720.00	1,736,454.00	1,384,429.00	1,144,139.00
Proved Developed	4,126,599.00	2,599,800.00	2,342,239.00	1,853,743.00	1,517,207.00
Total Proved	6,002,972.00	3,554,428.00	3,159,621.00	2,417,820.00	1,913,200.00
Proved plus Probable	8,129,755.00	4,534,540.00	3,975,148.00	2,943,577.00	2,261,289.00
Proved plus Probable plus Possible	9,817,885.00	5,210,678.00	4,531,484.00	3,300,669.00	2,502,325.00
Recôncavo Basin					
Proved Developed Producing	408,072.00	310,478.00	287,612.00	239,745.00	203,548.00
Proved Developed	1,669,879.00	1,008,709.00	906,367.00	713,097.00	579,570.00
Total Proved	2,056,424.00	1,188,346.00	1,056,152.00	808,900.00	640,755.00
Proved plus Probable	3,170,779.00	1,722,534.00	1,512,590.00	1,127,443.00	871,443.00
Proved plus Probable plus Possible	4,424,842.00	2,357,724.00	2,064,502.00	1,529,431.00	1,175,400.00
Grand Total					
Proved Developed Producing	**3,521,018.00**	**2,356,869.00**	**2,147,243.00**	**1,744,763.00**	**1,464,635.00**
Proved Developed	**6,115,767.00**	**3,895,922.00**	**3,527,039.00**	**2,823,605.00**	**2,333,812.00**
Total Proved	**9,048,888.00**	**5,390,308.00**	**4,803,014.00**	**3,694,129.00**	**2,934,695.00**
Proved plus Probable	**13,227,241.00**	**7,365,081.00**	**6,471,078.00**	**4,822,697.00**	**3,729,035.00**
Proved plus Probable plus Possible	**17,009,509.00**	**9,044,267.00**	**7,890,702.00**	**5,798,426.00**	**4,434,102.00**

Note: Probable and possible reserves and values for probable and possible reserves have not been risk adjusted to make them comparable to proved reserves and values for proved reserves.

TABLE 9
PROJECTION of PROVED DEVELOPED PRODUCING RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
CAMPOS BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	2,891.81	0.00	0.00	73.63	-	-	212,924.00	21,293.00	83,693.00	0.00	0.00	0.00	36,699.00	71,239.00	67,526.00
2024	1,673.35	0.00	0.00	67.80	-	-	113,453.00	11,344.00	91,187.00	0.00	0.00	0.00	3,713.00	7,209.00	6,186.00
2025	0.00	0.00	0.00	-	-	-	0.00	0.00	27,119.00	0.00	0.00	0.00	0.00	(27,119.00)	(21,063.00)
2026	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2027	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2028	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2031	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2032	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2033	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2034	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2035	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**4,565.16**	**0.00**	**0.00**				**326,377.00**	**32,637.00**	**201,999.00**	**0.00**	**0.00**	**0.00**	**40,412.00**	**51,329.00**	**52,649.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	52,473.00
12 Percent	52,785.00
15 Percent	52,924.00
20 Percent	52,997.00

TABLE 10
PROJECTION of PROVED DEVELOPED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
CAMPOS BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	3,658.97	0.00	0.00	73.63	-	-	269,410.00	26,939.00	88,748.00	28,658.00	0.00	0.00	51,486.00	73,579.00	69,744.00
2024	3,570.64	0.00	0.00	67.80	-	-	242,089.00	24,209.00	100,797.00	9,691.00	0.00	0.00	38,765.00	68,627.00	58,884.00
2025	2,649.97	0.00	0.00	63.86	-	-	169,227.00	16,923.00	87,623.00	0.00	0.00	0.00	20,948.00	43,733.00	33,967.00
2026	2,085.05	0.00	0.00	61.15	-	-	127,501.00	12,750.00	90,858.00	0.00	0.00	0.00	7,081.00	16,812.00	11,820.00
2027	0.00	0.00	0.00	-	-	-	0.00	0.00	27,119.00	0.00	0.00	0.00	0.00	(27,119.00)	(17,260.00)
2028	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2029	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2030	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2031	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2032	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2033	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2034	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2035	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**11,964.63**	**0.00**	**0.00**				**808,227.00**	**80,821.00**	**395,145.00**	**38,349.00**	**0.00**	**0.00**	**118,280.00**	**175,632.00**	**157,155.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	160,706.00
12 Percent	153,682.00
15 Percent	148,621.00
20 Percent	140,586.00

TABLE 11
PROJECTION of TOTAL PROVED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
CAMPOS BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	3,658.97	0.00	0.00	73.63	-	-	269,410.00	26,939.00	88,748.00	29,410.00	0.00	0.00	51,466.00	72,847.00	69,050.00
2024	3,937.67	0.00	0.00	67.80	-	-	266,974.00	26,696.00	100,797.00	58,706.00	0.00	0.00	45,027.00	35,748.00	30,673.00
2025	4,710.77	0.00	0.00	63.86	-	-	300,830.00	30,082.00	87,623.00	147,469.00	0.00	0.00	55,854.00	(20,198.00)	(15,688.00)
2026	5,655.19	0.00	0.00	61.15	-	-	345,815.00	34,581.00	90,858.00	50,026.00	0.00	0.00	67,159.00	103,191.00	72,551.00
2027	6,116.26	0.00	0.00	59.17	-	-	361,899.00	36,190.00	113,053.00	50,026.00	0.00	0.00	63,173.00	99,457.00	63,298.00
2028	5,709.98	0.00	0.00	57.72	-	-	329,580.00	32,958.00	107,318.00	50,026.00	0.00	0.00	53,873.00	85,405.00	49,203.00
2029	5,158.44	0.00	0.00	57.05	-	-	294,289.00	29,431.00	103,363.00	50,026.00	0.00	0.00	43,057.00	68,412.00	35,677.00
2030	4,409.16	0.00	0.00	57.05	-	-	251,543.00	25,156.00	92,165.00	0.00	0.00	0.00	33,784.00	100,438.00	47,414.00
2031	4,432.27	0.00	0.00	57.05	-	-	252,861.00	25,288.00	114,820.00	0.00	0.00	0.00	26,485.00	86,268.00	36,864.00
2032	4,072.77	0.00	0.00	57.05	-	-	232,351.00	23,234.00	108,704.00	18,718.00	0.00	0.00	21,780.00	59,915.00	23,176.00
2033	3,598.44	0.00	0.00	57.05	-	-	205,291.00	20,531.00	91,933.00	0.00	0.00	0.00	20,001.00	72,826.00	25,500.00
2034	3,195.06	0.00	0.00	57.05	-	-	182,278.00	18,228.00	95,217.00	0.00	0.00	0.00	13,440.00	55,393.00	17,558.00
2035	2,847.28	0.00	0.00	57.05	-	-	162,437.00	16,245.00	100,825.00	0.00	0.00	0.00	9,473.00	35,894.00	10,299.00
2036	2,548.34	0.00	0.00	57.05	-	-	145,383.00	14,537.00	109,959.00	0.00	0.00	0.00	2,511.00	18,376.00	4,773.00
2037	2,285.01	0.00	0.00	57.05	-	-	130,360.00	13,036.00	91,038.00	0.00	0.00	0.00	5,707.00	20,579.00	4,838.00
2038	2,057.45	0.00	0.00	57.05	-	-	117,378.00	11,738.00	96,344.00	0.00	0.00	0.00	1,291.00	8,005.00	1,704.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	56,721.00	0.00	0.00	0.00	0.00	(56,721.00)	(10,927.00)
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**64,393.06**	**0.00**	**0.00**				**3,848,679.00**	**384,870.00**	**1,649,486.00**	**454,407.00**	**0.00**	**0.00**	**514,081.00**	**845,835.00**	**465,963.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	520,827.00
12 Percent	418,612.00
15 Percent	359,265.00
20 Percent	284,291.00

TABLE 12
PROJECTION of PROVED-plus-PROBABLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
CAMPOS BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	4,040.46	0.00	0.00	73.63	-	-	297,499.00	29,751.00	91,260.00	30,130.00	0.00	0.00	59,187.00	87,171.00	82,627.00
2024	4,792.28	0.00	0.00	67.80	-	-	324,916.00	32,493.00	104,148.00	61,562.00	0.00	0.00	61,520.00	65,193.00	55,938.00
2025	5,932.61	0.00	0.00	63.86	-	-	378,857.00	37,885.00	87,623.00	147,469.00	0.00	0.00	79,633.00	26,247.00	20,386.00
2026	7,108.87	0.00	0.00	61.15	-	-	434,707.00	43,470.00	90,858.00	50,026.00	0.00	0.00	94,263.00	156,090.00	109,743.00
2027	7,580.83	0.00	0.00	59.17	-	-	448,558.00	44,854.00	122,394.00	95,741.00	0.00	0.00	85,175.00	100,394.00	63,894.00
2028	7,017.24	0.00	0.00	57.72	-	-	405,035.00	40,505.00	115,776.00	50,026.00	0.00	0.00	72,746.00	125,982.00	72,579.00
2029	6,542.96	0.00	0.00	57.05	-	-	373,276.00	37,329.00	107,774.00	50,026.00	0.00	0.00	64,388.00	113,759.00	59,325.00
2030	6,290.08	0.00	0.00	57.05	-	-	358,849.00	35,884.00	93,286.00	50,026.00	0.00	0.00	63,539.00	116,114.00	54,814.00
2031	6,589.85	0.00	0.00	57.05	-	-	375,951.00	37,596.00	126,097.00	94,720.00	0.00	0.00	55,039.00	62,499.00	26,707.00
2032	6,076.01	0.00	0.00	57.05	-	-	346,637.00	34,665.00	115,930.00	18,718.00	0.00	0.00	49,017.00	128,307.00	49,631.00
2033	5,439.03	0.00	0.00	57.05	-	-	310,296.00	31,028.00	93,955.00	0.00	0.00	0.00	45,369.00	139,944.00	49,002.00
2034	4,909.06	0.00	0.00	57.05	-	-	280,062.00	28,004.00	110,729.00	0.00	0.00	0.00	32,908.00	108,421.00	34,365.00
2035	4,468.04	0.00	0.00	57.05	-	-	254,902.00	25,491.00	101,669.00	0.00	0.00	0.00	32,300.00	95,442.00	27,384.00
2036	4,059.49	0.00	0.00	57.05	-	-	231,594.00	23,159.00	117,186.00	0.00	0.00	0.00	21,253.00	69,996.00	18,180.00
2037	3,729.06	0.00	0.00	57.05	-	-	212,743.00	21,273.00	97,451.00	0.00	0.00	0.00	22,195.00	71,824.00	16,886.00
2038	3,449.34	0.00	0.00	57.05	-	-	196,785.00	19,679.00	107,466.00	0.00	0.00	0.00	17,871.00	51,769.00	11,017.00
2039	3,201.49	0.00	0.00	57.05	-	-	182,645.00	18,263.00	119,633.00	0.00	0.00	0.00	10,768.00	33,981.00	6,546.00
2040	2,982.78	0.00	0.00	57.05	-	-	170,168.00	17,015.00	106,435.00	0.00	0.00	0.00	12,799.00	33,919.00	5,915.00
2041	2,782.91	0.00	0.00	57.05	-	-	158,765.00	15,878.00	93,840.00	0.00	0.00	0.00	16,167.00	32,880.00	5,190.00
2042	2,605.10	0.00	0.00	57.05	-	-	148,621.00	14,861.00	94,494.00	0.00	0.00	0.00	12,841.00	26,425.00	3,776.00
2043	2,444.49	0.00	0.00	57.05	-	-	139,458.00	13,945.00	80,977.00	0.00	0.00	0.00	15,142.00	29,394.00	3,802.00
2044	2,300.61	0.00	0.00	57.05	-	-	131,250.00	13,125.00	80,977.00	0.00	0.00	0.00	12,630.00	24,518.00	2,871.00
2045	2,166.29	0.00	0.00	57.05	-	-	123,587.00	12,359.00	80,977.00	0.00	0.00	0.00	10,285.00	19,966.00	2,116.00
2046	1,810.79	0.00	0.00	57.05	-	-	103,306.00	10,329.00	80,977.00	0.00	0.00	0.00	4,080.00	7,920.00	760.00
2047	1,676.72	0.00	0.00	57.05	-	-	95,657.00	9,567.00	80,977.00	0.00	0.00	0.00	1,738.00	3,375.00	293.00
2048	1,586.91	0.00	0.00	57.05	-	-	90,533.00	9,053.00	80,977.00	0.00	0.00	0.00	171.00	332.00	26.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	74,565.00	0.00	0.00	0.00	0.00	(74,565.00)	(5,306.00)
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**111,583.30**	**0.00**	**0.00**				**6,574,657.00**	**657,461.00**	**2,658,431.00**	**648,444.00**	**0.00**	**0.00**	**953,024.00**	**1,657,297.00**	**778,467.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	890,806.00
12 Percent	685,641.00
15 Percent	574,652.00
20 Percent	442,720.00

TABLE 13
PROJECTION of PROVED-plus-PROBABLE-plus-POSSIBLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
CAMPOS BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	4,303.16	0.00	0.00	73.63	-	-	316,842.00	31,684.00	94,129.00	30,600.00	0.00	0.00	64,118.00	96,311.00	91,291.00
2024	5,387.63	0.00	0.00	67.80	-	-	365,282.00	36,528.00	113,711.00	63,426.00	0.00	0.00	70,557.00	81,060.00	69,552.00
2025	6,744.48	0.00	0.00	63.86	-	-	430,702.00	43,069.00	87,623.00	147,469.00	0.00	0.00	95,435.00	57,106.00	44,354.00
2026	8,113.53	0.00	0.00	61.15	-	-	496,142.00	49,616.00	90,858.00	50,026.00	0.00	0.00	112,998.00	192,644.00	135,444.00
2027	8,937.38	0.00	0.00	59.17	-	-	528,825.00	52,883.00	138,201.00	95,741.00	0.00	0.00	104,298.00	137,702.00	87,638.00
2028	8,415.07	0.00	0.00	57.72	-	-	485,718.00	48,571.00	122,251.00	50,026.00	0.00	0.00	95,170.00	169,700.00	97,766.00
2029	7,917.93	0.00	0.00	57.05	-	-	451,718.00	45,173.00	110,583.00	50,026.00	0.00	0.00	87,372.00	158,564.00	82,691.00
2030	7,639.68	0.00	0.00	57.05	-	-	435,844.00	43,583.00	94,369.00	50,026.00	0.00	0.00	86,668.00	161,198.00	76,097.00
2031	7,904.40	0.00	0.00	57.05	-	-	450,946.00	45,094.00	134,194.00	94,720.00	0.00	0.00	75,172.00	101,766.00	43,487.00
2032	7,335.81	0.00	0.00	57.05	-	-	418,508.00	41,850.00	122,429.00	18,718.00	0.00	0.00	68,737.00	166,774.00	64,511.00
2033	6,648.44	0.00	0.00	57.05	-	-	379,294.00	37,931.00	95,346.00	0.00	0.00	0.00	66,777.00	179,240.00	62,761.00
2034	6,063.98	0.00	0.00	57.05	-	-	345,950.00	34,594.00	115,804.00	0.00	0.00	0.00	51,344.00	144,208.00	45,708.00
2035	5,550.04	0.00	0.00	57.05	-	-	316,630.00	31,663.00	103,235.00	0.00	0.00	0.00	50,657.00	131,075.00	37,608.00
2036	5,104.84	0.00	0.00	57.05	-	-	291,231.00	29,124.00	123,685.00	0.00	0.00	0.00	37,292.00	101,130.00	26,266.00
2037	4,720.00	0.00	0.00	57.05	-	-	269,276.00	26,928.00	99,668.00	0.00	0.00	0.00	38,740.00	103,940.00	24,437.00
2038	4,383.24	0.00	0.00	57.05	-	-	250,064.00	25,006.00	111,714.00	0.00	0.00	0.00	32,730.00	80,614.00	17,156.00
2039	4,084.00	0.00	0.00	57.05	-	-	232,992.00	23,298.00	123,760.00	0.00	0.00	0.00	24,771.00	61,163.00	11,783.00
2040	3,805.09	0.00	0.00	57.05	-	-	217,080.00	21,708.00	111,763.00	0.00	0.00	0.00	25,342.00	58,267.00	10,161.00
2041	3,559.25	0.00	0.00	57.05	-	-	203,055.00	20,306.00	95,566.00	0.00	0.00	0.00	29,133.00	58,050.00	9,164.00
2042	3,340.99	0.00	0.00	57.05	-	-	190,604.00	19,062.00	96,149.00	0.00	0.00	0.00	25,125.00	50,268.00	7,183.00
2043	3,134.16	0.00	0.00	57.05	-	-	178,804.00	17,882.00	80,977.00	0.00	0.00	0.00	27,181.00	52,764.00	6,825.00
2044	2,964.11	0.00	0.00	57.05	-	-	169,102.00	16,912.00	80,977.00	0.00	0.00	0.00	24,212.00	47,001.00	5,503.00
2045	2,803.93	0.00	0.00	57.05	-	-	159,964.00	15,996.00	80,977.00	0.00	0.00	0.00	21,417.00	41,574.00	4,406.00
2046	2,397.21	0.00	0.00	57.05	-	-	136,761.00	13,678.00	80,977.00	0.00	0.00	0.00	14,316.00	27,790.00	2,666.00
2047	2,248.85	0.00	0.00	57.05	-	-	128,297.00	12,829.00	80,977.00	0.00	0.00	0.00	11,727.00	22,764.00	1,977.00
2048	2,136.08	0.00	0.00	57.05	-	-	121,863.00	12,188.00	80,977.00	0.00	0.00	0.00	9,757.00	18,941.00	1,489.00
2049	1,999.71	0.00	0.00	57.05	-	-	114,084.00	11,410.00	80,977.00	0.00	0.00	0.00	7,377.00	14,320.00	1,019.00
2050	1,904.81	0.00	0.00	57.05	-	-	108,670.00	10,868.00	80,977.00	0.00	0.00	0.00	5,721.00	11,104.00	715.00
2051	1,816.81	0.00	0.00	57.05	-	-	103,649.00	10,365.00	80,977.00	0.00	0.00	0.00	4,184.00	8,123.00	474.00
2052	1,725.91	0.00	0.00	57.05	-	-	98,463.00	9,845.00	81,250.00	0.00	0.00	0.00	2,505.00	4,863.00	257.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	74,565.00	0.00	0.00	0.00	0.00	(74,565.00)	(3,563.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**143,090.52**	**0.00**	**0.00**				**8,396,360.00**	**839,644.00**	**3,069,646.00**	**650,778.00**	**0.00**	**0.00**	**1,370,833.00**	**2,465,459.00**	**1,066,826.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	1,234,112.00
12 Percent	931,093.00
15 Percent	771,685.00
20 Percent	586,038.00

TABLE 14
PROJECTION of PROVED DEVELOPED PRODUCING RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	39.01	5,775.00	0.00	87.13	8.56	-	52,836.00	4,649.00	11,635.00	0.00	0.00	0.00	5,574.00	30,978.00	29,363.00
2024	32.84	4,921.00	0.00	81.30	7.98	-	41,937.00	3,692.00	10,824.00	0.00	0.00	0.00	4,182.00	23,239.00	19,940.00
2025	27.85	4,221.00	0.00	77.36	7.59	-	34,196.00	3,010.00	11,563.00	0.00	0.00	0.00	2,993.00	16,630.00	12,917.00
2026	23.93	3,671.00	0.00	74.65	7.31	-	28,618.00	2,519.00	11,932.00	0.00	0.00	0.00	2,160.00	12,007.00	8,442.00
2027	20.75	3,221.00	0.00	72.67	7.12	-	24,442.00	2,153.00	11,932.00	0.00	0.00	0.00	1,579.00	8,778.00	5,587.00
2028	18.18	2,857.00	0.00	71.22	6.97	-	21,205.00	1,865.00	11,941.00	0.00	0.00	0.00	1,128.00	6,271.00	3,613.00
2029	15.97	2,532.00	0.00	70.55	6.90	-	18,598.00	1,637.00	11,932.00	0.00	0.00	0.00	767.00	4,262.00	2,223.00
2030	14.14	2,246.00	0.00	70.55	6.90	-	16,497.00	1,451.00	12,177.00	0.00	0.00	0.00	438.00	2,431.00	1,148.00
2031	12.61	1,992.00	0.00	70.55	6.90	-	14,635.00	1,290.00	12,308.00	0.00	0.00	0.00	158.00	879.00	376.00
2032	11.32	1,772.00	0.00	70.55	6.90	-	13,026.00	1,144.00	11,365.00	0.00	0.00	0.00	79.00	438.00	169.00
2033	0.00	0.00	0.00	-	-	-	0.00	0.00	37,840.00	0.00	0.00	0.00	0.00	(37,840.00)	(13,250.00)
2034	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2035	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**216.60**	**33,208.00**	**0.00**				**265,990.00**	**23,410.00**	**155,449.00**	**0.00**	**0.00**	**0.00**	**19,058.00**	**68,073.00**	**70,528.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	71,198.00
12 Percent	69,543.00
15 Percent	67,665.00
20 Percent	63,951.00

TABLE 15
PROJECTION of PROVED DEVELOPED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	40.28	6,286.00	0.00	87.13	8.56	-	57,318.00	4,872.00	11,635.00	4,812.00	0.00	0.00	6,165.00	29,834.00	28,279.00
2024	37.13	6,787.00	0.00	81.30	7.98	-	57,177.00	4,453.00	10,824.00	0.00	0.00	0.00	6,331.00	35,569.00	30,519.00
2025	31.14	5,855.00	0.00	77.36	7.59	-	46,847.00	3,642.00	11,563.00	0.00	0.00	0.00	4,767.00	26,875.00	20,874.00
2026	26.49	5,116.00	0.00	74.65	7.31	-	39,375.00	3,055.00	11,932.00	0.00	0.00	0.00	3,660.00	20,728.00	14,573.00
2027	22.75	4,509.00	0.00	72.67	7.12	-	33,757.00	2,618.00	11,932.00	0.00	0.00	0.00	2,870.00	16,337.00	10,397.00
2028	19.76	4,015.00	0.00	71.22	6.97	-	29,389.00	2,276.00	11,941.00	0.00	0.00	0.00	2,255.00	12,917.00	7,442.00
2029	17.21	3,573.00	0.00	70.55	6.90	-	25,871.00	2,000.00	11,932.00	0.00	0.00	0.00	1,762.00	10,177.00	5,307.00
2030	15.13	3,190.00	0.00	70.55	6.90	-	23,080.00	1,780.00	12,177.00	0.00	0.00	0.00	1,333.00	7,790.00	3,677.00
2031	13.41	2,849.00	0.00	70.55	6.90	-	20,605.00	1,586.00	12,308.00	0.00	0.00	0.00	965.00	5,746.00	2,455.00
2032	12.03	2,544.00	0.00	70.55	6.90	-	18,405.00	1,414.00	11,365.00	0.00	0.00	0.00	799.00	4,827.00	1,867.00
2033	10.77	2,258.00	0.00	70.55	6.90	-	16,342.00	1,256.00	10,642.00	0.00	0.00	0.00	1,511.00	2,933.00	1,027.00
2034	9.66	2,010.00	0.00	70.55	6.90	-	14,554.00	1,117.00	10,248.00	0.00	0.00	0.00	1,084.00	2,105.00	667.00
2035	8.66	1,790.00	0.00	70.55	6.90	-	12,960.00	994.00	8,442.00	0.00	0.00	0.00	1,198.00	2,326.00	667.00
2036	7.79	1,598.00	0.00	70.55	6.90	-	11,575.00	886.00	8,034.00	0.00	0.00	0.00	903.00	1,752.00	455.00
2037	6.97	1,419.00	0.00	70.55	6.90	-	10,280.00	514.00	8,034.00	0.00	0.00	0.00	589.00	1,143.00	269.00
2038	6.25	1,263.00	0.00	70.55	6.90	-	9,155.00	457.00	8,034.00	0.00	0.00	0.00	226.00	438.00	93.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	37,840.00	0.00	0.00	0.00	0.00	(37,840.00)	(7,290.00)
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**285.43**	**55,062.00**	**0.00**				**426,690.00**	**32,920.00**	**208,883.00**	**4,812.00**	**0.00**	**0.00**	**36,418.00**	**143,657.00**	**121,278.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	126,707.00
12 Percent	115,900.00
15 Percent	108,144.00
20 Percent	96,449.00

TABLE 16
PROJECTION of TOTAL PROVED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	40.28	6,286.00	0.00	87.13	8.56	-	57,318.00	4,872.00	11,635.00	4,812.00	0.00	0.00	6,165.00	29,834.00	28,279.00
2024	37.13	6,787.00	0.00	81.30	7.98	-	57,177.00	4,453.00	10,824.00	0.00	0.00	0.00	6,331.00	35,569.00	30,519.00
2025	31.14	5,855.00	0.00	77.36	7.59	-	46,847.00	3,642.00	11,563.00	0.00	0.00	0.00	4,767.00	26,875.00	20,874.00
2026	26.49	5,116.00	0.00	74.65	7.31	-	39,375.00	3,055.00	11,932.00	0.00	0.00	0.00	3,660.00	20,728.00	14,573.00
2027	22.75	4,509.00	0.00	72.67	7.12	-	33,757.00	2,618.00	11,932.00	0.00	0.00	0.00	2,870.00	16,337.00	10,397.00
2028	19.76	4,015.00	0.00	71.22	6.97	-	29,389.00	2,276.00	11,941.00	0.00	0.00	0.00	2,255.00	12,917.00	7,442.00
2029	17.21	3,573.00	0.00	70.55	6.90	-	25,871.00	2,000.00	11,932.00	0.00	0.00	0.00	1,762.00	10,177.00	5,307.00
2030	15.13	3,190.00	0.00	70.55	6.90	-	23,080.00	1,780.00	12,177.00	0.00	0.00	0.00	1,333.00	7,790.00	3,677.00
2031	13.41	2,849.00	0.00	70.55	6.90	-	20,605.00	1,586.00	12,308.00	0.00	0.00	0.00	965.00	5,746.00	2,455.00
2032	12.03	2,544.00	0.00	70.55	6.90	-	18,405.00	1,414.00	11,365.00	0.00	0.00	0.00	799.00	4,827.00	1,867.00
2033	10.77	2,258.00	0.00	70.55	6.90	-	16,342.00	1,256.00	10,642.00	0.00	0.00	0.00	1,511.00	2,933.00	1,027.00
2034	9.66	2,010.00	0.00	70.55	6.90	-	14,554.00	1,117.00	10,248.00	0.00	0.00	0.00	1,084.00	2,105.00	667.00
2035	8.66	1,790.00	0.00	70.55	6.90	-	12,960.00	994.00	8,442.00	0.00	0.00	0.00	1,198.00	2,326.00	667.00
2036	7.79	1,598.00	0.00	70.55	6.90	-	11,575.00	886.00	8,034.00	0.00	0.00	0.00	903.00	1,752.00	455.00
2037	6.97	1,419.00	0.00	70.55	6.90	-	10,280.00	514.00	8,034.00	0.00	0.00	0.00	589.00	1,143.00	269.00
2038	6.25	1,263.00	0.00	70.55	6.90	-	9,155.00	457.00	8,034.00	0.00	0.00	0.00	226.00	438.00	93.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	37,840.00	0.00	0.00	0.00	0.00	(37,840.00)	(7,290.00)
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**285.43**	**55,062.00**	**0.00**				**426,690.00**	**32,920.00**	**208,883.00**	**4,812.00**	**0.00**	**0.00**	**36,418.00**	**143,657.00**	**121,278.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	126,707.00
12 Percent	115,900.00
15 Percent	108,144.00
20 Percent	96,449.00

TABLE 17
PROJECTION of PROVED-plus-PROBABLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	55.48	6,582.00	0.00	87.13	8.56	-	61,175.00	5,064.00	11,635.00	4,812.00	0.00	0.00	6,724.00	32,940.00	31,223.00
2024	61.00	7,076.00	0.00	81.30	7.98	-	61,423.00	4,665.00	10,824.00	0.00	0.00	0.00	6,946.00	38,988.00	33,453.00
2025	218.03	9,075.00	0.00	77.36	7.59	-	85,744.00	5,587.00	11,563.00	14,980.00	0.00	0.00	10,219.00	43,395.00	33,705.00
2026	310.74	9,551.00	0.00	74.65	7.31	-	93,016.00	5,740.00	11,932.00	0.00	0.00	0.00	11,249.00	64,095.00	45,064.00
2027	221.78	7,069.00	0.00	72.67	7.12	-	66,450.00	4,253.00	11,932.00	0.00	0.00	0.00	7,424.00	42,841.00	27,266.00
2028	164.50	5,549.00	0.00	71.22	6.97	-	50,395.00	3,327.00	11,941.00	0.00	0.00	0.00	5,115.00	30,012.00	17,290.00
2029	95.71	4,400.00	0.00	70.55	6.90	-	37,111.00	2,564.00	11,932.00	0.00	0.00	0.00	3,207.00	19,408.00	10,121.00
2030	56.60	3,620.00	0.00	70.55	6.90	-	28,972.00	2,077.00	12,177.00	0.00	0.00	0.00	2,003.00	12,715.00	6,002.00
2031	13.41	2,849.00	0.00	70.55	6.90	-	20,605.00	1,586.00	12,308.00	0.00	0.00	0.00	782.00	5,929.00	2,534.00
2032	12.03	2,544.00	0.00	70.55	6.90	-	18,405.00	1,414.00	11,365.00	0.00	0.00	0.00	617.00	5,009.00	1,938.00
2033	10.77	2,258.00	0.00	70.55	6.90	-	16,342.00	1,256.00	10,642.00	0.00	0.00	0.00	1,104.00	3,340.00	1,170.00
2034	9.66	2,010.00	0.00	70.55	6.90	-	14,554.00	1,117.00	10,248.00	0.00	0.00	0.00	677.00	2,512.00	796.00
2035	8.66	1,790.00	0.00	70.55	6.90	-	12,960.00	994.00	8,442.00	0.00	0.00	0.00	791.00	2,733.00	784.00
2036	7.79	1,598.00	0.00	70.55	6.90	-	11,575.00	886.00	8,034.00	0.00	0.00	0.00	903.00	1,752.00	455.00
2037	6.97	1,419.00	0.00	70.55	6.90	-	10,280.00	514.00	8,034.00	0.00	0.00	0.00	589.00	1,143.00	269.00
2038	6.25	1,263.00	0.00	70.55	6.90	-	9,155.00	457.00	8,034.00	0.00	0.00	0.00	226.00	438.00	93.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	37,840.00	0.00	0.00	0.00	0.00	(37,840.00)	(7,290.00)
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**1,259.38**	**68,653.00**	**0.00**				**598,162.00**	**41,501.00**	**208,883.00**	**19,792.00**	**0.00**	**0.00**	**58,576.00**	**269,410.00**	**204,873.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	217,201.00
12 Percent	193,201.00
15 Percent	177,025.00
20 Percent	153,583.00

TABLE 18
PROJECTION of PROVED-plus-PROBABLE-plus-POSSIBLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	55.48	6,582.00	0.00	87.13	8.56	-	61,175.00	5,064.00	11,635.00	4,812.00	0.00	0.00	6,724.00	32,940.00	31,223.00
2024	61.00	7,076.00	0.00	81.30	7.98	-	61,423.00	4,665.00	10,824.00	0.00	0.00	0.00	6,946.00	38,988.00	33,453.00
2025	292.64	10,481.00	0.00	77.36	7.59	-	102,189.00	6,411.00	11,563.00	14,980.00	0.00	0.00	12,601.00	56,634.00	43,988.00
2026	396.94	11,008.00	0.00	74.65	7.31	-	110,097.00	6,593.00	11,932.00	0.00	0.00	0.00	13,723.00	77,849.00	54,734.00
2027	250.47	7,490.00	0.00	72.67	7.12	-	71,532.00	4,504.00	11,932.00	0.00	0.00	0.00	8,161.00	46,935.00	29,871.00
2028	168.94	5,607.00	0.00	71.22	6.97	-	51,112.00	3,361.00	11,941.00	0.00	0.00	0.00	5,220.00	30,590.00	17,623.00
2029	97.00	4,415.00	0.00	70.55	6.90	-	37,304.00	2,572.00	11,932.00	0.00	0.00	0.00	3,236.00	19,564.00	10,203.00
2030	57.38	3,628.00	0.00	70.55	6.90	-	29,083.00	2,079.00	12,177.00	0.00	0.00	0.00	2,020.00	12,807.00	6,046.00
2031	13.41	2,849.00	0.00	70.55	6.90	-	20,605.00	1,586.00	12,308.00	0.00	0.00	0.00	782.00	5,929.00	2,534.00
2032	12.03	2,544.00	0.00	70.55	6.90	-	18,405.00	1,414.00	11,365.00	0.00	0.00	0.00	617.00	5,009.00	1,938.00
2033	10.77	2,258.00	0.00	70.55	6.90	-	16,342.00	1,256.00	10,642.00	0.00	0.00	0.00	1,104.00	3,340.00	1,170.00
2034	9.66	2,010.00	0.00	70.55	6.90	-	14,554.00	1,117.00	10,248.00	0.00	0.00	0.00	677.00	2,512.00	796.00
2035	8.66	1,790.00	0.00	70.55	6.90	-	12,960.00	994.00	8,442.00	0.00	0.00	0.00	791.00	2,733.00	784.00
2036	7.79	1,598.00	0.00	70.55	6.90	-	11,575.00	886.00	8,034.00	0.00	0.00	0.00	903.00	1,752.00	455.00
2037	6.97	1,419.00	0.00	70.55	6.90	-	10,280.00	514.00	8,034.00	0.00	0.00	0.00	589.00	1,143.00	269.00
2038	6.25	1,263.00	0.00	70.55	6.90	-	9,155.00	457.00	8,034.00	0.00	0.00	0.00	226.00	438.00	93.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	37,840.00	0.00	0.00	0.00	0.00	(37,840.00)	(7,290.00)
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**1,455.39**	**72,018.00**	**0.00**				**637,791.00**	**43,473.00**	**208,883.00**	**19,792.00**	**0.00**	**0.00**	**64,320.00**	**301,323.00**	**227,890.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	241,753.00
12 Percent	214,786.00
15 Percent	196,641.00
20 Percent	170,339.00

TABLE 19
PROJECTION of PROVED DEVELOPED PRODUCING RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
POTIGUAR BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	8,197.30	3,457.00	0.00	83.23	6.17	-	703,595.00	70,176.00	194,343.00	25,304.00	0.00	0.00	126,297.00	287,475.00	272,492.00
2024	7,560.17	3,209.00	0.00	77.42	5.75	-	603,733.00	60,296.00	182,388.00	15,520.00	0.00	0.00	54,562.00	290,967.00	249,658.00
2025	7,010.52	2,968.00	0.00	73.49	5.46	-	531,413.00	53,136.00	129,528.00	0.00	0.00	0.00	52,687.00	296,062.00	229,952.00
2026	6,540.81	2,758.00	0.00	70.79	5.27	-	477,566.00	47,795.00	124,392.00	0.00	0.00	0.00	46,072.00	259,307.00	182,315.00
2027	6,070.94	1,300.00	0.00	68.81	5.12	-	424,426.00	42,636.00	126,088.00	0.00	0.00	0.00	40,922.00	214,780.00	136,693.00
2028	5,716.51	1,211.00	0.00	67.37	5.02	-	391,227.00	39,332.00	106,334.00	0.00	0.00	0.00	36,949.00	208,612.00	120,183.00
2029	5,396.03	1,123.00	0.00	66.71	4.97	-	365,575.00	36,776.00	102,904.00	0.00	0.00	0.00	33,951.00	191,944.00	100,099.00
2030	5,112.89	1,043.00	0.00	66.72	4.97	-	346,335.00	34,862.00	99,869.00	0.00	0.00	0.00	31,772.00	179,832.00	84,893.00
2031	4,858.44	970.00	0.00	66.73	4.97	-	329,036.00	33,133.00	97,151.00	0.00	0.00	0.00	39,339.00	159,413.00	68,121.00
2032	4,630.73	903.00	0.00	66.74	4.97	-	313,552.00	31,584.00	94,712.00	0.00	0.00	0.00	37,095.00	150,161.00	58,085.00
2033	4,418.62	838.00	0.00	66.75	4.97	-	299,113.00	30,142.00	92,477.00	0.00	0.00	0.00	35,035.00	141,459.00	49,533.00
2034	4,227.52	780.00	0.00	66.76	4.97	-	286,105.00	28,843.00	90,457.00	0.00	0.00	0.00	56,713.00	110,092.00	34,895.00
2035	4,052.53	726.00	0.00	66.77	4.97	-	274,192.00	27,650.00	88,612.00	0.00	0.00	0.00	53,697.00	104,233.00	29,907.00
2036	3,827.54	677.00	0.00	66.93	4.97	-	259,560.00	26,229.00	156,050.00	0.00	0.00	0.00	51,017.00	26,264.00	6,821.00
2037	3,682.61	630.00	0.00	66.93	4.97	-	249,626.00	25,227.00	81,847.00	0.00	0.00	0.00	48,467.00	94,085.00	22,120.00
2038	3,550.14	589.00	0.00	66.93	4.97	-	240,552.00	24,317.00	80,521.00	0.00	0.00	0.00	46,142.00	89,572.00	19,063.00
2039	3,426.58	550.00	0.00	66.93	4.97	-	232,087.00	23,461.00	79,286.00	0.00	0.00	0.00	43,976.00	85,364.00	16,444.00
2040	3,312.71	515.00	0.00	66.93	4.97	-	224,294.00	22,683.00	78,135.00	0.00	0.00	0.00	41,982.00	81,494.00	14,212.00
2041	3,202.40	481.00	0.00	66.93	4.97	-	216,743.00	21,911.00	77,046.00	0.00	0.00	0.00	40,046.00	77,740.00	12,272.00
2042	3,100.60	450.00	0.00	66.94	4.97	-	209,779.00	21,215.00	76,031.00	0.00	0.00	0.00	38,262.00	74,271.00	10,613.00
2043	3,004.70	423.00	0.00	66.94	4.97	-	203,222.00	20,559.00	75,074.00	0.00	0.00	0.00	36,580.00	71,009.00	9,185.00
2044	2,915.83	397.00	0.00	66.94	4.97	-	197,149.00	19,947.00	74,176.00	0.00	0.00	0.00	35,029.00	67,997.00	7,961.00
2045	2,828.64	373.00	0.00	66.94	4.97	-	191,193.00	19,349.00	73,318.00	0.00	0.00	0.00	33,498.00	65,028.00	6,893.00
2046	2,747.83	352.00	0.00	66.94	4.97	-	185,677.00	18,785.00	72,513.00	0.00	0.00	0.00	32,090.00	62,289.00	5,977.00
2047	2,671.08	331.00	0.00	66.94	4.97	-	180,439.00	18,263.00	71,747.00	0.00	0.00	0.00	30,747.00	59,682.00	5,183.00
2048	2,599.67	314.00	0.00	66.94	4.97	-	175,573.00	17,768.00	71,024.00	0.00	0.00	0.00	29,505.00	57,276.00	4,502.00
2049	2,504.76	296.00	0.00	66.94	4.97	-	169,133.00	17,143.00	70,016.00	0.00	0.00	0.00	27,871.00	54,103.00	3,850.00
2050	2,438.56	281.00	0.00	66.94	4.97	-	164,624.00	16,691.00	69,364.00	0.00	0.00	0.00	26,714.00	51,855.00	3,340.00
2051	2,373.65	267.00	0.00	66.93	4.97	-	160,206.00	16,237.00	68,737.00	0.00	0.00	0.00	25,580.00	49,652.00	2,895.00
2052	2,315.77	254.00	0.00	66.94	4.97	-	156,269.00	15,847.00	68,152.00	0.00	0.00	0.00	24,571.00	47,699.00	2,517.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	716,173.00	0.00	0.00	0.00	0.00	(716,173.00)	(34,220.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**124,296.08**	**28,466.00**	**0.00**				**8,761,994.00**	**881,993.00**	**3,588,465.00**	**40,824.00**	**0.00**	**0.00**	**1,257,168.00**	**2,993,544.00**	**1,736,454.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	1,922,720.00
12 Percent	1,578,471.00
15 Percent	1,384,429.00
20 Percent	1,144,139.00

TABLE 20
PROJECTION of PROVED DEVELOPED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
POTIGUAR BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	9,068.15	3,876.00	0.00	83.27	6.17	-	779,020.00	74,701.00	209,594.00	80,143.00	0.00	0.00	139,700.00	274,882.00	260,555.00
2024	10,354.08	4,009.00	0.00	77.45	5.75	-	824,933.00	73,102.00	244,721.00	53,220.00	0.00	0.00	75,708.00	378,182.00	324,491.00
2025	10,572.88	3,688.00	0.00	73.42	5.46	-	796,404.00	68,428.00	184,991.00	19,126.00	0.00	0.00	80,946.00	442,913.00	344,010.00
2026	9,862.32	3,329.00	0.00	70.70	5.27	-	714,821.00	61,514.00	177,986.00	9,563.00	0.00	0.00	70,509.00	395,249.00	277,892.00
2027	9,013.91	1,815.00	0.00	68.71	5.12	-	628,652.00	54,390.00	176,178.00	1,086.00	0.00	0.00	61,143.00	335,855.00	213,750.00
2028	8,297.31	1,659.00	0.00	67.26	5.02	-	566,368.00	49,406.00	153,325.00	0.00	0.00	0.00	53,464.00	310,173.00	178,694.00
2029	7,786.93	1,553.00	0.00	66.59	4.97	-	526,228.00	45,957.00	147,812.00	0.00	0.00	0.00	48,710.00	283,749.00	147,976.00
2030	7,274.67	1,430.00	0.00	66.58	4.97	-	491,479.00	43,147.00	149,273.00	0.00	0.00	0.00	43,616.00	255,443.00	120,586.00
2031	6,827.79	1,320.00	0.00	66.58	4.97	-	461,155.00	40,669.00	138,304.00	0.00	0.00	0.00	54,392.00	227,790.00	97,339.00
2032	6,434.27	1,221.00	0.00	66.58	4.97	-	434,449.00	38,477.00	134,394.00	0.00	0.00	0.00	50,434.00	211,144.00	81,676.00
2033	6,029.66	1,128.00	0.00	66.57	4.97	-	407,026.00	36,273.00	130,264.00	0.00	0.00	0.00	48,014.00	192,475.00	67,397.00
2034	5,657.35	1,044.00	0.00	66.57	4.97	-	381,806.00	34,260.00	126,439.00	0.00	0.00	0.00	74,122.00	146,985.00	46,589.00
2035	5,377.11	971.00	0.00	66.57	4.97	-	362,784.00	32,656.00	123,717.00	0.00	0.00	0.00	69,727.00	136,684.00	39,218.00
2036	5,148.39	906.00	0.00	66.57	4.97	-	347,247.00	31,302.00	121,534.00	0.00	0.00	0.00	66,070.00	128,341.00	33,333.00
2037	4,522.51	677.00	0.00	66.54	4.97	-	304,304.00	28,605.00	252,514.00	0.00	0.00	0.00	61,865.00	(38,680.00)	(9,093.00)
2038	4,332.36	633.00	0.00	66.54	4.97	-	291,441.00	27,454.00	91,739.00	0.00	0.00	0.00	58,564.00	113,684.00	24,195.00
2039	4,150.78	593.00	0.00	66.55	4.97	-	279,165.00	26,370.00	89,811.00	0.00	0.00	0.00	55,415.00	107,569.00	20,723.00
2040	3,979.90	556.00	0.00	66.55	4.97	-	267,614.00	25,356.00	87,975.00	0.00	0.00	0.00	52,457.00	101,826.00	17,757.00
2041	3,820.80	520.00	0.00	66.55	4.97	-	256,861.00	24,392.00	86,302.00	0.00	0.00	0.00	49,696.00	96,471.00	15,229.00
2042	3,678.56	488.00	0.00	66.55	4.97	-	247,247.00	23,523.00	84,799.00	0.00	0.00	0.00	47,233.00	91,692.00	13,103.00
2043	3,559.47	460.00	0.00	66.56	4.97	-	239,191.00	22,769.00	83,578.00	0.00	0.00	0.00	45,166.00	87,678.00	11,341.00
2044	3,449.94	433.00	0.00	66.56	4.97	-	231,781.00	22,078.00	82,442.00	0.00	0.00	0.00	43,269.00	83,992.00	9,834.00
2045	3,340.93	407.00	0.00	66.57	4.97	-	224,415.00	21,388.00	81,341.00	0.00	0.00	0.00	41,372.00	80,314.00	8,513.00
2046	3,238.03	384.00	0.00	66.57	4.97	-	217,461.00	20,737.00	80,285.00	0.00	0.00	0.00	39,590.00	76,849.00	7,373.00
2047	3,144.70	364.00	0.00	66.57	4.97	-	211,158.00	20,140.00	79,323.00	0.00	0.00	0.00	37,976.00	73,719.00	6,403.00
2048	3,057.51	344.00	0.00	66.58	4.97	-	205,268.00	19,584.00	78,421.00	0.00	0.00	0.00	36,468.00	70,795.00	5,566.00
2049	2,926.97	326.00	0.00	66.57	4.97	-	196,482.00	18,814.00	76,987.00	0.00	0.00	0.00	34,232.00	66,449.00	4,729.00
2050	2,846.85	309.00	0.00	66.58	4.97	-	191,078.00	18,300.00	76,179.00	0.00	0.00	0.00	32,844.00	63,755.00	4,108.00
2051	2,765.71	295.00	0.00	66.58	4.97	-	185,606.00	17,790.00	75,397.00	0.00	0.00	0.00	31,423.00	60,996.00	3,557.00
2052	2,693.07	280.00	0.00	66.58	4.97	-	180,706.00	17,333.00	74,638.00	0.00	0.00	0.00	30,170.00	58,565.00	3,092.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	788,940.00	0.00	0.00	0.00	0.00	(788,940.00)	(37,697.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**163,212.91**	**35,018.00**	**0.00**				**11,452,150.00**	**1,038,915.00**	**4,489,203.00**	**163,138.00**	**0.00**	**0.00**	**1,634,295.00**	**4,126,599.00**	**2,342,239.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	2,599,800.00
12 Percent	2,123,479.00
15 Percent	1,853,743.00
20 Percent	1,517,207.00

TABLE 21
PROJECTION of TOTAL PROVED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
POTIGUAR BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	9,513.18	3,893.00	0.00	83.27	6.17	-	816,198.00	77,152.00	211,343.00	162,108.00	0.00	0.00	143,238.00	222,357.00	210,767.00
2024	12,146.06	5,690.00	0.00	77.49	5.75	-	973,910.00	82,165.00	256,676.00	219,363.00	0.00	0.00	92,194.00	323,512.00	277,583.00
2025	14,074.42	6,426.00	0.00	73.52	5.46	-	1,069,825.00	84,981.00	211,401.00	151,311.00	0.00	0.00	111,450.00	510,682.00	396,646.00
2026	15,079.46	5,983.00	0.00	70.75	5.27	-	1,098,339.00	84,716.00	222,496.00	128,654.00	0.00	0.00	112,577.00	549,896.00	386,620.00
2027	14,723.28	5,550.00	0.00	68.65	5.12	-	1,039,159.00	79,528.00	224,094.00	39,514.00	0.00	0.00	103,617.00	592,406.00	377,027.00
2028	13,502.24	5,083.00	0.00	67.20	5.02	-	932,821.00	71,851.00	214,170.00	25,241.00	0.00	0.00	89,778.00	531,781.00	306,364.00
2029	12,398.66	4,695.00	0.00	66.53	4.97	-	848,278.00	65,703.00	203,771.00	3,506.00	0.00	0.00	79,365.00	495,933.00	258,631.00
2030	11,229.13	3,818.00	0.00	66.53	4.97	-	766,053.00	60,007.00	199,164.00	0.00	0.00	0.00	68,397.00	438,485.00	206,995.00
2031	10,239.07	3,262.00	0.00	66.53	4.97	-	697,383.00	55,205.00	183,091.00	0.00	0.00	0.00	81,826.00	377,261.00	161,211.00
2032	9,397.11	3,008.00	0.00	66.52	4.97	-	640,072.00	51,146.00	174,882.00	0.00	0.00	0.00	72,596.00	341,448.00	132,079.00
2033	8,612.86	2,771.00	0.00	66.52	4.97	-	586,687.00	47,373.00	167,061.00	0.00	0.00	0.00	67,260.00	304,993.00	106,794.00
2034	7,916.62	2,565.00	0.00	66.51	4.97	-	539,305.00	44,008.00	160,043.00	0.00	0.00	0.00	102,090.00	233,164.00	73,904.00
2035	7,357.13	2,384.00	0.00	66.51	4.97	-	501,168.00	41,239.00	154,526.00	0.00	0.00	0.00	98,481.00	206,922.00	59,370.00
2036	6,832.07	972.00	0.00	66.50	4.97	-	459,169.00	38,151.00	156,119.00	0.00	0.00	0.00	93,617.00	171,282.00	44,486.00
2037	6,009.42	732.00	0.00	66.47	4.97	-	403,094.00	34,659.00	269,198.00	0.00	0.00	0.00	86,670.00	12,567.00	2,955.00
2038	5,648.09	678.00	0.00	66.47	4.97	-	378,806.00	32,817.00	106,669.00	0.00	0.00	0.00	80,587.00	158,733.00	33,781.00
2039	5,291.53	626.00	0.00	66.47	4.97	-	354,829.00	31,020.00	102,922.00	0.00	0.00	0.00	75,102.00	145,785.00	28,085.00
2040	4,955.56	578.00	0.00	66.46	4.97	-	332,231.00	29,332.00	99,357.00	0.00	0.00	0.00	69,205.00	134,337.00	23,426.00
2041	4,650.35	532.00	0.00	66.46	4.97	-	311,708.00	27,772.00	96,130.00	0.00	0.00	0.00	63,854.00	123,952.00	19,568.00
2042	4,409.67	496.00	0.00	66.46	4.97	-	295,539.00	26,514.00	93,554.00	0.00	0.00	0.00	59,661.00	115,810.00	16,548.00
2043	4,215.83	467.00	0.00	66.46	4.97	-	282,521.00	25,456.00	91,507.00	0.00	0.00	0.00	56,290.00	109,268.00	14,134.00
2044	4,041.48	439.00	0.00	66.47	4.97	-	270,812.00	24,498.00	89,649.00	0.00	0.00	0.00	53,265.00	103,400.00	12,108.00
2045	3,869.79	412.00	0.00	66.47	4.97	-	259,283.00	23,559.00	87,825.00	0.00	0.00	0.00	50,286.00	97,613.00	10,345.00
2046	3,707.84	388.00	0.00	66.48	4.97	-	248,409.00	22,671.00	86,115.00	0.00	0.00	0.00	47,472.00	92,151.00	8,841.00
2047	3,570.30	367.00	0.00	66.48	4.97	-	239,176.00	21,901.00	84,647.00	0.00	0.00	0.00	45,093.00	87,535.00	7,602.00
2048	3,437.10	347.00	0.00	66.49	4.97	-	230,265.00	21,165.00	83,216.00	0.00	0.00	0.00	42,800.00	83,084.00	6,532.00
2049	3,257.68	328.00	0.00	66.50	4.97	-	218,251.00	20,196.00	81,252.00	0.00	0.00	0.00	39,713.00	77,090.00	5,487.00
2050	3,119.84	310.00	0.00	66.50	4.97	-	209,002.00	19,452.00	79,832.00	0.00	0.00	0.00	37,303.00	72,415.00	4,665.00
2051	2,982.73	295.00	0.00	66.50	4.97	-	199,819.00	18,709.00	78,427.00	0.00	0.00	0.00	34,911.00	67,772.00	3,952.00
2052	2,872.55	280.00	0.00	66.51	4.97	-	192,443.00	18,107.00	77,206.00	0.00	0.00	0.00	33,024.00	64,106.00	3,385.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	842,768.00	0.00	0.00	0.00	0.00	(842,768.00)	(40,270.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**219,061.05**	**63,375.00**	**0.00**				**15,394,555.00**	**1,281,053.00**	**5,189,111.00**	**729,697.00**	**0.00**	**0.00**	**2,191,722.00**	**6,002,972.00**	**3,159,621.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	3,554,428.00
12 Percent	2,826,319.00
15 Percent	2,417,820.00
20 Percent	1,913,200.00

TABLE 22
PROJECTION of PROVED-plus-PROBABLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
POTIGUAR BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	9,648.02	4,098.00	0.00	83.28	6.17	-	828,725.00	77,670.00	213,780.00	188,966.00	0.00	0.00	145,957.00	202,352.00	191,805.00
2024	12,812.76	6,116.00	0.00	77.50	5.75	-	1,028,189.00	85,148.00	268,991.00	268,622.00	0.00	0.00	97,210.00	308,218.00	264,460.00
2025	15,722.68	7,486.00	0.00	73.55	5.46	-	1,197,276.00	91,581.00	227,648.00	220,526.00	0.00	0.00	125,628.00	531,893.00	413,123.00
2026	17,486.55	7,128.00	0.00	70.74	5.27	-	1,274,553.00	94,072.00	244,316.00	176,444.00	0.00	0.00	132,339.00	627,382.00	441,097.00
2027	18,336.37	6,784.00	0.00	68.65	5.12	-	1,293,465.00	93,299.00	255,398.00	131,930.00	0.00	0.00	132,041.00	680,797.00	433,283.00
2028	18,126.80	6,589.00	0.00	67.17	5.02	-	1,250,620.00	89,431.00	256,353.00	108,646.00	0.00	0.00	124,627.00	671,563.00	386,892.00
2029	17,523.16	6,106.00	0.00	66.52	4.97	-	1,195,985.00	85,250.00	252,090.00	58,749.00	0.00	0.00	116,866.00	683,030.00	356,200.00
2030	16,392.36	5,268.00	0.00	66.51	4.97	-	1,116,516.00	79,600.00	247,690.00	16,282.00	0.00	0.00	106,081.00	666,863.00	314,805.00
2031	15,026.27	4,644.00	0.00	66.49	4.97	-	1,022,201.00	73,327.00	236,696.00	0.00	0.00	0.00	119,614.00	592,564.00	253,215.00
2032	13,559.14	4,252.00	0.00	66.48	4.97	-	922,577.00	66,942.00	220,220.00	0.00	0.00	0.00	104,952.00	530,463.00	205,193.00
2033	12,225.62	3,910.00	0.00	66.47	4.97	-	832,099.00	61,075.00	205,355.00	0.00	0.00	0.00	95,735.00	469,934.00	164,549.00
2034	11,052.50	3,622.00	0.00	66.46	4.97	-	752,556.00	55,901.00	191,732.00	0.00	0.00	0.00	150,126.00	354,797.00	112,458.00
2035	10,107.53	3,373.00	0.00	66.45	4.97	-	688,434.00	51,661.00	183,722.00	0.00	0.00	0.00	138,114.00	314,937.00	90,361.00
2036	9,331.56	3,159.00	0.00	66.45	4.97	-	635,753.00	48,134.00	177,377.00	0.00	0.00	0.00	130,897.00	279,345.00	72,552.00
2037	8,661.39	2,957.00	0.00	66.44	4.97	-	590,198.00	45,055.00	182,871.00	0.00	0.00	0.00	116,628.00	245,644.00	57,751.00
2038	8,043.38	2,782.00	0.00	66.44	4.97	-	548,232.00	42,209.00	166,937.00	0.00	0.00	0.00	112,328.00	226,758.00	48,258.00
2039	7,460.14	2,621.00	0.00	66.43	4.97	-	508,631.00	39,525.00	158,882.00	0.00	0.00	0.00	104,088.00	206,136.00	39,711.00
2040	6,945.95	2,477.00	0.00	66.43	4.97	-	473,716.00	37,148.00	151,520.00	0.00	0.00	0.00	96,916.00	188,132.00	32,809.00
2041	6,481.88	2,322.00	0.00	66.42	4.97	-	442,099.00	34,959.00	147,930.00	0.00	0.00	0.00	88,131.00	171,079.00	27,005.00
2042	6,065.11	2,200.00	0.00	66.42	4.97	-	413,785.00	33,012.00	143,682.00	0.00	0.00	0.00	80,609.00	156,482.00	22,361.00
2043	5,686.51	2,090.00	0.00	66.42	4.97	-	388,063.00	31,216.00	136,543.00	0.00	0.00	0.00	74,904.00	145,400.00	18,808.00
2044	5,378.90	1,995.00	0.00	66.41	4.97	-	367,151.00	29,733.00	133,420.00	0.00	0.00	0.00	69,359.00	134,639.00	15,765.00
2045	5,122.14	1,902.00	0.00	66.42	4.97	-	349,660.00	28,460.00	130,814.00	0.00	0.00	0.00	64,732.00	125,654.00	13,319.00
2046	4,873.90	1,803.00	0.00	66.42	4.97	-	332,682.00	27,231.00	128,281.00	0.00	0.00	0.00	60,238.00	116,932.00	11,221.00
2047	4,665.46	1,726.00	0.00	66.42	4.97	-	318,470.00	26,182.00	126,186.00	0.00	0.00	0.00	56,475.00	109,627.00	9,520.00
2048	4,459.83	1,659.00	0.00	66.43	4.97	-	304,509.00	25,166.00	124,096.00	0.00	0.00	0.00	52,784.00	102,463.00	8,056.00
2049	4,223.18	1,589.00	0.00	66.43	4.97	-	288,448.00	23,963.00	121,609.00	0.00	0.00	0.00	48,578.00	94,298.00	6,711.00
2050	3,957.34	556.00	0.00	66.41	4.97	-	265,569.00	22,385.00	125,644.00	0.00	0.00	0.00	45,372.00	72,168.00	4,649.00
2051	3,782.31	531.00	0.00	66.41	4.97	-	253,834.00	21,517.00	108,012.00	0.00	0.00	0.00	42,263.00	82,042.00	4,784.00
2052	3,628.97	508.00	0.00	66.42	4.97	-	243,562.00	20,750.00	106,444.00	0.00	0.00	0.00	39,566.00	76,802.00	4,055.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	1,038,639.00	0.00	0.00	0.00	0.00	(1,038,639.00)	(49,628.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**286,787.71**	**102,253.00**	**0.00**				**20,127,558.00**	**1,541,602.00**	**6,412,878.00**	**1,170,165.00**	**0.00**	**0.00**	**2,873,158.00**	**8,129,755.00**	**3,975,148.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	4,534,540.00
12 Percent	3,508,136.00
15 Percent	2,943,577.00
20 Percent	2,261,289.00

TABLE 23
PROJECTION of PROVED-plus-PROBABLE-plus-POSSIBLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
POTIGUAR BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	9,804.44	4,116.00	0.00	83.28	6.17	-	841,939.00	78,458.00	215,165.00	201,816.00	0.00	0.00	147,936.00	198,564.00	188,215.00
2024	13,198.30	6,445.00	0.00	77.51	5.75	-	1,060,092.00	86,991.00	274,610.00	281,523.00	0.00	0.00	100,622.00	316,346.00	271,435.00
2025	16,558.80	8,190.00	0.00	73.57	5.46	-	1,262,923.00	95,156.00	234,779.00	235,228.00	0.00	0.00	133,514.00	564,246.00	438,250.00
2026	18,523.37	7,602.00	0.00	70.76	5.27	-	1,350,818.00	98,228.00	252,615.00	217,173.00	0.00	0.00	141,080.00	641,722.00	451,180.00
2027	20,615.52	7,742.00	0.00	68.71	5.12	-	1,456,064.00	102,569.00	272,330.00	141,111.00	0.00	0.00	151,741.00	788,313.00	501,711.00
2028	20,603.86	7,318.00	0.00	67.23	5.02	-	1,422,029.00	99,224.00	275,334.00	135,507.00	0.00	0.00	144,948.00	767,016.00	441,885.00
2029	19,924.41	6,820.00	0.00	66.56	4.97	-	1,360,156.00	94,585.00	270,472.00	101,785.00	0.00	0.00	135,720.00	757,594.00	395,085.00
2030	19,420.53	6,394.00	0.00	66.54	4.97	-	1,323,950.00	91,471.00	272,338.00	72,442.00	0.00	0.00	129,504.00	758,195.00	357,921.00
2031	18,149.37	5,660.00	0.00	66.47	4.97	-	1,234,479.00	85,450.00	261,965.00	9,567.00	0.00	0.00	152,209.00	725,288.00	309,932.00
2032	16,372.85	5,083.00	0.00	66.45	4.97	-	1,113,297.00	77,802.00	242,735.00	0.00	0.00	0.00	133,956.00	658,804.00	254,837.00
2033	14,832.70	4,678.00	0.00	66.45	4.97	-	1,008,810.00	71,127.00	226,360.00	0.00	0.00	0.00	123,153.00	588,170.00	205,950.00
2034	13,414.39	4,357.00	0.00	66.43	4.97	-	912,802.00	64,988.00	210,573.00	0.00	0.00	0.00	190,312.00	446,929.00	141,660.00
2035	12,224.69	4,071.00	0.00	66.42	4.97	-	832,227.00	59,780.00	200,264.00	0.00	0.00	0.00	175,219.00	396,964.00	113,897.00
2036	11,250.30	3,844.00	0.00	66.42	4.97	-	766,298.00	55,488.00	192,104.00	0.00	0.00	0.00	163,836.00	354,870.00	92,168.00
2037	10,409.57	3,619.00	0.00	66.41	4.97	-	709,304.00	51,731.00	196,049.00	0.00	0.00	0.00	148,232.00	313,292.00	73,655.00
2038	9,643.79	3,425.00	0.00	66.41	4.97	-	657,443.00	48,317.00	178,776.00	0.00	0.00	0.00	141,318.00	289,032.00	61,513.00
2039	8,943.89	3,242.00	0.00	66.40	4.97	-	610,012.00	45,173.00	169,721.00	0.00	0.00	0.00	132,110.00	263,008.00	50,667.00
2040	8,326.10	3,078.00	0.00	66.40	4.97	-	568,138.00	42,388.00	161,467.00	0.00	0.00	0.00	123,595.00	240,688.00	41,973.00
2041	7,771.31	2,895.00	0.00	66.40	4.97	-	530,376.00	39,847.00	157,108.00	0.00	0.00	0.00	113,103.00	220,318.00	34,779.00
2042	7,274.01	2,755.00	0.00	66.39	4.97	-	496,649.00	37,579.00	152,179.00	0.00	0.00	0.00	104,343.00	202,548.00	28,944.00
2043	6,810.10	2,625.00	0.00	66.39	4.97	-	465,183.00	35,459.00	144,255.00	0.00	0.00	0.00	97,060.00	188,409.00	24,371.00
2044	6,411.64	2,508.00	0.00	66.39	4.97	-	438,142.00	33,626.00	140,282.00	0.00	0.00	0.00	89,839.00	174,395.00	20,421.00
2045	6,069.60	2,394.00	0.00	66.39	4.97	-	414,883.00	32,015.00	136,913.00	0.00	0.00	0.00	83,625.00	162,330.00	17,206.00
2046	5,771.81	2,266.00	0.00	66.40	4.97	-	394,494.00	30,589.00	133,961.00	0.00	0.00	0.00	78,181.00	151,763.00	14,560.00
2047	5,517.55	2,178.00	0.00	66.40	4.97	-	377,198.00	29,362.00	131,455.00	0.00	0.00	0.00	73,570.00	142,811.00	12,402.00
2048	5,262.94	2,096.00	0.00	66.41	4.97	-	359,934.00	28,152.00	128,915.00	0.00	0.00	0.00	68,974.00	133,893.00	10,526.00
2049	4,978.92	2,011.00	0.00	66.41	4.97	-	340,667.00	26,773.00	126,010.00	0.00	0.00	0.00	63,879.00	124,005.00	8,825.00
2050	4,766.24	1,935.00	0.00	66.42	4.97	-	326,187.00	25,742.00	123,974.00	0.00	0.00	0.00	60,000.00	116,471.00	7,502.00
2051	4,475.32	815.00	0.00	66.41	4.97	-	301,235.00	24,055.00	127,862.00	0.00	0.00	0.00	56,177.00	93,141.00	5,431.00
2052	4,287.59	784.00	0.00	66.41	4.97	-	288,650.00	23,161.00	110,171.00	0.00	0.00	0.00	52,809.00	102,509.00	5,412.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	1,063,749.00	0.00	0.00	0.00	0.00	(1,063,749.00)	(50,829.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**331,613.91**	**120,946.00**	**0.00**				**23,224,379.00**	**1,715,286.00**	**6,784,491.00**	**1,396,152.00**	**0.00**	**0.00**	**3,510,565.00**	**9,817,885.00**	**4,531,484.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	5,210,678.00
12 Percent	3,970,809.00
15 Percent	3,300,669.00
20 Percent	2,502,325.00

TABLE 24
PROJECTION of PROVED DEVELOPED PRODUCING RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
RECÔNCAVO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	1,029.01	4,806.00	0.00	83.40	6.21	-	115,669.00	11,858.00	34,063.00	0.00	0.00	0.00	10,637.00	59,111.00	56,030.00
2024	949.09	4,360.00	0.00	77.58	6.10	-	100,229.00	10,267.00	25,368.00	0.00	0.00	0.00	9,851.00	54,743.00	46,971.00
2025	875.01	3,763.00	0.00	73.66	6.02	-	87,107.00	8,918.00	24,947.00	0.00	0.00	0.00	8,119.00	45,123.00	35,048.00
2026	812.27	5,548.00	0.00	70.96	5.96	-	90,704.00	9,261.00	24,590.00	0.00	0.00	0.00	8,670.00	48,183.00	33,877.00
2027	756.69	5,014.00	0.00	68.99	5.92	-	81,890.00	8,362.00	24,276.00	0.00	0.00	0.00	7,511.00	41,741.00	26,566.00
2028	709.02	4,571.00	0.00	67.55	5.89	-	74,821.00	7,636.00	24,008.00	0.00	0.00	0.00	6,584.00	36,593.00	21,082.00
2029	662.39	4,166.00	0.00	66.89	5.88	-	68,802.00	7,024.00	23,748.00	0.00	0.00	0.00	5,799.00	32,231.00	16,809.00
2030	621.72	3,823.00	0.00	66.89	5.88	-	64,066.00	6,536.00	23,521.00	0.00	0.00	0.00	5,187.00	28,822.00	13,606.00
2031	584.89	3,521.00	0.00	66.90	5.88	-	59,832.00	6,102.00	23,316.00	0.00	0.00	0.00	4,638.00	25,776.00	11,015.00
2032	552.52	3,250.00	0.00	66.91	5.88	-	56,078.00	5,713.00	23,138.00	0.00	0.00	0.00	5,537.00	21,690.00	8,390.00
2033	519.94	3,006.00	0.00	66.92	5.88	-	52,469.00	5,349.00	22,959.00	0.00	0.00	0.00	8,214.00	15,947.00	5,584.00
2034	491.45	2,796.00	0.00	66.92	5.88	-	49,329.00	5,031.00	22,804.00	0.00	0.00	0.00	7,308.00	14,186.00	4,497.00
2035	464.87	2,607.00	0.00	66.92	5.88	-	46,440.00	4,733.00	22,659.00	0.00	0.00	0.00	6,477.00	12,571.00	3,607.00
2036	441.38	2,441.00	0.00	66.93	5.88	-	43,896.00	4,470.00	22,531.00	0.00	0.00	0.00	5,744.00	11,151.00	2,897.00
2037	417.35	2,277.00	0.00	66.94	5.88	-	41,325.00	4,208.00	22,402.00	0.00	0.00	0.00	5,003.00	9,712.00	2,284.00
2038	396.16	2,134.00	0.00	66.93	5.88	-	39,063.00	3,985.00	22,288.00	0.00	0.00	0.00	4,348.00	8,442.00	1,796.00
2039	376.42	2,002.00	0.00	66.93	5.88	-	36,966.00	3,770.00	22,182.00	0.00	0.00	0.00	3,744.00	7,270.00	1,401.00
2040	358.88	1,885.00	0.00	66.93	5.88	-	35,103.00	3,577.00	22,088.00	0.00	0.00	0.00	3,209.00	6,229.00	1,086.00
2041	340.38	1,766.00	0.00	66.94	5.88	-	33,170.00	3,377.00	21,989.00	0.00	0.00	0.00	2,654.00	5,150.00	814.00
2042	324.18	1,662.00	0.00	66.93	5.88	-	31,471.00	3,205.00	21,903.00	0.00	0.00	0.00	2,163.00	4,200.00	600.00
2043	308.53	1,564.00	0.00	66.94	5.88	-	29,849.00	3,044.00	21,820.00	0.00	0.00	0.00	1,695.00	3,290.00	426.00
2044	175.94	1,408.00	0.00	67.56	5.88	-	20,166.00	2,037.00	45,711.00	0.00	0.00	0.00	1,395.00	(28,977.00)	(3,393.00)
2045	167.48	1,325.00	0.00	67.54	5.88	-	19,102.00	1,926.00	13,990.00	0.00	0.00	0.00	1,083.00	2,103.00	223.00
2046	159.89	1,250.00	0.00	67.54	5.88	-	18,149.00	1,834.00	13,958.00	0.00	0.00	0.00	801.00	1,556.00	149.00
2047	152.71	1,180.00	0.00	67.53	5.88	-	17,251.00	1,745.00	13,927.00	0.00	0.00	0.00	537.00	1,042.00	91.00
2048	146.29	1,116.00	0.00	67.56	5.88	-	16,446.00	1,659.00	13,900.00	0.00	0.00	0.00	302.00	585.00	46.00
2049	139.41	1,051.00	0.00	67.55	5.88	-	15,597.00	1,573.00	13,871.00	0.00	0.00	0.00	52.00	101.00	7.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	60,499.00	0.00	0.00	0.00	0.00	(60,499.00)	(3,897.00)
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**12,933.87**	**74,292.00**	**0.00**				**1,344,990.00**	**137,200.00**	**672,456.00**	**0.00**	**0.00**	**0.00**	**127,262.00**	**408,072.00**	**287,612.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	310,478.00
12 Percent	266,885.00
15 Percent	239,745.00
20 Percent	203,548.00

TABLE 25
PROJECTION of PROVED DEVELOPED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
RECÔNCAVO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	1,939.47	5,465.00	0.00	83.50	6.21	-	195,881.00	16,673.00	38,728.00	32,727.00	0.00	0.00	21,024.00	86,729.00	82,208.00
2024	2,486.12	6,461.00	0.00	77.61	6.10	-	232,352.00	18,194.00	33,653.00	3,822.00	0.00	0.00	27,081.00	149,602.00	128,363.00
2025	2,419.39	6,137.00	324.00	73.67	6.02	76.36	239,913.00	18,086.00	33,291.00	6,931.00	0.00	0.00	28,222.00	153,383.00	119,133.00
2026	2,195.05	8,165.00	410.00	70.99	5.96	73.65	234,694.00	17,902.00	31,968.00	1,069.00	0.00	0.00	27,642.00	156,113.00	109,759.00
2027	1,958.36	10,237.00	381.00	69.02	5.92	71.67	223,073.00	16,834.00	30,605.00	1,527.00	0.00	0.00	26,222.00	147,885.00	94,119.00
2028	1,760.08	9,649.00	354.00	67.63	5.89	70.22	200,722.00	15,189.00	29,472.00	305.00	0.00	0.00	23,234.00	132,522.00	76,347.00
2029	1,563.36	9,257.00	330.00	66.97	5.88	69.55	182,083.00	13,816.00	28,333.00	153.00	0.00	0.00	20,772.00	119,009.00	62,063.00
2030	1,406.41	8,537.00	308.00	66.99	5.88	69.55	165,828.00	12,643.00	27,443.00	153.00	0.00	0.00	18,606.00	106,983.00	50,503.00
2031	1,276.87	7,949.00	287.00	67.03	5.88	69.55	152,287.00	11,649.00	26,723.00	153.00	0.00	0.00	16,801.00	96,961.00	41,433.00
2032	1,167.22	7,740.00	268.00	67.06	5.88	69.55	142,429.00	10,895.00	26,126.00	305.00	0.00	0.00	21,063.00	84,040.00	32,508.00
2033	1,070.73	7,604.00	250.00	67.07	5.88	69.55	133,913.00	10,233.00	25,610.00	153.00	0.00	0.00	32,948.00	64,969.00	22,749.00
2034	975.57	7,023.00	232.00	67.10	5.88	69.55	122,894.00	9,441.00	25,098.00	0.00	0.00	0.00	29,749.00	58,606.00	18,576.00
2035	900.78	6,212.00	217.00	67.10	5.88	69.55	112,064.00	8,672.00	24,704.00	0.00	0.00	0.00	26,480.00	52,208.00	14,980.00
2036	835.57	5,362.00	202.00	67.12	5.88	69.55	101,659.00	7,939.00	24,373.00	0.00	0.00	0.00	23,504.00	45,843.00	11,907.00
2037	777.66	4,665.00	189.00	67.08	5.88	69.55	92,744.00	7,297.00	24,081.00	0.00	0.00	0.00	20,832.00	40,534.00	9,529.00
2038	725.90	4,165.00	177.00	67.09	5.88	69.55	85,502.00	6,768.00	23,824.00	0.00	0.00	0.00	18,637.00	36,273.00	7,720.00
2039	668.18	3,742.00	166.00	67.07	5.88	69.55	78,364.00	6,252.00	23,545.00	0.00	0.00	0.00	16,493.00	32,074.00	6,179.00
2040	625.66	3,386.00	156.00	67.05	5.88	69.55	72,709.00	5,834.00	23,335.00	0.00	0.00	0.00	14,787.00	28,753.00	5,014.00
2041	585.97	3,152.00	146.00	67.04	5.88	69.55	67,972.00	5,467.00	23,134.00	0.00	0.00	0.00	13,374.00	25,997.00	4,104.00
2042	552.57	2,951.00	136.00	67.15	5.88	69.55	63,915.00	5,154.00	22,966.00	0.00	0.00	0.00	12,158.00	23,637.00	3,378.00
2043	513.24	2,738.00	127.00	67.07	5.88	69.55	59,355.00	4,814.00	22,764.00	0.00	0.00	0.00	10,804.00	20,973.00	2,713.00
2044	475.92	2,542.00	118.00	67.10	5.88	69.55	55,089.00	4,496.00	22,573.00	0.00	0.00	0.00	9,527.00	18,493.00	2,165.00
2045	446.86	2,376.00	110.00	67.19	5.88	69.55	51,644.00	4,226.00	22,425.00	0.00	0.00	0.00	8,498.00	16,495.00	1,748.00
2046	297.49	2,159.00	104.00	67.48	5.88	69.55	40,002.00	3,143.00	46,226.00	0.00	0.00	0.00	7,588.00	(16,955.00)	(1,627.00)
2047	281.04	2,026.00	97.00	67.61	5.88	69.55	37,661.00	2,968.00	14,472.00	0.00	0.00	0.00	6,875.00	13,346.00	1,159.00
2048	266.02	1,904.00	91.00	67.66	5.88	69.55	35,524.00	2,805.00	14,408.00	0.00	0.00	0.00	6,226.00	12,085.00	950.00
2049	251.20	1,785.00	86.00	67.47	5.88	69.55	33,426.00	2,643.00	14,345.00	0.00	0.00	0.00	5,589.00	10,849.00	772.00
2050	231.33	1,628.00	78.00	67.62	5.88	69.55	30,641.00	2,445.00	14,261.00	0.00	0.00	0.00	4,738.00	9,197.00	593.00
2051	146.71	1,028.00	49.00	67.52	5.88	69.55	19,358.00	1,741.00	13,902.00	0.00	0.00	0.00	1,263.00	2,452.00	143.00
2052	133.71	917.00	44.00	67.30	5.88	69.55	17,451.00	1,601.00	13,847.00	0.00	0.00	0.00	681.00	1,322.00	70.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	60,499.00	0.00	0.00	0.00	0.00	(60,499.00)	(2,891.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**28,934.44**	**146,962.00**	**5,437.00**				**3,281,149.00**	**255,820.00**	**806,734.00**	**47,298.00**	**0.00**	**0.00**	**501,418.00**	**1,669,879.00**	**906,367.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	1,008,709.00
12 Percent	819,812.00
15 Percent	713,097.00
20 Percent	579,570.00

TABLE 26
PROJECTION of TOTAL PROVED RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
RECÔNCAVO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	1,991.54	5,469.00	0.00	83.51	6.21	-	200,281.00	16,933.00	38,959.00	46,562.00	0.00	0.00	21,451.00	76,376.00	72,396.00
2024	3,005.66	6,701.00	0.00	77.61	6.10	-	274,138.00	20,703.00	36,458.00	60,712.00	0.00	0.00	31,780.00	124,485.00	106,812.00
2025	3,312.97	6,334.00	501.00	73.77	6.02	76.36	320,787.00	22,939.00	37,583.00	71,455.00	0.00	0.00	37,510.00	151,300.00	117,515.00
2026	3,432.96	8,458.00	633.00	71.09	5.96	73.65	341,078.00	24,285.00	38,001.00	53,963.00	0.00	0.00	39,677.00	185,152.00	130,176.00
2027	3,173.63	10,451.00	599.00	69.17	5.92	71.67	324,322.00	22,903.00	36,393.00	41,554.00	0.00	0.00	37,071.00	186,401.00	118,632.00
2028	2,829.68	9,796.00	540.00	67.76	5.89	70.22	287,343.00	20,387.00	34,463.00	31,846.00	0.00	0.00	31,721.00	168,926.00	97,319.00
2029	2,475.21	9,358.00	478.00	67.12	5.88	69.55	254,400.00	18,156.00	32,525.00	153.00	0.00	0.00	27,331.00	176,235.00	91,907.00
2030	2,165.50	8,607.00	429.00	67.13	5.88	69.55	225,815.00	16,242.00	30,898.00	153.00	0.00	0.00	23,510.00	155,012.00	73,177.00
2031	1,881.83	7,996.00	388.00	67.15	5.88	69.55	200,366.00	14,534.00	29,462.00	153.00	0.00	0.00	20,107.00	136,110.00	58,162.00
2032	1,636.33	7,774.00	353.00	67.14	5.88	69.55	180,124.00	13,157.00	28,246.00	305.00	0.00	0.00	23,221.00	115,195.00	44,559.00
2033	1,450.94	7,628.00	321.00	67.14	5.88	69.55	164,601.00	12,077.00	27,320.00	153.00	0.00	0.00	35,486.00	89,565.00	31,361.00
2034	1,299.02	7,040.00	292.00	67.16	5.88	69.55	148,940.00	11,006.00	26,543.00	0.00	0.00	0.00	32,440.00	78,951.00	25,025.00
2035	1,178.61	6,231.00	268.00	67.17	5.88	69.55	134,440.00	10,011.00	25,932.00	0.00	0.00	0.00	30,000.00	68,497.00	19,654.00
2036	1,076.41	5,663.00	245.00	67.17	5.88	69.55	122,638.00	9,196.00	25,432.00	0.00	0.00	0.00	27,754.00	60,256.00	15,650.00
2037	991.50	5,242.00	224.00	67.21	5.88	69.55	113,044.00	8,512.00	25,016.00	0.00	0.00	0.00	26,145.00	53,371.00	12,548.00
2038	912.22	4,745.00	205.00	67.21	5.88	69.55	103,465.00	7,843.00	24,640.00	0.00	0.00	0.00	23,243.00	47,739.00	10,160.00
2039	824.96	4,168.00	187.00	67.14	5.88	69.55	92,901.00	7,126.00	24,233.00	0.00	0.00	0.00	20,904.00	40,638.00	7,828.00
2040	750.27	3,694.00	171.00	67.12	5.88	69.55	83,970.00	6,509.00	23,885.00	0.00	0.00	0.00	18,200.00	35,376.00	6,170.00
2041	677.89	3,397.00	158.00	67.09	5.88	69.55	76,445.00	5,977.00	23,544.00	0.00	0.00	0.00	15,942.00	30,982.00	4,891.00
2042	650.22	3,168.00	147.00	67.16	5.88	69.55	72,523.00	5,668.00	23,400.00	0.00	0.00	0.00	14,763.00	28,692.00	4,100.00
2043	605.46	2,935.00	137.00	67.10	5.88	69.55	67,411.00	5,300.00	23,174.00	0.00	0.00	0.00	13,239.00	25,698.00	3,324.00
2044	564.06	2,722.00	127.00	67.13	5.88	69.55	62,701.00	4,953.00	22,964.00	0.00	0.00	0.00	11,827.00	22,957.00	2,688.00
2045	530.53	2,540.00	118.00	67.21	5.88	69.55	58,800.00	4,655.00	22,796.00	0.00	0.00	0.00	10,659.00	20,690.00	2,193.00
2046	369.93	2,299.00	111.00	67.46	5.88	69.55	46,193.00	3,518.00	47,751.00	0.00	0.00	0.00	9,461.00	(14,537.00)	(1,395.00)
2047	346.50	2,126.00	102.00	67.58	5.88	69.55	43,011.00	3,290.00	14,749.00	0.00	0.00	0.00	8,490.00	16,482.00	1,431.00
2048	325.85	1,966.00	95.00	67.45	5.88	69.55	40,146.00	3,085.00	14,662.00	0.00	0.00	0.00	7,616.00	14,783.00	1,162.00
2049	307.69	1,835.00	88.00	67.59	5.88	69.55	37,708.00	2,901.00	14,585.00	0.00	0.00	0.00	6,875.00	13,347.00	950.00
2050	283.53	1,649.00	79.00	67.61	5.88	69.55	34,360.00	2,670.00	14,482.00	0.00	0.00	0.00	5,851.00	11,357.00	732.00
2051	198.37	1,031.00	49.00	67.57	5.88	69.55	22,874.00	1,948.00	14,121.00	0.00	0.00	0.00	2,314.00	4,491.00	262.00
2052	185.99	917.00	44.00	67.37	5.88	69.55	20,982.00	1,813.00	14,069.00	0.00	0.00	0.00	1,734.00	3,366.00	178.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	71,469.00	0.00	0.00	0.00	0.00	(71,469.00)	(3,415.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**39,435.26**	**151,940.00**	**7,089.00**				**4,155,807.00**	**308,297.00**	**867,755.00**	**307,009.00**	**0.00**	**0.00**	**616,322.00**	**2,056,424.00**	**1,056,152.00**

Notes:

1. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
2. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
3. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	1,188,346.00
12 Percent	944,972.00
15 Percent	808,900.00
20 Percent	640,755.00

TABLE 27
PROJECTION of PROVED-plus-PROBABLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
RECÔNCAVO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	2,104.97	5,714.00	0.00	83.53	6.21	-	211,303.00	17,597.00	39,509.00	68,023.00	0.00	0.00	22,685.00	63,489.00	60,180.00
2024	3,302.42	7,310.00	0.00	77.62	6.10	-	300,939.00	22,308.00	37,977.00	64,106.00	0.00	0.00	35,088.00	141,460.00	121,377.00
2025	4,088.70	8,148.00	566.00	73.76	6.02	76.36	393,857.00	27,324.00	41,670.00	82,495.00	0.00	0.00	46,923.00	195,445.00	151,802.00
2026	4,857.28	10,632.00	705.00	71.03	5.96	73.65	460,282.00	31,443.00	45,891.00	64,717.00	0.00	0.00	54,991.00	263,240.00	185,078.00
2027	4,944.67	12,778.00	698.00	69.07	5.92	71.67	467,199.00	31,475.00	46,203.00	61,191.00	0.00	0.00	55,248.00	273,082.00	173,799.00
2028	4,802.66	11,990.00	706.00	67.67	5.89	70.22	445,215.00	29,859.00	44,975.00	62,911.00	0.00	0.00	51,561.00	255,909.00	147,431.00
2029	4,484.54	11,463.00	681.00	67.07	5.88	69.55	415,532.00	27,824.00	42,840.00	23,067.00	0.00	0.00	47,388.00	274,413.00	143,106.00
2030	3,931.45	10,541.00	604.00	67.09	5.88	69.55	367,763.00	24,754.00	39,919.00	8,600.00	0.00	0.00	40,913.00	253,577.00	119,706.00
2031	3,313.33	9,769.00	528.00	67.07	5.88	69.55	316,398.00	21,495.00	36,860.00	153.00	0.00	0.00	34,042.00	223,848.00	95,656.00
2032	2,789.80	9,806.00	470.00	67.06	5.88	69.55	277,441.00	18,998.00	34,304.00	305.00	0.00	0.00	41,043.00	182,791.00	70,707.00
2033	2,431.75	9,675.00	422.00	67.07	5.88	69.55	249,326.00	17,156.00	32,510.00	153.00	0.00	0.00	57,416.00	142,091.00	49,753.00
2034	2,175.13	8,886.00	380.00	67.08	5.88	69.55	224,596.00	15,543.00	31,178.00	0.00	0.00	0.00	52,220.00	125,655.00	39,828.00
2035	1,962.20	7,901.00	344.00	67.09	5.88	69.55	202,026.00	14,067.00	30,079.00	0.00	0.00	0.00	45,934.00	111,946.00	32,120.00
2036	1,767.96	7,081.00	312.00	67.07	5.88	69.55	181,920.00	12,756.00	29,067.00	0.00	0.00	0.00	43,380.00	96,717.00	25,119.00
2037	1,604.24	6,356.00	283.00	67.12	5.88	69.55	164,730.00	11,616.00	28,185.00	0.00	0.00	0.00	39,887.00	85,042.00	19,993.00
2038	1,479.38	5,926.00	260.00	67.11	5.88	69.55	152,215.00	10,774.00	27,562.00	0.00	0.00	0.00	37,842.00	76,037.00	16,182.00
2039	1,359.60	5,555.00	239.00	67.10	5.88	69.55	140,516.00	9,984.00	26,980.00	0.00	0.00	0.00	34,958.00	68,594.00	13,215.00
2040	1,227.06	5,234.00	219.00	67.07	5.88	69.55	128,311.00	9,173.00	26,357.00	0.00	0.00	0.00	31,529.00	61,252.00	10,682.00
2041	1,076.53	4,768.00	202.00	67.07	5.88	69.55	114,289.00	8,246.00	25,647.00	0.00	0.00	0.00	27,322.00	53,074.00	8,378.00
2042	1,047.83	4,342.00	187.00	67.09	5.88	69.55	108,833.00	7,848.00	25,466.00	0.00	0.00	0.00	25,664.00	49,855.00	7,124.00
2043	970.76	3,932.00	172.00	67.08	5.88	69.55	100,204.00	7,265.00	25,067.00	0.00	0.00	0.00	23,076.00	44,796.00	5,795.00
2044	894.41	3,491.00	158.00	67.12	5.88	69.55	91,548.00	6,686.00	24,654.00	0.00	0.00	0.00	20,471.00	39,737.00	4,653.00
2045	823.17	3,204.00	146.00	67.16	5.88	69.55	84,275.00	6,181.00	24,266.00	0.00	0.00	0.00	18,301.00	35,527.00	3,766.00
2046	747.03	2,955.00	135.00	67.22	5.88	69.55	76,980.00	5,667.00	23,828.00	0.00	0.00	0.00	16,145.00	31,340.00	3,007.00
2047	714.65	2,740.00	126.00	67.14	5.88	69.55	72,856.00	5,369.00	23,671.00	0.00	0.00	0.00	14,898.00	28,918.00	2,511.00
2048	682.39	2,524.00	116.00	67.15	5.88	69.55	68,732.00	5,078.00	23,515.00	0.00	0.00	0.00	13,647.00	26,492.00	2,083.00
2049	647.42	2,338.00	107.00	67.20	5.88	69.55	64,693.00	4,786.00	23,348.00	0.00	0.00	0.00	12,430.00	24,129.00	1,717.00
2050	616.65	2,118.00	97.00	67.17	5.88	69.55	60,619.00	4,501.00	23,200.00	0.00	0.00	0.00	11,192.00	21,726.00	1,400.00
2051	527.40	1,461.00	65.00	67.17	5.88	69.55	48,537.00	3,729.00	22,805.00	0.00	0.00	0.00	7,481.00	14,522.00	847.00
2052	502.79	1,291.00	57.00	67.19	5.88	69.55	45,339.00	3,501.00	22,684.00	0.00	0.00	0.00	6,512.00	12,642.00	668.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	106,567.00	0.00	0.00	0.00	0.00	(106,567.00)	(5,093.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**61,878.17**	**189,929.00**	**8,985.00**				**6,036,474.00**	**423,003.00**	**1,036,784.00**	**435,721.00**	**0.00**	**0.00**	**970,187.00**	**3,170,779.00**	**1,512,590.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	1,722,534.00
12 Percent	1,338,175.00
15 Percent	1,127,443.00
20 Percent	871,443.00

TABLE 28
PROJECTION of PROVED-plus-PROBABLE-plus-POSSIBLE RESERVES and FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for
CERTAIN FIELDS
in the
RECÔNCAVO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Oil, Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	2,167.83	8,135.00	0.00	83.54	6.21	-	231,624.00	18,816.00	39,781.00	74,451.00	0.00	0.00	25,479.00	73,097.00	69,287.00
2024	3,484.94	12,621.00	0.00	77.65	6.10	-	347,605.00	25,110.00	38,783.00	65,132.00	0.00	0.00	41,563.00	177,017.00	151,886.00
2025	4,668.74	14,624.00	620.00	73.82	6.02	76.36	480,035.00	32,491.00	44,221.00	84,635.00	0.00	0.00	58,771.00	259,917.00	201,877.00
2026	5,928.85	17,878.00	769.00	71.09	5.96	73.65	584,676.00	38,898.00	50,920.00	73,395.00	0.00	0.00	71,835.00	349,628.00	245,815.00
2027	6,419.81	20,703.00	767.00	69.10	5.92	71.67	621,150.00	40,718.00	53,608.00	63,518.00	0.00	0.00	75,934.00	387,372.00	246,537.00
2028	6,262.41	19,740.00	782.00	67.71	5.89	70.22	595,209.00	38,858.00	52,105.00	62,911.00	0.00	0.00	71,724.00	369,611.00	212,936.00
2029	6,029.53	18,493.00	780.00	67.12	5.88	69.55	567,694.00	36,951.00	50,173.00	35,738.00	0.00	0.00	67,678.00	377,154.00	196,686.00
2030	5,463.73	16,411.00	729.00	67.15	5.88	69.55	514,076.00	33,533.00	47,081.00	17,047.00	0.00	0.00	60,285.00	356,130.00	168,118.00
2031	4,618.87	14,465.00	652.00	67.14	5.88	69.55	440,507.00	28,944.00	42,971.00	153.00	0.00	0.00	50,391.00	318,048.00	135,909.00
2032	3,819.76	13,659.00	582.00	67.11	5.88	69.55	377,135.00	24,982.00	39,178.00	305.00	0.00	0.00	56,421.00	256,249.00	99,122.00
2033	3,304.65	12,891.00	523.00	67.12	5.88	69.55	333,966.00	22,236.00	36,659.00	153.00	0.00	0.00	82,562.00	192,356.00	67,354.00
2034	2,969.54	11,540.00	473.00	67.11	5.88	69.55	300,037.00	20,071.00	34,948.00	0.00	0.00	0.00	74,116.00	170,902.00	54,170.00
2035	2,685.69	10,071.00	427.00	67.13	5.88	69.55	269,212.00	18,096.00	33,504.00	0.00	0.00	0.00	67,101.00	150,511.00	43,184.00
2036	2,433.46	8,849.00	387.00	67.13	5.88	69.55	242,304.00	16,380.00	32,212.00	0.00	0.00	0.00	60,972.00	132,740.00	34,475.00
2037	2,208.12	7,660.00	351.00	67.17	5.88	69.55	217,770.00	14,795.00	30,977.00	0.00	0.00	0.00	55,316.00	116,682.00	27,432.00
2038	2,022.76	6,896.00	322.00	67.18	5.88	69.55	198,841.00	13,569.00	30,033.00	0.00	0.00	0.00	51,329.00	103,910.00	22,114.00
2039	1,861.96	6,283.00	295.00	67.18	5.88	69.55	182,539.00	12,498.00	29,265.00	0.00	0.00	0.00	47,384.00	93,392.00	17,992.00
2040	1,665.47	5,726.00	270.00	67.17	5.88	69.55	164,317.00	11,327.00	28,359.00	0.00	0.00	0.00	42,358.00	82,273.00	14,348.00
2041	1,416.40	5,416.00	248.00	67.14	5.88	69.55	144,186.00	10,040.00	27,222.00	0.00	0.00	0.00	36,342.00	70,582.00	11,142.00
2042	1,407.72	5,119.00	229.00	67.16	5.88	69.55	140,563.00	9,747.00	27,118.00	0.00	0.00	0.00	35,245.00	68,453.00	9,781.00
2043	1,312.12	4,788.00	211.00	67.16	5.88	69.55	130,952.00	9,107.00	26,630.00	0.00	0.00	0.00	32,373.00	62,842.00	8,129.00
2044	1,219.63	4,280.00	194.00	67.19	5.88	69.55	120,608.00	8,428.00	26,137.00	0.00	0.00	0.00	29,254.00	56,789.00	6,649.00
2045	1,129.52	3,915.00	180.00	67.18	5.88	69.55	111,415.00	7,811.00	25,658.00	0.00	0.00	0.00	26,501.00	51,445.00	5,453.00
2046	1,037.33	3,621.00	166.00	67.27	5.88	69.55	102,622.00	7,202.00	25,135.00	0.00	0.00	0.00	23,897.00	46,388.00	4,450.00
2047	998.57	3,358.00	154.00	67.28	5.88	69.55	97,635.00	6,856.00	24,947.00	0.00	0.00	0.00	22,383.00	43,449.00	3,774.00
2048	959.97	3,082.00	142.00	67.22	5.88	69.55	92,529.00	6,504.00	24,761.00	0.00	0.00	0.00	20,829.00	40,435.00	3,179.00
2049	914.59	2,860.00	132.00	67.21	5.88	69.55	87,463.00	6,154.00	24,547.00	0.00	0.00	0.00	19,299.00	37,463.00	2,666.00
2050	882.21	2,605.00	120.00	67.22	5.88	69.55	82,969.00	5,845.00	24,389.00	0.00	0.00	0.00	17,930.00	34,805.00	2,243.00
2051	795.42	1,876.00	85.00	67.19	5.88	69.55	70,385.00	5,043.00	24,002.00	0.00	0.00	0.00	14,055.00	27,285.00	1,591.00
2052	767.95	1,673.00	75.00	67.26	5.88	69.55	66,704.00	4,784.00	23,866.00	0.00	0.00	0.00	12,938.00	25,116.00	1,326.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	107,199.00	0.00	0.00	0.00	0.00	(107,199.00)	(5,123.00)
2054	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**80,857.55**	**269,238.00**	**10,665.00**				**7,916,728.00**	**535,794.00**	**1,126,389.00**	**477,438.00**	**0.00**	**0.00**	**1,352,265.00**	**4,424,842.00**	**2,064,502.00**

Notes:

1. Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.
2. Reserves were estimated only to the limits of economic production as defined in the Definition of Reserves section of this report, the expiration dates of the concession extensions as advised by 3R Petroleum, or the end of 2052 as a time limit requested by 3R Petroleum, whichever occurs first.
3. Projected forecasts and estimated economic limits are estimated to occur after the expiration dates of the concession agreements. 3R Petroleum has represented that it will meet the conditions required by the National Petroleum Agency (ANP) to obtain concession extensions. Based on this representation, and at 3R Petroleum's request, the reserves evaluated extensions herein consider the potential concession extensions.
4. Abandonment costs have been included as operating expenses the year following cessation of production of the evaluated Cluster.

Present Worth (10^3U.S.$) at:	
8 Percent	2,357,724.00
12 Percent	1,821,785.00
15 Percent	1,529,431.00
20 Percent	1,175,400.00

TABLE 29
SUMMARY of NET CONTINGET RESOURCES
as of
DECEMBER 31, 2022
for
CERTAIN ASSETS
in
BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	1C				2C				3C			
Basin	**Oil (10^3bbl)**	**Sales Gas (10^6ft^3)**	**C5+ (10^3bbl)**	**LPG (10^3bbl)**	**Oil (10^3bbl)**	**Sales Gas (10^6ft^3)**	**C5+ (10^3bbl)**	**LPG (10^3bbl)**	**Oil (10^3bbl)**	**Sales Gas (10^6ft^3)**	**C5+ (10^3bbl)**	**LPG Taxes**
Campos	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Espiritu Santo	0.00	52,232.00	0.00	0.00	0.00	82,196.00	0.00	0.00	0.00	94,734.00	0.00	0.00
Potiguar	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Reconcavo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**52,232.00**	**0.00**	**0.00**	**0.00**	**82,196.00**	**0.00**	**0.00**	**0.00**	**94,734.00**	**0.00**	**0.00**

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the resources evaluated.
3. The contingent resources estimated in this report have an economic status of Economically Viable.

TABLE 30
PROJECTION of NET CONTINGENT RESOURCES
as of
DECEMBER 31, 2022
for the
MALOMBE FIELD
in the
ESPIRITU SANTO BASIN, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

	1C				2C				3C			
Year	Oil (10^3bbl)	Sales Gas (10^6ft^3)	C5+ (10^3bbl)	LPG (10^3bbl)	Oil (10^3bbl)	Sales Gas (10^6ft^3)	C5+ (10^3bbl)	LPG (10^3bbl)	Oil (10^3bbl)	Sales Gas (10^6ft^3)	C5+ (10^3bbl)	LPG Taxes
2023	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00
2026	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00
2027	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00
2028	0.00	10,327.00	0.00	0.00	0.00	10,340.00	0.00	0.00	0.00	10,340.00	0.00	0.00
2029	0.00	7,231.00	0.00	0.00	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00
2030	0.00	3,738.00	0.00	0.00	0.00	10,312.00	0.00	0.00	0.00	10,312.00	0.00	0.00
2031	0.00	0.00	0.00	0.00	0.00	10,193.00	0.00	0.00	0.00	10,312.00	0.00	0.00
2032	0.00	0.00	0.00	0.00	0.00	6,667.00	0.00	0.00	0.00	10,340.00	0.00	0.00
2033	0.00	0.00	0.00	0.00	0.00	3,436.00	0.00	0.00	0.00	8,020.00	0.00	0.00
2034	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4,162.00	0.00	0.00
2035	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**52,232.00**	**0.00**	**0.00**	**0.00**	**82,196.00**	**0.00**	**0.00**	**0.00**	**94,734.00**	**0.00**	**0.00**

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the resources evaluated.
3. The contingent resources estimated in this report have an economic status of Economically Viable.

These data accompany the report of DeGolyer and MacNaughton and are subject to its specific conditions.

TABLE 31
PROJECTION of 1C CONTINGENT RESOURCES and POTENTIAL FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for the
MALOMBE FIELD
in
ESPIRITU SANTO, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	10,312.00	0.00	-	7.59	-	78,267.00	6,888.00	15,000.00	97,865.00	0.00	0.00	7,404.00	(48,890.00)	(37,973.00)
2026	0.00	10,312.00	0.00	-	7.31	-	75,380.00	6,634.00	15,000.00	0.00	0.00	0.00	7,002.00	46,744.00	32,865.00
2027	0.00	10,312.00	0.00	-	7.12	-	73,420.00	6,461.00	15,000.00	0.00	0.00	0.00	6,730.00	45,229.00	28,785.00
2028	0.00	10,327.00	0.00	-	6.97	-	71,979.00	6,334.00	15,000.00	0.00	0.00	0.00	6,529.00	44,116.00	25,416.00
2029	0.00	7,231.00	0.00	-	6.90	-	49,896.00	4,391.00	15,000.00	0.00	0.00	0.00	3,458.00	27,047.00	14,105.00
2030	0.00	3,738.00	0.00	-	6.90	-	25,790.00	2,270.00	15,000.00	0.00	0.00	0.00	105.00	8,415.00	3,973.00
2031	0.00	0.00	0.00	-	-	-	0.00	0.00	20,785.00	0.00	0.00	0.00	0.00	(20,785.00)	(8,882.00)
2032	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2033	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2034	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2035	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**52,232.00**	**0.00**				**374,732.00**	**32,978.00**	**110,785.00**	**97,865.00**	**0.00**	**0.00**	**31,228.00**	**101,876.00**	**58,289.00**

Notes:
1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the resources evaluated.
3. The contingent resources estimated in this report have an economic status of Economically Viable.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	65,335.00
12 Percent	51,931.00
15 Percent	43,549.00

TABLE 32
PROJECTION of 2C CONTINGENT RESOURCES and POTENTIAL FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for the
MALOMBE FIELD
in
ESPIRITU SANTO, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	10,312.00	0.00	-	7.59	-	78,267.00	6,888.00	15,000.00	97,865.00	0.00	0.00	7,404.00	(48,890.00)	(37,973.00)
2026	0.00	10,312.00	0.00	-	7.31	-	75,380.00	6,634.00	15,000.00	0.00	0.00	0.00	7,002.00	46,744.00	32,865.00
2027	0.00	10,312.00	0.00	-	7.12	-	73,420.00	6,461.00	15,000.00	0.00	0.00	0.00	6,730.00	45,229.00	28,785.00
2028	0.00	10,340.00	0.00	-	6.97	-	72,070.00	6,342.00	15,000.00	0.00	0.00	0.00	6,542.00	44,186.00	25,456.00
2029	0.00	10,312.00	0.00	-	6.90	-	71,152.00	6,261.00	15,000.00	0.00	0.00	0.00	6,414.00	43,477.00	22,673.00
2030	0.00	10,312.00	0.00	-	6.90	-	71,152.00	6,261.00	15,000.00	0.00	0.00	0.00	6,414.00	43,477.00	20,524.00
2031	0.00	10,193.00	0.00	-	6.90	-	70,333.00	6,189.00	15,000.00	0.00	0.00	0.00	6,301.00	42,843.00	18,308.00
2032	0.00	6,667.00	0.00	-	6.90	-	46,000.00	4,048.00	15,000.00	0.00	0.00	0.00	2,916.00	24,036.00	9,298.00
2033	0.00	3,436.00	0.00	-	6.90	-	23,712.00	2,086.00	15,000.00	0.00	0.00	0.00	0.00	6,626.00	2,320.00
2034	0.00	0.00	0.00	-	-	-	0.00	0.00	20,785.00	0.00	0.00	0.00	0.00	(20,785.00)	(6,588.00)
2035	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2036	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**82,196.00**	**0.00**				**581,486.00**	**51,170.00**	**155,785.00**	**97,865.00**	**0.00**	**0.00**	**49,723.00**	**226,943.00**	**115,668.00**

Notes:

1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the resources evaluated.
3. The contingent resources estimated in this report have an economic status of Economically Viable.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	132,377.00
12 Percent	101,049.00
15 Percent	82,466.00

TABLE 33
PROJECTION of 3C CONTINGENT RESOURCES and POTENTIAL FUTURE NET REVENUE
as of
DECEMBER 31, 2022
for the
MALOMBE FIELD
in
ESPIRITU SANTO, BRAZIL
for
3R PETROLEUM S.A.

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

Year	Oil, Condensate and C5+ (10^3bbl)	Sales Gas (10^6ft^3)	LPG (10^6ft^3)	Condensate and C5+ Price (U.S.$/bbl)	Sales Gas Price (U.S.$/$10^3ft^3$)	LPG Price (U.S.$/bbl)	Future Gross Revenue (10^3U.S.$)	Royalties Paid in Cash (10^3U.S.$)	Operating Expenses (10^3U.S.$)	Capital Costs (10^3U.S.$)	SPF (10^3U.S.$)	Indirect Taxes (10^3U.S.$)	Income Taxes (10^3U.S.$)	Future Net Revenue (10^3U.S.$)	Present Worth at 10 Percent (10^3U.S.$)
2023	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2024	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2025	0.00	10,312.00	0.00	-	7.59	-	78,267.00	6,888.00	15,000.00	97,865.00	0.00	0.00	7,404.00	(48,890.00)	(37,973.00)
2026	0.00	10,312.00	0.00	-	7.31	-	75,380.00	6,634.00	15,000.00	0.00	0.00	0.00	7,002.00	46,744.00	32,865.00
2027	0.00	10,312.00	0.00	-	7.12	-	73,420.00	6,461.00	15,000.00	0.00	0.00	0.00	6,730.00	45,229.00	28,785.00
2028	0.00	10,340.00	0.00	-	6.97	-	72,070.00	6,342.00	15,000.00	0.00	0.00	0.00	6,542.00	44,186.00	25,456.00
2029	0.00	10,312.00	0.00	-	6.90	-	71,152.00	6,261.00	15,000.00	0.00	0.00	0.00	6,414.00	43,477.00	22,673.00
2030	0.00	10,312.00	0.00	-	6.90	-	71,152.00	6,261.00	15,000.00	0.00	0.00	0.00	6,414.00	43,477.00	20,524.00
2031	0.00	10,312.00	0.00	-	6.90	-	71,152.00	6,261.00	15,000.00	0.00	0.00	0.00	6,414.00	43,477.00	18,579.00
2032	0.00	10,340.00	0.00	-	6.90	-	71,347.00	6,278.00	15,000.00	0.00	0.00	0.00	6,442.00	43,627.00	16,876.00
2033	0.00	8,020.00	0.00	-	6.90	-	55,337.00	4,870.00	15,000.00	0.00	0.00	0.00	9,397.00	26,070.00	9,129.00
2034	0.00	4,162.00	0.00	-	6.90	-	28,719.00	2,527.00	15,000.00	0.00	0.00	0.00	1,143.00	10,049.00	3,185.00
2035	0.00	0.00	0.00	-	-	-	0.00	0.00	20,785.00	0.00	0.00	0.00	0.00	(20,785.00)	(5,964.00)
2036	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2037	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2038	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2039	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2040	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2041	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2042	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2043	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2044	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2045	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2046	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2047	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2048	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2049	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2050	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2051	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2052	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2053	0.00	0.00	0.00	-	-	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	**0.00**	**94,734.00**	**0.00**				**667,996.00**	**58,783.00**	**170,785.00**	**97,865.00**	**0.00**	**0.00**	**63,902.00**	**276,661.00**	**134,135.00**

Notes:

1. Application of any risk factor to contingent resources quantities does not equate contingent resources with reserves.
2. There is no certainty that it will be commercially viable to produce any portion of the resources evaluated.
3. The contingent resources estimated in this report have an economic status of Economically Viable.
4. Abandonment costs have been included as operating expenses the year following cessation of production.

Present Worth (10^3U.S.$) at:	
8 Percent	154,887.00
12 Percent	116,201.00
15 Percent	93,731.00


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PETROLEUM