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DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

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# REPORT
# as of
# JUNE 30, 2015
# on
# RESERVES and REVENUE
# of
# CERTAIN PROPERTIES
# owned by
# CARACOL PETROLEUM, LLC
# in the
# SOUTHERN MILUVEACH UNIT

# QUALIFIED PERSONS REPORT

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# REPORT as of JUNE 30, 2015 on RESERVES and REVENUE of CERTAIN PROPERTIES owned by CARACOL PETROLEUM, LLC in the SOUTHERN MILUVEACH UNIT

## QUALIFIED PERSONS REPORT

## FOREWORD

Scope of Investigation

This report presents estimates, as of June 30, 2015, of the extent and value of the proved, proved-plus-probable, and proved-plus-probable-plus-possible oil reserves of certain properties in which CaraCol Petroleum, LLC (CaraCol) has represented that it owns a 38.187-percent working interest with a 29.595-percent net revenue interest. The reserves estimated in this report are located in the Southern Miluveach Unit (SMU), North Slope Alaska, to be developed and operated by Brooks Range Petroleum Corporation (BRPC) from the Mustang drillsite pad. This report has been prepared to meet the requirements of the Singapore Stock Exchange. It has been prepared for disclosure on the Singapore Exchange Network by Alpha Energy Holdings Limited, the holding company of CaraCol, for public viewing and access.

At the time of the preparation of this report, CaraCol has represented that BRPC was proceeding with final design engineering and procuring long-lead equipment. The planning for the first wells in the drilling program was proceeding and the first well began drilling in late December 2014.

Estimates of reserves presented in this report have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers. These reserves definitions are discussed in detail in the Definition of Reserves section of this report.

Reserves estimated in this report are expressed as gross and net reserves. Gross reserves are defined as the total estimated petroleum that is recoverable from these properties after June 30, 2015. Company gross reserves are the portion of the gross reserves attributable to CaraCol's working interest. Net reserves are defined as that portion of the gross reserves attributable to the CaraCol working interest after deducting landholder and overriding royalty interests owned by others.

The table below summarizes the five leases (ADL #390680, 390681, 390690, 390691, and 390692) and licenses held by CaraCol in the SMU.

| Asset Name/Country | CaraCol's Interest (%) | Development Status | License Expiration Date | License Area (acres) | Type of Deposit | Remarks |
|---|---|---|---|---|---|---|
| Southern Miluveach Unit, North Slope Alaska, USA | 38.187% working interest, 29.595% revenue interest. | SMU development is on-going. | March 30, 2016 (see notes below). | 8,960 | Oil | CaraCol pays 55.263% of drilling costs. |

Notes:

1. Subject to the terms and conditions of an approved plan of development, the Unit automatically terminates five years from the Effective Date (March 31, 2011) unless:
    - a well in the Unit area has been certified as capable of producing oil or gas in commercial quantities, in which case the Unit will remain in effect for so long as oil or gas is being produced in commercial quantities; or
    - for as long as oil or gas is being produced from within the Unit in commercial quantities and operations are being conducted in accordance with the approved plan of development; or
    - should production cease, for so long thereafter as diligent operations are in progress to restore production and then so long after as oil or gas is being produced from within the Unit in commercial quantities; or
    - exploration operations are being conducted under an approved development plan and the unit term is extended by the Commissioner of the Alaskan Department of Natural Resources. No single extension will exceed five years.
2. Production of oil and gas in commercial quantities is defined as production sufficient to yield a return in excess of operating costs, even if drilling and equipment costs may never be repaid.
3. It is the intention of CaraCol and BRPC to seek an extension from the Commissioner to the expiration date of the Unit.

This report presents values for proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves using initial prices and costs specified by CaraCol and BRPC. All prices, costs, and revenue shown in this report are expressed in United States dollars (U.S.$). A detailed explanation of the future price and cost assumptions is included in the Financial Analysis 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 estimated future gross revenue, future net revenue, and present worth. Future gross revenue is 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 estimated production taxes, ad valorem taxes, operating expenses, transportation expenses, and capital and abandonment costs from the future gross revenue. Operating expenses include lease and lifting expenses, and an allocation of overhead that directly relates to production activities. Future income tax expenses were not taken into account in the preparation of these estimates. Present worth is defined as future net revenue discounted at a specified arbitrary discount rate compounded annually 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 are reported in detail using a discount rate of 10 percent, and summarized in the appendix using discount rates of 5, 9, 12, 15, 20, 25, and 30 percent.

Estimates of oil reserves and future net revenue should be regarded only as estimates that may change as further production history and additional information become available. Not only are such reserves and revenue 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.

<u>Authority</u>

This report was prepared at the request of Mr. Dean Gallegos, Chief Financial Officer of Alpha Energy Holdings Limited. CaraCol is a wholly owned subsidiary of Alpha Energy Holdings Limited.

Source of Information Data used in the preparation of this report were obtained from BRPC and from public sources. In the preparation of this report we have relied, without independent verification, upon information furnished by CaraCol with respect to its property interests, production flow tests 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 of the properties was not considered necessary for the purposes of this report, as no production facilities are yet in place, and we are comfortable that State of Alaska well drilling and reporting guidelines are monitored by the state. DeGolyer and MacNaughton has made reasonable enquiries and exercised its judgement on the reasonable use of such data and information, and has no reason to doubt the accuracy or reliability of the information provided or extracted.

Qualified Person DeGolyer and MacNaughton, operating from its offices at 5001 Spring Valley Road, Suite 800E, Dallas, Texas, 75244, USA, is an independent petroleum engineering consulting firm that has been providing petroleum consulting services throughout the world since 1936. Provision of professional services has been solely on a fee basis. Mr. Paul J. Szatkowski, P.E., Manager of our North American Division, has supervised the evaluation. He graduated from Texas A&M University with a Bachelor of Science Degree in Petroleum Engineering in 1974. He is a Registered Professional Engineer in the State of Texas, a member of the Society of Petroleum Engineers, and the American Association of Petroleum Geologists, with 41 years of experience in the evaluation of oil and gas fields. Mr. Szatkowski fulfills the following criteria for a qualified person:

1. The qualified person is not a sole practitioner;
2. The qualified person producing the report is a Senior Vice President of DeGolyer and MacNaughton;
3. The qualified person and officers and staff of DeGolyer and MacNaughton are independent of Alpha Energy Holdings Limited (Alpha), Alpha directors, and substantial shareholders;
4. The qualified person and officers and staff of DeGolyer and MacNaughton do not have any interest, direct or indirect, in Alpha or its subsidiaries, and will not receive benefits other than fees paid in connection with the qualified person's report; and
5. Our fees are not contingent on the results of our evaluation.

## EXECUTIVE SUMMARY

At the request of CaraCol an evaluation has been prepared of the oil reserves, expenditures, and revenues for the interest that CaraCol has represented that it owns in the SMU of the Kuparuk River Field as of June 30, 2015. This unit is operated by BPRC in North Slope Alaska, United States. No site visit was undertaken by us.

The SMU is expected to produce oil from the Cretaceous-age Kuparuk River Formation sandstones. The reservoir has been delineated by four exploratory wells and two additional development wells that were drilled in 2014 and early 2015. The reserves are expected to be fully developed by the middle of 2018, with production scheduled to begin in October 2016. Planned development will result in 9 producers and 15 injectors. CaraCol has represented that it owns a 38.187-percent working interest with a 29.595-percent revenue interest in the SMU.

Estimates of reserves presented in this report have been prepared in accordance with the PRMS approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers. These reserves definitions and other terms are discussed in detail in following sections of this report.

The estimated proved (1P), proved-plus-probable (2P), and proved-plus-probable-plus-possible (3P) reserves, as of June 30, 2015, expressed in millions of barrels (MMbbl), for the proposed SMU development are summarized as follows:

| Category | Gross Attributable to License (MMbbl) | Net Attributable to CaraCol (MMbbl) | Change from Previous Update (percent) | Remarks |
|---|---|---|---|---|
| **Oil Reserves** | | | | |
| 1P | 22.6 | 6.7 | N/A | Approximately 30-Percent Recovery |
| 2P | 34.5 | 10.2 | N/A | Approximately 35-Percent Recovery |
| 3P | 38.9 | 11.5 | N/A | Approximately 40-Percent Recovery |

Note: Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves. All oil reserves estimated herein are considered undeveloped.

Estimated future net revenue and expenditures attributable to CaraCol's working interest in the SMU, as of June 30, 2015, under the assumptions concerning prices and costs are summarized as follows, expressed in thousands of United States dollars (M U.S.$):

| | **Proved** | **Proved plus Probable** | **Proved plus Probable plus Possible** |
|---|---|---|---|
| Future Gross Revenue, M U.S.$ | 445,751 | 683,332 | 771,930 |
| Production and Ad Valorem Taxes, M U.S.$ | (20,914) | (10,824) | (4,743) |
| Transportation Expenses, M U.S.$ | 64,136 | 97,974 | 110,389 |
| Operating Expenses, M U.S. $ | 113,753 | 136,790 | 145,752 |
| Capital and Abandonment Costs, M U.S. $ | 173,447 | 191,849 | 191,849 |
| Future Net Revenue, M U.S. $ | 115,329 | 267,542 | 328,683 |
| Present Worth at 10 Percent, M U.S. $ | 49,952 | 124,462 | 145,740 |

Notes:
1. Values for probable and possible reserves have not been risk adjusted to make them comparable to values for proved reserves.
2. Future income taxes were not taken into account in the preparation of these estimates.

**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 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation 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 further satisfy four criteria: they must be discovered, recoverable, commercial, and remaining (as of the evaluation 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* – Proved Reserves are those quantities of petroleum which, 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-percent probability that the quantities actually recovered will equal or exceed the estimate.

> *Unproved Reserves* – Unproved Reserves are based on geoscience and/or engineering data similar to that used in estimates of Proved Reserves, but technical or other uncertainties preclude such reserves being classified as Proved. Unproved Reserves may be further categorized as Probable Reserves and Possible Reserves.

>> *Probable Reserves* – 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-percent probability that the actual quantities recovered will equal or exceed the 2P estimate.

*Possible Reserves* – Possible Reserves are those additional reserves which analysis of geoscience and engineering data suggest 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. In this context, when probabilistic methods are used, there should be at least a 10-percent probability that the actual quantities recovered will equal or exceed the 3P estimate.

*Reserves Status Categories* – Reserves status categories define the development and producing status of wells and reservoirs.

*Developed Reserves* – Developed Reserves are expected quantities 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* – Developed Producing Reserves are expected to be recovered from completion intervals that are open and producing at the time of the estimate. Improved recovery reserves are considered producing only after the improved recovery project is in operation.

*Developed Non-Producing Reserves* – Developed Non-Producing Reserves include shut-in and behind-pipe Reserves. Shut-in Reserves are expected to be recovered from (1) completion intervals which 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 which will require additional completion work or future recompletion prior to the start of production. In all cases, production can be initiated or restored with relatively low expenditure compared to the cost of drilling a new well.

*Undeveloped Reserves* – Undeveloped Reserves are quantities expected to be recovered through future investments: (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.

**SOUTHERN MILUVEACH UNIT GEOLOGY and EXPLORATION DATA**

The SMU encompasses approximately 12 contiguous square miles (7,680 acres) in the North Slope oil productive region of Alaska. It is located directly north of the Tarn field, south of the Palm field, and southwest of the 2M drilling pad of the Kuparuk River Unit, Kuparuk field. Five wells have been drilled into the SMU as follows: the Kuparuk River Unit 2L-03 well drilled in the south (2002), the North Tarn 1 (2011), and 1A (2012) wells situated in the center, the Mustang 1 (2012) and SMU M-02 (2014) wells drilled to the eastern side. All of these wells encountered Early Cretaceous-age Upper Kuparuk River Formation sandstones, which make up the oil development objective of the SMU and the prolific oil producer in the Kuparuk River and Palm fields.

The Kuparuk River Formation includes several sandstone and shale members above the Kingak Formation and below the Kalubik Shale Formation. The main objective oil interval includes the bioturbated shallow marine C sandstone lobe, which, where present, has a net sand true vertical thickness (TVT) of generally 15 feet to more than 50 feet in the local multi-field area. This clean and blocky sand lobe often includes siderite and glauconite components, but core data in offset wells indicate permeability of 1 to 10 millidarcys within these heteromineralogy zones. The regional Upper Cretaceous unconformity lies at the base of the C lobe. The thin-bedded progradational lower shoreface sandstones of the upper A interval of the Kuparuk River Formation lie beneath the unconformity and, where paleotopography and faulting are favorable, are preserved and contribute as an oil-bearing lower component to the overall reservoir. In the wells drilled within the SMU, the net oil varies from 17 to 25 feet TVT at an average depth of 6,035 feet true vertical depth subsea (TVDSS). Reservoir thickness in the North Tarn 1 well was estimated from mud log oil shows, since well difficulties precluded obtaining a wireline log suite. The North Tarn 1A well penetrated the reservoir within 1,000 feet of the original hole and had 17 feet TVT of net oil. The 1A well was pressure and flow tested in January 2012 and produced oil at a rate of 62 barrels per day with a very high wellbore skin value of 47.7. Average net oil thickness for the SMU is 17.5 feet TVT. Average porosity and water saturation for the SMU are 21.1 percent and 19.3 percent, respectively.

The Kuparuk River Formation in the SMU exhibits a moderately faulted undulating structure that varies from 5,900 to 6,200 feet TVDSS. A dual-direction tensional stress regime is manifested in a bimodal normal fault pattern. This is dominated by a series of north/south-trending, down-to-the-east normal faults, which are complemented by multiple northwest/southeast-trending cross faults. The displacements across these faults within the SMU may be sufficient to effect reservoir separation and cause compartmentalization. Seismic data also indicate fault separation from the 2M drilling pad development of the Kuparuk River Unit, Kuparuk field, which borders the SMU to the east and northeast. However, an initial pressure buildup test, conducted in the North Tarn 1A well, indicated that the Kuparuk C reservoir was approximately 500 pounds per square inch above the expected pressure. The elevated pressures at the North Tarn 1A well are most likely caused by the current waterflood operations in the Kuparuk River Unit and support the interpretation that the C sand is continuous between the Kuparuk River Unit waterflood injectors and the location of the North Tarn 1A well.

The SMU was recognized by the Division of Oil and Gas of the State of Alaska on January 26, 2012, subject to the recompletion of additional well work and sanction by BRPC by October 1, 2012. CaraCol has represented that those requirements have been met, and that development has been ongoing.

**SOUTHERN MILUVEACH UNIT DEVELOPMENT**

The development of the SMU from a single drillsite pad (the Mustang pad), the capital costs necessary to construct the Mustang drillsite pad, the schedule of development, and the expenses to operate were provided by CaraCol and BRPC. The development plan, the associated capital costs, and the operating expenses appeared reasonable and were accepted as presented.

As part of the overall development of the SMU, CaraCol has represented that one of the other working-interest owners (with 20-percent ownership) in the project is to pay for the cost of the surface production facilities. The contractual arrangement between this surface facility working-interest owner and the remaining working-interest owners is similar to a purchase/lease back arrangement. Any funds accruing from the 20-percent working interest that are over and above the calculated lease payments are to be refunded to the other working-interest owners. Any potential payments from the surface facility working-interest owner to CaraCol have not been included in this analysis. CaraCol and the other remaining working-interest owners are to pay for the cost to drill and complete the wells. Because of this arrangement, CaraCol is expected to pay 55.263 percent of the drilling and completion costs.

The proved estimate of reserves presented herein requires the drilling and completion of 8 single-lateral horizontal wells paired with 13 vertical water injection wells to effectively waterflood the targeted Kuparuk C reservoir. The proposed Mustang drill pad is located at the surface site of the existing North Tarn 1, 1A, and Mustang 1 wellbores in section 2 (Figure 1). The sections developed in the proved reserves estimate are the nine contiguous sections centered around the proposed Mustang drill pad in section 2, as well as section 25. This area is generally within a 12,000-foot drilling radius from the centralized planned drillsite pad location and also is located above the lowest known oil (LKO) depth at 6,105 feet TVDSS, which is seen in the Kuparuk River Unit 2L-03 well.

The planned proved reserves development is to orient the 8 horizontal producers and 13 vertical water injectors in a parallel direction with the dominant north-south faulting in order to minimize areas of stranded oil. Because it is unknown if these faults are sealing, each horizontal producer will be paired with one or two vertical water injectors located approximately 2,500 to 5,000 feet away so that they both lie within the same fault block. The north/south-oriented horizontal laterals are estimated to range in length between 5,000 and 8,000 feet and are estimated to cost an average of U.S.$17 million each. Since it is uncertain whether BRPC will be able to re-enter the Mustang 1 wellbore, extend the well horizontally, and complete it as a horizontal producer along the eastern boundary, capital has been included to re-drill the well. The rate forecast for the proved case was estimated using the BRPC full-field model. The recovery factor for the proved reserves case is approximately 30 percent of the original oil in place (OOIP) in the SMU.

The proved reserves development schedule represents the following: the gravel road and pad have already been installed; equipment procurement is underway and module fabrication is to finish by late 2015 to early 2016; module transportation to the North Slope is to begin by early 2016 and installation to finish by mid 2016. Functional check out and commissioning is planned for summer 2016 with an anticipated plant startup date of October 1, 2016. The Mustang 1ST test and the completion of the Shamrock well are planned for the fourth quarter of 2015. Development drilling is planned to resume in July 2016. The development drilling is expected to continue until April 2018.

The proposed production facilities on the Mustang pad are to be designed with a capacity of 15,000 barrels of fluid per day (BFPD). It is anticipated that initial oil production from the eight horizontal producing wells will be able to exceed the 15,000 BFPD limit. As such, the total oil production from the field is estimated to reach 15,000 barrels of oil per day (BOPD) by the second half of 2016 as the producers are completed, and remain at 15,000 BOPD throughout 2016. It is projected that water production will begin to increase after 2016 as water breakthrough occurs between the paired injectors and producers, and oil production will begin to decline as the total fluid produced remains at the production facility capacity of 15,000 BFPD.

The estimate of probable reserves presented herein requires the drilling and completion of one additional horizontal producer and two vertical injectors, in addition to those planned for the proved reserves development. These additional laterals are required to develop the Kuparuk C reservoir in the western sections of the SMU under sections 4 and 9. For the probable reserves estimate, the oil productive limits of the Kuparuk C have been extrapolated downdip an additional 50 feet below the LKO to 6,155 TVDSS, and the probable reserves recovery factor was increased from 30 percent, used in the proved reserves evaluation, to 35 percent. The estimate of possible reserves presented herein does not require any additional wells over that contemplated under the probable reserves development. For the possible reserves estimate, the recovery factor was increased from 35 percent used in the probable reserves evaluation to 40 percent.

Figure 1 below is a map of the SMU development plan showing the boundaries of the SMU and the locations of the proposed horizontal producers and high-angle injectors.

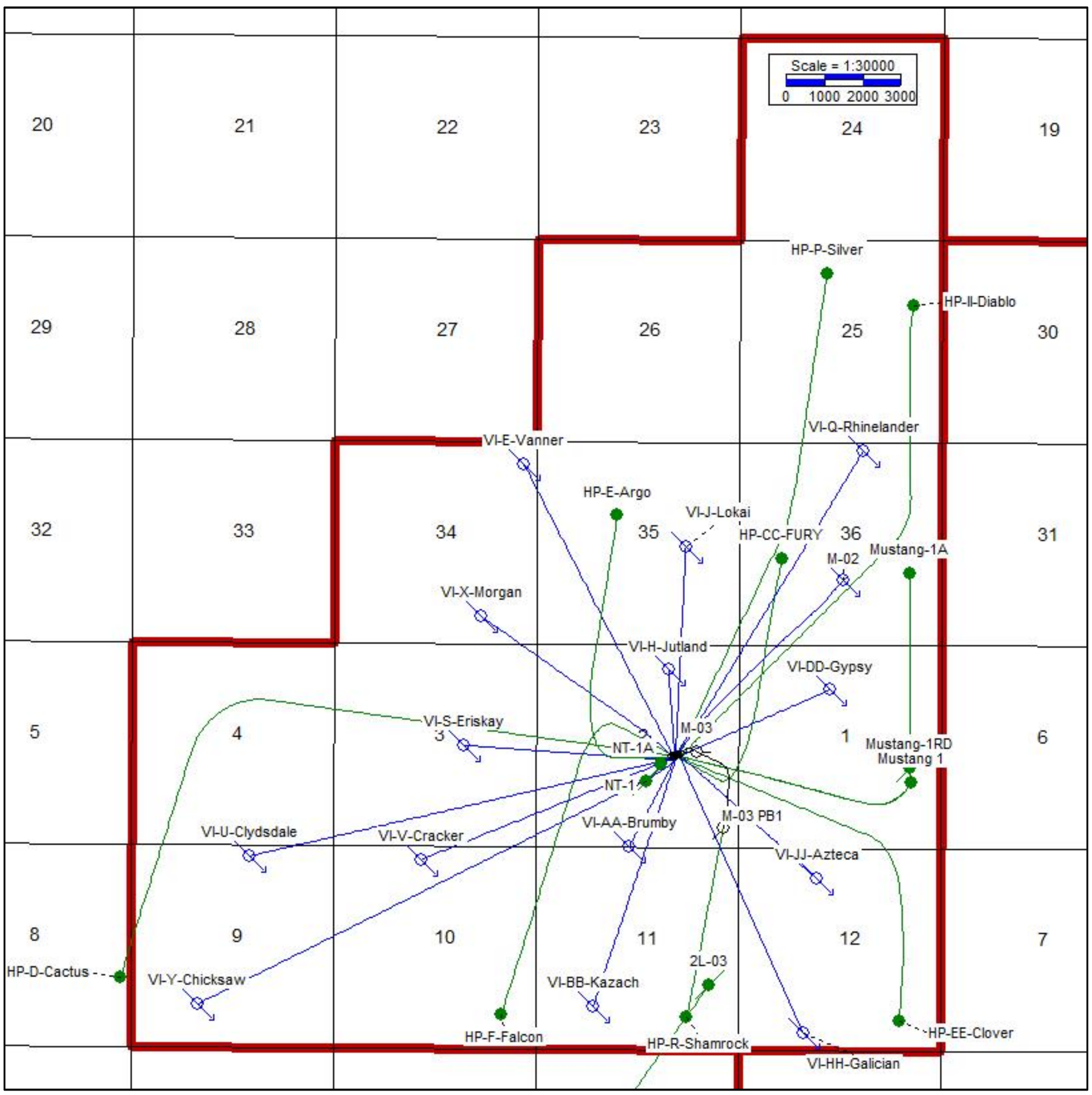

*Figure 1: SMU development plan map*

Because there are no gas sales markets available on the North Slope, no gas sales revenues are included herein for any associated gas produced from the development of the SMU. All gas produced will either be used as fuel or re-injected into the Kuparuk C for pressure maintenance.

**ESTIMATION of RESERVES**

Estimates of reserves presented in this report have been prepared in accordance with the Petroleum Resources Management System (PRMS) approved in March 2007 by the Society of Petroleum Engineers, the World Petroleum Council, the American Association of Petroleum Geologists, and the Society of Petroleum Evaluation Engineers. Appropriate geologic, petroleum engineering, and evaluation principles and techniques that are in accordance with practices generally recognized by the petroleum industry were used. 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 CaraCol, and the analyses of areas offsetting existing wells with test or production data, reserves were categorized as proved, probable, or possible.

The volumetric method was used to estimate the OOIP. Structure maps were prepared by BRPC and reviewed for this report 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. Simulation results prepared by a third party and provided by BRPC for this report were also used to help estimate the anticipated future recoverable volumes.

Estimates of ultimate recovery were obtained after applying recovery factors to OOIP. 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 analogous production histories in the Kuparuk C reservoir in the nearby Kuparuk River field and Palm field. An analysis of analogous reservoir performance, including production rate, reservoir pressure, and gas-oil ratio behavior, was used in the estimation of reserves.

The estimated proved (1P), proved-plus-probable (2P), and proved-plus-probable-plus-possible (3P) reserves, as of June 30, 2015, expressed in millions of barrels (MMbbl), for the proposed SMU development are summarized as follows:

| Category | Gross Attributable to License (MMbbl) | Net Attributable to CaraCol (MMbbl) | Change from Previous Update (percent) | Remarks |
|---|---|---|---|---|
| **Oil Reserves** | | | | |
| 1P | 22.6 | 6.7 | N/A | Approximately 30-Percent Recovery |
| 2P | 34.5 | 10.2 | N/A | Approximately 35-Percent Recovery |
| 3P | 38.9 | 11.5 | N/A | Approximately 40-Percent Recovery |

Note: Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves. All oil reserves estimated herein are considered undeveloped.

Oil reserves estimated herein are those to be recovered by conventional lease separation. Oil reserves estimates included in the appendix to this report are expressed in terms of barrels (bbl), in which 1 barrel equals 42 United States gallons.

**FINANCIAL ANALYSIS**

Revenue values in this report were estimated using the initial prices and expenditures provided by CaraCol and BRPC. Future prices were estimated using prices requested by CaraCol, and were considered to be reasonable. 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 risks than proved reserves. Revenue values for probable and possible reserves have not been adjusted to account for such risks; this adjustment would be necessary in order to make revenue values for probable and possible reserves comparable with revenue values for proved reserves.

The following assumptions supplied by BRPC were used for estimating future prices and costs.

*Oil Prices*

An oil price forecast based on the future monthly prices traded on the New York Mercantile Exchange (NYMEX) for crude oil on July 1, 2015, was used in estimating the future net revenue. The average annual oil prices, based on the NYMEX future prices, applied to the properties in this report were as follows, expressed in United States dollars per barrel (U.S.$/bbl).

| **Year** | **Oil (U.S.$/bbl)** |
|---|---|
| 2015 | 59.59 |
| 2016 | 61.30 |
| 2017 | 63.44 |
| 2018 | 65.02 |
| 2019 | 66.30 |
| 2020 | 67.35 |
| 2021 | 68.28 |
| 2022 | 68.66 |
| 2023 *and thereafter* | 68.73 |

The above oil prices were not adjusted or escalated for inflation.

*Operating Expenses, Transportation Tariffs, Capital Costs, and Abandonment Costs*

Operating expenses, transportation tariffs, capital costs, and abandonment costs (in 2015 United States dollars) were provided by CaraCol and BRPC. Estimates of operating expenses, based on estimated future fixed and variable expenses, transportation tariffs, and capital costs were held constant for the lives of the properties and were not adjusted or escalated for inflation. The costs of surface facilities are paid by a separate legal entity established for the sole purpose of financing said facilities. CaraCol has represented that it is contractually responsible for a disproportionate share of 55.263 percent of the drilling capital.

*Production Taxes and Ad Valorem Taxes*

The new severance tax law, SB21, in the State of Alaska is very complex. Provisions of the new law include a variety of capital, loss carry forward, and small producer tax credits. The large negative production taxes in the early years of the project are primarily due to loss carry forward credits payable under SB21 that are generated from the high capital expenditures required for the SMU development. CaraCol and BRPC have represented that each intends to apply to the State of Alaska each year, where applicable, for Alaska to purchase the applicable tax credit. Based on this representation, the value of the tax credit has been included as a negative production tax payment herein. CaraCol has represented that it is eligible for the small-producer tax credit, and at CaraCol's request, this credit has been included in the production tax calculation herein. A Crude Conservation Tax of $0.05 per barrel of net production has also been included in the production tax calculation.

Ad valorem taxes were calculated at 2 percent of the depreciated capital investment, including tangible drilling costs. As of June 30, 2015, the estimated balance for ad valorem tax purposes was $20 million.

The estimated future revenue to be derived from the production and sale of CaraCol's estimated net proved, proved-plus-probable, and proved-plus-probable-plus-possible reserves, as of June 30, 2015, for the development of the SMU is summarized as follows, expressed in thousands of United States dollars (M U.S.$):

| | Proved | Proved plus Probable | Proved plus Probable plus Possible |
|---|---|---|---|
| Future Gross Revenue, M U.S.$ | 445,751 | 683,332 | 771,930 |
| Production and Ad Valorem Taxes, M U.S.$ | (20,914) | (10,824) | (4,743) |
| Transportation Expenses, M U.S.$ | 64,136 | 97,974 | 110,389 |
| Operating Expenses, M U.S.$ | 113,753 | 136,790 | 145,752 |
| Capital and Abandonment Costs, M U.S.$ | 173,447 | 191,849 | 191,849 |
| Future Net Revenue, M U.S.$ | 115,329 | 267,542 | 328,683 |
| Present Worth at 10 Percent, M U.S.$ | 49,952 | 124,462 | 145,740 |

Notes:
1. Values for probable and possible reserves have not been risk adjusted to make them comparable to values for proved reserves.
2. Future income taxes were not taken into account in the preparation of these estimates.

The appendix bound with this report includes (1) summary projections of estimated proved reserves and revenue, (2) a summary projection of estimated proved-plus-probable reserves and revenue, and (3) a summary projection of estimated proved-plus-probable-plus-possible reserves and revenue.

## SUMMARY and CONCLUSIONS

BRPC is developing certain properties located in the SMU on the North Slope, Alaska. CaraCol has represented that it owns a 38.187-percent working interest in the project. The estimated reserves of the properties evaluated, as of June 30, 2015, are summarized as follows, expressed in thousands of barrels (Mbbl):

| Category | Gross Oil (Mbbl) | Company Gross Oil (Mbbl) | Net Oil (Mbbl) |
|---|---|---|---|
| 1P | 22,574 | 8,620 | 6,681 |
| 2P | 34,485 | 13,169 | 10,206 |
| 3P | 38,854 | 14,837 | 11,499 |

Note: Probable and possible reserves have not been risk adjusted to make them comparable to proved reserves.

Estimated future net revenue and costs attributable to CaraCol's working interest in the SMU, as of June 30, 2015, of the properties evaluated under the aforementioned assumptions concerning future prices and costs are summarized as follows, expressed in thousands of United States dollars (M U.S.$):

| | Proved | Proved plus Probable | Proved plus Probable plus Possible |
|---|---|---|---|
| Future Gross Revenue, M U.S.$ | 445,751 | 683,332 | 771,930 |
| Production and Ad Valorem Taxes, M U.S.$ | (20,914) | (10,824) | (4,743) |
| Transportation Expenses, M U.S.$ | 64,136 | 97,974 | 110,389 |
| Operating Expenses, M U.S.$ | 113,753 | 136,790 | 145,752 |
| Capital and Abandonment Costs, M U.S.$ | 173,447 | 191,849 | 191,849 |
| Future Net Revenue, M U.S.$ | 115,329 | 267,542 | 328,683 |
| Present Worth at 10 Percent, M U.S.$ | 49,952 | 124,462 | 145,740 |

Notes:
1. Values for probable and possible reserves have not been risk adjusted to make them comparable to values for proved reserves.
2. Future income taxes were not taken into account in the preparation of these estimates.

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 CaraCol. 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: August 4, 2015

STATE OF TEXAS
P. J. SZATKOWSKI
46791
REGISTERED
PROFESSIONAL ENGINEER

Paul J. Szatkowski P.E.

Paul J. Szatkowski, P.E.
Senior Vice President
DeGolyer and MacNaughton

**PROJECTION OF ESTIMATED PROVED PRODUCTION AND REVENUE**
**AS OF JUNE 30, 2015**
**FROM CERTAIN PROPERTIES OWNED BY**
**CARACOL PETROLEUM, LLC**

**GRAND TOTAL**

| Year Ending Dec 31 | Completions | Gross Oil Production (bbl) | Company Gross Oil Production (bbl) | Company Gross Sales Gas Production (Mcf) | Net Oil Production (bbl) | Net Sales Gas Production (Mcf) |
|---|---|---|---|---|---|---|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 3 | 706,971 | 269,970 | 0 | 209,227 | 0 |
| 2017 | 8 | 3,735,822 | 1,426,592 | 0 | 1,105,609 | 0 |
| 2018 | 8 | 3,076,545 | 1,174,836 | 0 | 910,497 | 0 |
| 2019 | 8 | 2,364,574 | 902,956 | 0 | 699,791 | 0 |
| 2020 | 8 | 1,780,771 | 680,020 | 0 | 527,016 | 0 |
| 2021 | 8 | 1,412,730 | 539,477 | 0 | 418,094 | 0 |
| 2022 | 8 | 1,183,004 | 451,752 | 0 | 350,108 | 0 |
| 2023 | 8 | 1,013,922 | 387,184 | 0 | 300,068 | 0 |
| 2024 | 8 | 882,693 | 337,073 | 0 | 261,231 | 0 |
| 2025 | 8 | 771,966 | 294,789 | 0 | 228,462 | 0 |
| 2026 | 8 | 685,454 | 261,754 | 0 | 202,859 | 0 |
| 2027 | 8 | 614,152 | 234,525 | 0 | 181,757 | 0 |
| 2028 | 8 | 555,543 | 212,144 | 0 | 164,412 | 0 |
| 2029 | 8 | 505,144 | 192,899 | 0 | 149,496 | 0 |
| 2030 | 8 | 464,643 | 177,432 | 0 | 137,510 | 0 |
| 2031 | 8 | 430,780 | 164,501 | 0 | 127,489 | 0 |
| 2032 | 8 | 403,229 | 153,981 | 0 | 119,335 | 0 |
| 2033 | 8 | 377,300 | 144,079 | 0 | 111,661 | 0 |
| 2034 | 8 | 355,667 | 135,818 | 0 | 105,259 | 0 |
| Subtotal | | 21,320,910 | 8,141,782 | 0 | 6,309,881 | 0 |
| Remaining | | 1,253,367 | 478,621 | 0 | 370,931 | 0 |
| **Total** | | **22,574,277** | **8,620,403** | **0** | **6,680,812** | **0** |
| Cumulative | | 0 | | | | |
| Ultimate | | 22,574,277 | | | | |

| Year Ending Dec 31 | Oil Prices ($/bbl) | Gas Prices ($/Mcf) | Future Gross Revenue Oil ($) | Future Gross Revenue Gas ($) | Future Gross Revenue Total ($) | Ad Valorem Taxes ($) | Production Taxes ($) | Transportation Expenses ($) |
|---|---|---|---|---|---|---|---|---|
| 2015 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 61.30 | | 12,825,594 | 0 | 12,825,594 | 688,582 | -20,426,631 | 2,008,576 |
| 2017 | 63.44 | | 70,139,841 | 0 | 70,139,841 | 1,693,589 | -16,716,181 | 10,613,847 |
| 2018 | 65.02 | | 59,200,539 | 0 | 59,200,539 | 1,724,608 | -6,738,601 | 8,740,775 |
| 2019 | 66.30 | | 46,396,141 | 0 | 46,396,141 | 1,659,872 | 34,992 | 6,717,993 |
| 2020 | 67.35 | | 35,494,503 | 0 | 35,494,503 | 1,579,657 | 26,348 | 5,059,350 |
| 2021 | 68.28 | | 28,547,501 | 0 | 28,547,501 | 1,499,441 | 20,905 | 4,013,709 |
| 2022 | 68.66 | | 24,038,394 | 0 | 24,038,394 | 1,419,231 | 17,505 | 3,361,034 |
| 2023 | 68.73 | | 20,623,687 | 0 | 20,623,687 | 1,339,015 | 15,003 | 2,880,654 |
| 2024 | 68.73 | | 17,954,423 | 0 | 17,954,423 | 1,258,805 | 13,060 | 2,507,820 |
| 2025 | 68.73 | | 15,702,180 | 0 | 15,702,180 | 1,178,590 | 326,026 | 2,193,233 |
| 2026 | 68.73 | | 13,942,481 | 0 | 13,942,481 | 1,098,374 | 94,709 | 1,947,444 |
| 2027 | 68.73 | | 12,492,163 | 0 | 12,492,163 | 1,018,163 | 9,087 | 1,744,868 |
| 2028 | 68.73 | | 11,300,026 | 0 | 11,300,026 | 937,949 | 8,221 | 1,578,354 |
| 2029 | 68.73 | | 10,274,885 | 0 | 10,274,885 | 857,733 | 7,474 | 1,435,165 |
| 2030 | 68.73 | | 9,451,074 | 0 | 9,451,074 | 777,522 | 6,873 | 1,320,098 |
| 2031 | 68.73 | | 8,762,284 | 0 | 8,762,284 | 697,307 | 6,375 | 1,223,889 |
| 2032 | 68.73 | | 8,201,882 | 0 | 8,201,882 | 617,096 | 5,966 | 1,145,614 |
| 2033 | 68.73 | | 7,674,473 | 0 | 7,674,473 | 536,881 | 5,581 | 1,071,948 |
| 2034 | 68.73 | | 7,234,447 | 0 | 7,234,447 | 456,666 | 5,265 | 1,010,486 |
| Subtotal | 66.60 | | 420,256,518 | 0 | 420,256,518 | 21,039,081 | -43,278,023 | 60,574,857 |
| Remaining | 68.73 | | 25,494,120 | 0 | 25,494,120 | 1,306,375 | 18,546 | 3,560,942 |
| **Total** | **66.72** | | **445,750,638** | **0** | **445,750,638** | **22,345,456** | **-43,259,477** | **64,135,799** |

| Year Ending Dec 31 | Lease Expenses ($) | Lifting Expenses ($) | Capital and Abandonment Costs ($) | Total Expenditures ($) | Future Net Revenue Annual ($) | Future Net Revenue Cumulative ($) | Present Worth at 10 Percent Annual ($) | Present Worth at 10 Percent Cumulative ($) |
|---|---|---|---|---|---|---|---|---|
| 2015 | 803,250 | 0 | 17,850,001 | 18,653,251 | -18,653,251 | -18,653,251 | -18,167,574 | -18,167,574 |
| 2016 | 3,274,241 | 404,971 | 55,705,265 | 61,393,053 | -28,829,410 | -47,482,661 | -25,886,111 | -44,053,685 |
| 2017 | 6,464,427 | 1,793,508 | 76,318,424 | 95,190,206 | -10,027,773 | -57,510,434 | -9,249,625 | -53,303,310 |
| 2018 | 3,500,025 | 1,539,558 | 10,665,790 | 24,446,148 | 39,768,384 | -17,742,050 | 29,426,857 | -23,876,453 |
| 2019 | 3,021,960 | 1,646,373 | 0 | 11,386,326 | 33,314,951 | 15,572,901 | 22,725,913 | -1,150,540 |
| 2020 | 3,020,990 | 1,705,073 | 0 | 9,785,413 | 24,103,085 | 39,675,986 | 14,944,966 | 13,794,426 |
| 2021 | 3,018,191 | 1,723,057 | 0 | 8,754,957 | 18,272,198 | 57,948,184 | 10,292,465 | 24,086,891 |
| 2022 | 3,015,246 | 1,737,855 | 0 | 8,114,135 | 14,487,523 | 72,435,707 | 7,417,602 | 31,504,493 |
| 2023 | 3,012,120 | 1,748,600 | 0 | 7,641,374 | 11,628,295 | 84,064,002 | 5,412,438 | 36,916,931 |
| 2024 | 3,009,125 | 1,762,233 | 0 | 7,279,178 | 9,403,380 | 93,467,382 | 3,978,595 | 40,895,526 |
| 2025 | 3,005,661 | 1,765,485 | 0 | 6,964,379 | 7,233,185 | 100,700,567 | 2,781,998 | 43,677,524 |
| 2026 | 3,002,398 | 1,773,182 | 0 | 6,723,024 | 6,026,374 | 106,726,941 | 2,107,133 | 45,784,657 |
| 2027 | 2,999,072 | 1,779,479 | 0 | 6,523,419 | 4,941,494 | 111,668,435 | 1,570,862 | 47,355,519 |
| 2028 | 2,995,917 | 1,789,579 | 0 | 6,363,850 | 3,990,006 | 115,658,441 | 1,153,135 | 48,508,654 |
| 2029 | 2,992,295 | 1,789,340 | 0 | 6,216,800 | 3,192,878 | 118,851,319 | 838,726 | 49,347,380 |
| 2030 | 2,988,881 | 1,793,648 | 0 | 6,102,627 | 2,564,052 | 121,415,371 | 612,352 | 49,959,732 |
| 2031 | 2,985,465 | 1,797,960 | 0 | 6,007,314 | 2,051,288 | 123,466,659 | 445,411 | 50,405,143 |
| 2032 | 2,982,266 | 1,807,071 | 0 | 5,934,951 | 1,643,869 | 125,110,528 | 324,567 | 50,729,710 |
| 2033 | 2,978,610 | 1,806,084 | 0 | 5,856,642 | 1,275,369 | 126,385,897 | 228,888 | 50,958,598 |
| 2034 | 2,975,170 | 1,809,806 | 0 | 5,795,462 | 977,054 | 127,362,951 | 159,452 | 51,118,050 |
| Subtotal | 62,045,310 | 31,972,862 | 160,539,480 | 315,132,509 | 127,362,951 | | 51,118,050 | |
| Remaining | 12,459,699 | 7,275,079 | 12,907,152 | 36,202,872 | -12,033,673 | 115,329,278 | -1,165,617 | 49,952,433 |
| **Total** | **74,505,009** | **39,247,941** | **173,446,632** | **351,335,381** | **115,329,278** | | **49,952,433** | |

**Gross Completions**

| Oil | Gas |
|---|---|
| 8 | 0 |

**Month of Last Production:** 12/2039

**Interests (Percent)**

| Date | Working | Revenue |
|---|---|---|

**Present Worth Profile ($)**

| | |
|---|---|
| **5.00 Percent** | 77,416,108 |
| **9.00 Percent** | 54,720,981 |
| **12.00 Percent** | 41,341,888 |
| **15.00 Percent** | 30,429,710 |
| **20.00 Percent** | 16,418,657 |
| **25.00 Percent** | 6,195,167 |
| **30.00 Percent** | -1,390,236 |

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TEXAS REGISTERED ENGINEERING FIRM

**PROJECTION OF ESTIMATED PROVED PLUS PROBABLE PRODUCTION AND REVENUE**
**AS OF JUNE 30, 2015**
**FROM CERTAIN PROPERTIES OWNED BY**
**CARACOL PETROLEUM, LLC**

**GRAND TOTAL**

| Year Ending Dec 31 | Completions | Gross Oil Production (bbl) | Company Gross Oil Production (bbl) | Company Gross Sales Gas Production (Mcf) | Net Oil Production (bbl) | Net Sales Gas Production (Mcf) |
|---|---|---|---|---|---|---|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 3 | 686,000 | 261,962 | 0 | 203,020 | 0 |
| 2017 | 9 | 4,440,300 | 1,695,610 | 0 | 1,314,098 | 0 |
| 2018 | 9 | 4,834,674 | 1,846,209 | 0 | 1,430,812 | 0 |
| 2019 | 9 | 3,968,715 | 1,515,527 | 0 | 1,174,534 | 0 |
| 2020 | 9 | 2,827,600 | 1,079,771 | 0 | 836,822 | 0 |
| 2021 | 9 | 2,163,510 | 826,176 | 0 | 640,287 | 0 |
| 2022 | 9 | 1,757,109 | 670,985 | 0 | 520,013 | 0 |
| 2023 | 9 | 1,479,835 | 565,102 | 0 | 437,954 | 0 |
| 2024 | 9 | 1,281,682 | 489,434 | 0 | 379,311 | 0 |
| 2025 | 9 | 1,125,010 | 429,606 | 0 | 332,945 | 0 |
| 2026 | 9 | 1,004,852 | 383,721 | 0 | 297,384 | 0 |
| 2027 | 9 | 907,929 | 346,709 | 0 | 268,699 | 0 |
| 2028 | 9 | 830,259 | 317,050 | 0 | 245,714 | 0 |
| 2029 | 9 | 761,005 | 290,604 | 0 | 225,218 | 0 |
| 2030 | 9 | 704,115 | 268,879 | 0 | 208,381 | 0 |
| 2031 | 9 | 654,311 | 249,861 | 0 | 193,642 | 0 |
| 2032 | 9 | 610,142 | 232,993 | 0 | 180,570 | 0 |
| 2033 | 9 | 565,852 | 216,081 | 0 | 167,463 | 0 |
| 2034 | 9 | 526,269 | 200,966 | 0 | 155,749 | 0 |
| Subtotal | | 31,129,169 | 11,887,246 | 0 | 9,212,616 | 0 |
| Remaining | | 3,355,416 | 1,281,327 | 0 | 993,028 | 0 |
| **Total** | | **34,484,585** | **13,168,573** | **0** | **10,205,644** | **0** |
| Cumulative | | 0 | | | | |
| Ultimate | | 34,484,585 | | | | |

| Year Ending Dec 31 | Oil Prices ($/bbl) | Gas Prices ($/Mcf) | Future Gross Revenue Oil ($) | Future Gross Revenue Gas ($) | Future Gross Revenue Total ($) | Ad Valorem Taxes ($) | Production Taxes ($) | Transportation Expenses ($) |
|---|---|---|---|---|---|---|---|---|
| 2015 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 61.30 | | 12,445,147 | 0 | 12,445,147 | 687,808 | -20,426,938 | 1,948,995 |
| 2017 | 63.44 | | 83,366,373 | 0 | 83,366,373 | 1,689,708 | -16,827,259 | 12,615,341 |
| 2018 | 65.02 | | 93,031,400 | 0 | 93,031,400 | 1,745,655 | -5,406,244 | 13,735,795 |
| 2019 | 66.30 | | 77,871,556 | 0 | 77,871,556 | 1,709,055 | 58,729 | 11,275,520 |
| 2020 | 67.35 | | 56,360,004 | 0 | 56,360,004 | 1,642,509 | 41,842 | 8,033,497 |
| 2021 | 68.28 | | 43,718,773 | 0 | 43,718,773 | 1,575,958 | 32,013 | 6,146,752 |
| 2022 | 68.66 | | 35,704,085 | 0 | 35,704,085 | 1,509,413 | 26,000 | 4,992,123 |
| 2023 | 68.73 | | 30,100,590 | 0 | 30,100,590 | 1,442,867 | 21,900 | 4,204,361 |
| 2024 | 68.73 | | 26,070,055 | 0 | 26,070,055 | 1,376,316 | 18,966 | 3,641,387 |
| 2025 | 68.73 | | 22,883,283 | 0 | 22,883,283 | 1,309,771 | 1,323,550 | 3,196,268 |
| 2026 | 68.73 | | 20,439,194 | 0 | 20,439,194 | 1,243,224 | 995,884 | 2,854,885 |
| 2027 | 68.73 | | 18,467,736 | 0 | 18,467,736 | 1,176,679 | 737,004 | 2,579,518 |
| 2028 | 68.73 | | 16,887,898 | 0 | 16,887,898 | 1,110,128 | 533,486 | 2,358,851 |
| 2029 | 68.73 | | 15,479,218 | 0 | 15,479,218 | 1,043,582 | 358,102 | 2,162,091 |
| 2030 | 68.73 | | 14,322,056 | 0 | 14,322,056 | 977,037 | 217,665 | 2,000,461 |
| 2031 | 68.73 | | 13,309,027 | 0 | 13,309,027 | 910,485 | 98,165 | 1,858,965 |
| 2032 | 68.73 | | 12,410,583 | 0 | 12,410,583 | 843,940 | 9,027 | 1,733,473 |
| 2033 | 68.73 | | 11,509,721 | 0 | 11,509,721 | 777,394 | 8,372 | 1,607,643 |
| 2034 | 68.73 | | 10,704,572 | 0 | 10,704,572 | 710,844 | 7,786 | 1,495,183 |
| Subtotal | 66.77 | | 615,081,271 | 0 | 615,081,271 | 23,482,373 | -38,171,950 | 88,441,109 |
| Remaining | 68.73 | | 68,250,877 | 0 | 68,250,877 | 3,816,258 | 49,650 | 9,533,077 |
| **Total** | **66.96** | | **683,332,148** | **0** | **683,332,148** | **27,298,631** | **-38,122,300** | **97,974,186** |

| Year Ending Dec 31 | Lease Expenses ($) | Lifting Expenses ($) | Capital and Abandonment Costs ($) | Total Expenditures ($) | Future Net Revenue Annual ($) | Future Net Revenue Cumulative ($) | Present Worth at 10 Percent Annual ($) | Present Worth at 10 Percent Cumulative ($) |
|---|---|---|---|---|---|---|---|---|
| 2015 | 803,250 | 0 | 17,850,001 | 18,653,251 | -18,653,251 | -18,653,251 | -18,167,574 | -18,167,574 |
| 2016 | 3,273,665 | 392,943 | 55,705,265 | 61,320,868 | -29,136,591 | -47,789,842 | -26,156,307 | -44,323,881 |
| 2017 | 6,846,849 | 2,061,440 | 84,552,635 | 106,076,265 | -7,572,341 | -55,362,183 | -7,177,648 | -51,501,529 |
| 2018 | 3,973,828 | 1,879,043 | 20,834,211 | 40,422,877 | 56,269,112 | 906,929 | 41,534,558 | -9,966,971 |
| 2019 | 3,034,312 | 1,871,705 | 0 | 16,181,537 | 59,922,235 | 60,829,164 | 40,884,490 | 30,917,519 |
| 2020 | 3,030,815 | 1,860,549 | 0 | 12,924,861 | 41,750,792 | 102,579,956 | 25,889,962 | 56,807,481 |
| 2021 | 3,026,851 | 1,838,991 | 0 | 11,012,594 | 31,098,208 | 133,678,164 | 17,519,801 | 74,327,282 |
| 2022 | 3,023,123 | 1,822,703 | 0 | 9,837,949 | 24,330,723 | 158,008,887 | 12,457,616 | 86,784,898 |
| 2023 | 3,019,402 | 1,806,577 | 0 | 9,030,340 | 19,605,483 | 177,614,370 | 9,124,147 | 95,909,045 |
| 2024 | 3,015,910 | 1,795,498 | 0 | 8,452,795 | 16,221,978 | 193,836,348 | 6,861,767 | 102,770,812 |
| 2025 | 3,011,982 | 1,774,765 | 0 | 7,983,015 | 12,266,947 | 206,103,295 | 4,716,627 | 107,487,439 |
| 2026 | 3,008,284 | 1,759,120 | 0 | 7,622,289 | 10,577,797 | 216,681,092 | 3,697,198 | 111,184,637 |
| 2027 | 3,004,591 | 1,743,629 | 0 | 7,327,738 | 9,226,315 | 225,907,407 | 2,931,556 | 114,116,193 |
| 2028 | 3,001,119 | 1,733,009 | 0 | 7,092,979 | 8,151,305 | 234,058,712 | 2,354,312 | 116,470,505 |
| 2029 | 2,997,227 | 1,713,071 | 0 | 6,872,389 | 7,205,145 | 241,263,857 | 1,891,494 | 118,361,999 |
| 2030 | 2,993,557 | 1,698,041 | 0 | 6,692,059 | 6,435,295 | 247,699,152 | 1,535,823 | 119,897,822 |
| 2031 | 2,989,891 | 1,683,162 | 0 | 6,532,018 | 5,768,359 | 253,467,511 | 1,251,582 | 121,149,404 |
| 2032 | 2,986,440 | 1,672,982 | 0 | 6,392,895 | 5,164,721 | 258,632,232 | 1,018,774 | 122,168,178 |
| 2033 | 2,982,582 | 1,653,807 | 0 | 6,244,032 | 4,479,923 | 263,112,155 | 803,295 | 122,971,473 |
| 2034 | 2,978,938 | 1,639,370 | 0 | 6,113,491 | 3,872,451 | 266,984,606 | 631,330 | 123,602,803 |
| Subtotal | 63,002,616 | 32,400,405 | 178,942,112 | 362,786,242 | 266,984,606 | | 123,602,803 | |
| Remaining | 27,250,722 | 14,136,249 | 12,907,152 | 63,827,200 | 557,769 | 267,542,375 | 859,377 | 124,462,180 |
| **Total** | **90,253,338** | **46,536,654** | **191,849,264** | **426,613,442** | **267,542,375** | | **124,462,180** | |

**Gross Completions**

| Oil | Gas |
|---|---|
| 9 | 0 |

**Month of Last Production:** 12/2044

**Interests (Percent)**

| Date | Working | Revenue |
|---|---|---|

**Present Worth Profile ($)**

| | |
|---|---|
| **5.00 Percent** | 180,531,758 |
| **9.00 Percent** | 133,881,055 |
| **12.00 Percent** | 107,735,628 |
| **15.00 Percent** | 86,986,749 |
| **20.00 Percent** | 60,904,209 |
| **25.00 Percent** | 42,107,188 |
| **30.00 Percent** | 28,175,863 |

DeGolyer and MacNaughton
F-716
TEXAS REGISTERED ENGINEERING FIRM

**PROJECTION OF ESTIMATED PROVED PLUS PROBABLE PLUS POSSIBLE PRODUCTION AND REVENUE**
**AS OF JUNE 30, 2015**
**FROM CERTAIN PROPERTIES OWNED BY**
**CARACOL PETROLEUM, LLC**

**GRAND TOTAL**

| Year Ending Dec 31 | Completions | Gross Oil Production (bbl) | Company Gross Oil Production (bbl) | Company Gross Sales Gas Production (Mcf) | Net Oil Production (bbl) | Net Sales Gas Production (Mcf) |
|---|---|---|---|---|---|---|
| 2015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 3 | 686,000 | 261,962 | 0 | 203,020 | 0 |
| 2017 | 9 | 4,440,300 | 1,695,610 | 0 | 1,314,098 | 0 |
| 2018 | 9 | 4,852,949 | 1,853,188 | 0 | 1,436,221 | 0 |
| 2019 | 9 | 4,123,929 | 1,574,798 | 0 | 1,220,469 | 0 |
| 2020 | 9 | 3,095,139 | 1,181,936 | 0 | 916,000 | 0 |
| 2021 | 9 | 2,443,841 | 933,226 | 0 | 723,250 | 0 |
| 2022 | 9 | 2,024,434 | 773,067 | 0 | 599,127 | 0 |
| 2023 | 9 | 1,728,430 | 660,032 | 0 | 511,525 | 0 |
| 2024 | 9 | 1,512,080 | 577,416 | 0 | 447,497 | 0 |
| 2025 | 9 | 1,337,473 | 510,739 | 0 | 395,823 | 0 |
| 2026 | 9 | 1,201,880 | 458,960 | 0 | 355,694 | 0 |
| 2027 | 9 | 1,091,299 | 416,732 | 0 | 322,967 | 0 |
| 2028 | 9 | 1,002,008 | 382,636 | 0 | 296,543 | 0 |
| 2029 | 9 | 921,574 | 351,919 | 0 | 272,738 | 0 |
| 2030 | 9 | 854,903 | 326,461 | 0 | 253,007 | 0 |
| 2031 | 9 | 794,970 | 303,574 | 0 | 235,269 | 0 |
| 2032 | 9 | 741,311 | 283,083 | 0 | 219,390 | 0 |
| 2033 | 9 | 687,501 | 262,535 | 0 | 203,464 | 0 |
| 2034 | 9 | 639,407 | 244,170 | 0 | 189,232 | 0 |
| Subtotal | | 34,179,428 | 13,052,044 | 0 | 10,115,334 | 0 |
| Remaining | | 4,674,870 | 1,785,185 | 0 | 1,383,518 | 0 |
| **Total** | | **38,854,298** | **14,837,229** | **0** | **11,498,852** | **0** |
| Cumulative | | 0 | | | | |
| Ultimate | | 38,854,298 | | | | |

| Year Ending Dec 31 | Oil Prices ($/bbl) | Gas Prices ($/Mcf) | Future Gross Revenue Oil ($) | Future Gross Revenue Gas ($) | Future Gross Revenue Total ($) | Ad Valorem Taxes ($) | Production Taxes ($) | Transportation Expenses ($) |
|---|---|---|---|---|---|---|---|---|
| 2015 | | | 0 | 0 | 0 | 0 | 0 | 0 |
| 2016 | 61.30 | | 12,445,147 | 0 | 12,445,147 | 687,569 | -20,426,938 | 1,948,995 |
| 2017 | 63.44 | | 83,366,373 | 0 | 83,366,373 | 1,688,549 | -16,827,176 | 12,615,341 |
| 2018 | 65.02 | | 93,383,063 | 0 | 93,383,063 | 1,748,634 | -5,405,552 | 13,787,717 |
| 2019 | 66.30 | | 80,917,074 | 0 | 80,917,074 | 1,716,483 | 61,024 | 11,716,500 |
| 2020 | 67.35 | | 61,692,617 | 0 | 61,692,617 | 1,654,474 | 45,801 | 8,793,602 |
| 2021 | 68.28 | | 49,383,498 | 0 | 49,383,498 | 1,592,469 | 36,165 | 6,943,198 |
| 2022 | 68.66 | | 41,136,062 | 0 | 41,136,062 | 1,530,460 | 29,955 | 5,751,620 |
| 2023 | 68.73 | | 35,157,142 | 0 | 35,157,142 | 1,468,450 | 25,575 | 4,910,644 |
| 2024 | 68.73 | | 30,756,477 | 0 | 30,756,477 | 1,406,441 | 22,375 | 4,295,972 |
| 2025 | 68.73 | | 27,204,877 | 0 | 27,204,877 | 1,344,437 | 1,941,031 | 3,799,896 |
| 2026 | 68.73 | | 24,446,854 | 0 | 24,446,854 | 1,282,427 | 1,566,084 | 3,414,663 |
| 2027 | 68.73 | | 22,197,566 | 0 | 22,197,566 | 1,220,418 | 1,265,174 | 3,100,489 |
| 2028 | 68.73 | | 20,381,364 | 0 | 20,381,364 | 1,158,408 | 1,025,665 | 2,846,808 |
| 2029 | 68.73 | | 18,745,268 | 0 | 18,745,268 | 1,096,404 | 815,598 | 2,618,283 |
| 2030 | 68.73 | | 17,389,177 | 0 | 17,389,177 | 1,034,394 | 644,623 | 2,428,868 |
| 2031 | 68.73 | | 16,170,082 | 0 | 16,170,082 | 972,385 | 493,545 | 2,258,588 |
| 2032 | 68.73 | | 15,078,647 | 0 | 15,078,647 | 910,376 | 359,445 | 2,106,140 |
| 2033 | 68.73 | | 13,984,115 | 0 | 13,984,115 | 848,371 | 227,994 | 1,953,260 |
| 2034 | 68.73 | | 13,005,873 | 0 | 13,005,873 | 786,362 | 111,843 | 1,816,621 |
| Subtotal | 66.91 | | 676,841,276 | 0 | 676,841,276 | 24,147,511 | -33,987,769 | 97,107,205 |
| Remaining | 68.73 | | 95,089,218 | 0 | 95,089,218 | 5,028,547 | 69,176 | 13,281,776 |
| **Total** | **67.13** | | **771,930,494** | **0** | **771,930,494** | **29,176,058** | **-33,918,593** | **110,388,981** |

| Year Ending Dec 31 | Lease Expenses ($) | Lifting Expenses ($) | Capital and Abandonment Costs ($) | Total Expenditures ($) | Future Net Revenue Annual ($) | Future Net Revenue Cumulative ($) | Present Worth at 10 Percent Annual ($) | Present Worth at 10 Percent Cumulative ($) |
|---|---|---|---|---|---|---|---|---|
| 2015 | 803,250 | 0 | 17,850,001 | 18,653,251 | -18,653,251 | -18,653,251 | -18,167,574 | -18,167,574 |
| 2016 | 3,273,654 | 392,943 | 55,705,265 | 61,320,857 | -29,136,341 | -47,789,592 | -26,156,082 | -44,323,656 |
| 2017 | 6,846,797 | 2,061,440 | 84,552,635 | 106,076,213 | -7,571,213 | -55,360,805 | -7,176,718 | -51,500,374 |
| 2018 | 3,973,962 | 1,879,043 | 20,834,211 | 40,474,933 | 56,565,048 | 1,204,243 | 41,748,873 | -9,751,501 |
| 2019 | 3,034,647 | 1,871,705 | 0 | 16,622,852 | 62,516,715 | 63,720,958 | 42,633,747 | 32,882,246 |
| 2020 | 3,031,353 | 1,860,549 | 0 | 13,685,504 | 46,306,838 | 110,027,796 | 28,703,888 | 61,586,134 |
| 2021 | 3,027,594 | 1,838,991 | 0 | 11,809,783 | 35,945,081 | 145,972,877 | 20,244,969 | 81,831,103 |
| 2022 | 3,024,070 | 1,822,703 | 0 | 10,598,393 | 28,977,254 | 174,950,131 | 14,833,613 | 96,664,716 |
| 2023 | 3,020,554 | 1,806,577 | 0 | 9,737,775 | 23,925,342 | 198,875,473 | 11,132,606 | 107,797,322 |
| 2024 | 3,017,265 | 1,795,498 | 0 | 9,108,735 | 20,218,926 | 219,094,399 | 8,551,061 | 116,348,383 |
| 2025 | 3,013,542 | 1,774,765 | 0 | 8,588,203 | 15,331,206 | 234,425,605 | 5,893,991 | 122,242,374 |
| 2026 | 3,010,048 | 1,759,120 | 0 | 8,183,831 | 13,414,512 | 247,840,117 | 4,688,084 | 126,930,458 |
| 2027 | 3,006,559 | 1,743,629 | 0 | 7,850,677 | 11,861,297 | 259,701,414 | 3,768,325 | 130,698,783 |
| 2028 | 3,003,292 | 1,733,009 | 0 | 7,583,109 | 10,614,182 | 270,315,596 | 3,065,268 | 133,764,051 |
| 2029 | 2,999,604 | 1,713,071 | 0 | 7,330,958 | 9,502,308 | 279,817,904 | 2,494,260 | 136,258,311 |
| 2030 | 2,996,138 | 1,698,041 | 0 | 7,123,047 | 8,587,113 | 288,405,017 | 2,049,166 | 138,307,477 |
| 2031 | 2,992,677 | 1,683,162 | 0 | 6,934,427 | 7,769,725 | 296,174,742 | 1,685,687 | 139,993,164 |
| 2032 | 2,989,430 | 1,672,982 | 0 | 6,768,552 | 7,040,274 | 303,215,016 | 1,388,591 | 141,381,755 |
| 2033 | 2,985,775 | 1,653,807 | 0 | 6,592,842 | 6,314,908 | 309,529,924 | 1,132,184 | 142,513,939 |
| 2034 | 2,982,336 | 1,639,370 | 0 | 6,438,327 | 5,669,341 | 315,199,265 | 924,123 | 143,438,062 |
| Subtotal | 63,032,547 | 32,400,405 | 178,942,112 | 371,482,269 | 315,199,265 | | 143,438,062 | |
| Remaining | 33,186,463 | 17,132,637 | 12,907,152 | 76,508,028 | 13,483,467 | 328,682,732 | 2,301,810 | 145,739,872 |
| **Total** | **96,219,010** | **49,533,042** | **191,849,264** | **447,990,297** | **328,682,732** | | **145,739,872** | |

**Gross Completions**

| Oil | Gas |
|---|---|
| 9 | 0 |

**Month of Last Production:** 12/2046

**Interests (Percent)**

| Date | Working | Revenue |
|---|---|---|

**Present Worth Profile ($)**

| | |
|---|---|
| **5.00 Percent** | 214,765,225 |
| **9.00 Percent** | 157,121,342 |
| **12.00 Percent** | 125,728,806 |
| **15.00 Percent** | 101,249,762 |
| **20.00 Percent** | 70,993,652 |
| **25.00 Percent** | 49,529,377 |
| **30.00 Percent** | 33,799,827 |

DeGolyer and MacNaughton
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TEXAS REGISTERED ENGINEERING FIRM