EXCEED

Leading Energy Transformation

Independent Reserves Estimate H6 Reservoir Sèmè Field, Block 1 Republic of Benin Summary Report

REX INTERNATIONAL HOLDING LIMITED

LIME PETROLEUM HOLDING AS

AKRAKE PETROLEUM SA

21st August 2024

Our Ref: E0101-RES-REP-001 V2.3

Exceed
Registered Office Address:
1 Rubislaw Terrace, Aberdeen
Scotland, UK, AB10 1XE
T: +44(0)1224 577940
E: info@xcd.com
xcd.com

Document Approval

EXCEED					
	TITLE	NAME	SIGNATURE	DATE	ROLE
Authors:	Mr.	H. Jutila	Heikki Jutila (Aug 21, 2024 17:02 GMT+1)	21.08.2024	Team Member
	Mr.	E. Heydari	Ebrahim Heydari (Aug 21, 2024 17:25 GMT+1)	21.08.2024	Team Member
	Mrs.	K. Howell	Katharine Howell (Aug 21, 2024 17:16 GMT+1)	21.08.2024	Team Member
Reviewed By:	Mr.	M. Cullen		21.08.2024	Team Member
Approved By:	Mr.	S. Hayhurst		21.08.2024	Qualified Person
Approved By:	Mr.	I. Mills		21.08.2024	Managing Director
Approved By	Mr.	P. M. Steimler	Peter Steimler (Aug 21, 2024 20:10 GMT+1)	21.08.2024	Akrake Petroleum Benin Director

Issue Summary

Issue Number	Date	Description of Revision or Amendment
1.0	01.07.2024	Internal Draft
1.1	05.07.2024	Final Draft for Approval
2.0	08.07.2024	Final for Comments
2.1	09.07.2024	Final for Signature
2.2	15.07.2024	Additional Comments Added
2.3	21.08.2024	Final Version for Issue

Exceed Torridon Limited
1 Rubislaw Terrace,
Aberdeen,
Scotland, UK
AB10 1XE

Our Reference : E0101-RES-REP
Date : 21st August 2024

AKRAKE PETROLEUM BENIN S.A.
Ilot : 193-194, Quartier : Gbéto
Cotonou
Bénin

Attention : Mr. Peter M. Steimler

Subject : Independent Reserves Estimation H6 Reservoir Sèmè Field, Block 1, Offshore Republic of Benin

This Qualified Person's Report ("QPR") has been prepared by Exceed Torridon Ltd, 1 Rubislaw Terrace, Aberdeen AB101XE, United Kingdom, and has been prepared in accordance with the applicable requirements in Practice Note 6.3 of the Singapore Exchange Securities Trading Limited's Mainboard Listing Rules.

For Exceed Torridon Limited

Mr. Ian Mills
Managing Director

1 EXECUTIVE SUMMARY

The purpose of this summary is to give a brief synopsis of the QPR performed by Exceed Torridon Ltd (XCD) for and on behalf of Rex International Holding Limited and its subsidiaries and affiliates to estimate their net entitlement of hydrocarbons in the Sèmè Field, Block 1, offshore republic Benin. The Entitlements are tabulated below in Table 1

			Akrake's 76.00% Net Entitlement Volume [2, 3]			**Rex's 63.64%* Net Entitlement Volume [2, 3]**		
Category	Field STOIIP (MMstb) (dynamic) XCD 2024	Gross Attributable to Licence (MMstb)[1,2]	Previous Report (MMstb)[4]	Current Report (MMstb)[5]	% Change from Previous Update	Previous Report (MMstb)[4]	Current Report (MMstb)[5]	% Change from Previous Update
Low 1P	95	11.4**	n/a	6.9	n/a	n/a	5.8	n/a
Base 2P	101	10.9	n/a	7.2	n/a	n/a	6.0	n/a
High 3P	104	13.6	n/a	7.7	n/a	n/a	6.4	n/a

Table 1 Akrake & Rex Entitlement Volumes

1. *Gross field Reserves (100% basis) after economic limit test as of 31st December 2023.*
2. *Economic cut-off year for the 1P, 2P and 3P reserves (first year of negative CF) are 2032, 2033, 2033, respectively.*
3. *Company net entitlement Reserves after economic limit test.*
4. *Not applicable as this is the first report carried out for the Sèmè Field*
5. *Volume as of 31st December 2023 after subtraction of net entitlement production plus revision and maturation of reserves*

N /A Denotes not applicable.

* Based on the Contribution (as defined in the Rex International Holding Limited announcement dated 19 June 2024) having been completed. As of the date of this report, completion has not yet occurred and Rex's entitlement prior to completion would be 51.6%. Reference: Rex International Holding Limited announcement, Rex to hold its interests in Lime Petroleum and Porto Novo Resources under new joint venture, 19 June 2024

** Note: It should be noted that for the Beninese oil and gas assets, 'Gross Attributable to Licence' are the Participants net entitlement of Cost Oil, plus Profit Oil, plus Tax Oil, as it has been defined in the PSC. Details of the of the Production Sharing Contract (PSC) as executed between the parties are summarised in Section 1.1 in order to elaborate on the Gross Attributable to Licence (MMstb) Volumes presented in Table 1.

1.1 Contractual and Fiscal Terms

Block 1 has been awarded under a Production Sharing Contract (PSC) executed between the Republic of Benin, Akrake Petroleum Benin S.A. and Octogone E&P S.A. on 20th of December 2023 under Article 106 of Law N°2019-06 of 15th November 2019 on the Petroleum Code of the Republic of Benin. The contract sets out the terms and conditions of the exploration and production activities in Block 1.

1.1.1 Terms of the Contract

The contract remains in force for the duration of the Research Permit (including any renewals or extensions) and the Exploitation Permit (including any renewals or extensions). The Research permit is at maximum 9 years and Exploitation Permit 25 years + 10 years possible extension.

1.1.2 Work Programme

The minimum work programme during the Initial period are:

Sub-period 1:

a) Reprocessing of seismic covering the Sèmè Field.

b) Drilling one vertical exploration well through H6.

c) In case of commerciality submit application for Exploitation Permit.

Sub-period 2:

a) Reprocessing seismic for the whole of Block 1.

b) Drilling of three exploration wells in deeper reservoirs to target natural gas and additional oil production, one well has to be located outside the Sèmè Field.

There are 2 renewal periods stipulating an additional three exploration wells but this work programme may be amended by approval of the Council of the Ministers.

1.1.3 Remuneration

During the Exploitation period the Operator will be refunded his Petroleum Costs. The %-age of Total Commercial Production net of Ad Valorem Tax available varies from 70% in the conventional offshore zone to 80% in the very deep offshore zone. The Remuneration is valued at market price for crude giving the Cost Oil Entitlement volume.

1.1.4 Profit Sharing

The share of each Party's profit Oil is determined using a R-Factor formula which is an indicator of the profitability of the project detail in Article 42 of the agreement. The Operators share varies between 40% and 55%. This is also valued at market price and represents the Profit Oil Entitlement Volume.

1.1.5 The Operators Entitlement

The cashflow attributable to the Operator is determined as per the points above and is the sum of Cost Oil and Profit Oil Entitlements. The Entitlement is based on recovering costs and the volume is very sensitive to the oil price. The Cost Oil Entitlement increases with high costs and low oil prices.

1.1.6 Volumes Attributable to the Total Project

These are the sum of all participants Cost and Profit Oil and Tax Oil.

It is worth noting that the "Entitlement Volumes" when quoted do not always increase monotonically as function of increasing in-situ volumes as is the case here.

The Field has been on production and has demonstrated good productivity. The plan is initially redevelop using a phased approach; Phase 1 in mid-2025 includes drilling one vertical exploration and appraisal well to test several reservoirs. It will be used as a vertical producer. Thereafter, a second, horizontal, well will be drilled to exploit the H6 reservoir previously produced. In 2026 Phase 1 is concluded by drilling two horizontal wells. The production system to be used is a highly flexible system comprising a drilling platform, a Mobile Production Unit (MOPU), and a Floating Storage and Offtake unit (FSO) for storage.

The QPR focuses on this Phase 1.

2 SUMMARY OF QPR

2.1 Introduction

This Qualified Persons Report (QPR) Summary has been prepared at the request of Akrake Petroleum Limited ("Akrake", or the "Company") by Exceed Torridon Ltd (XCD) as an independent Reserves Estimator. The QPR summary is based on work carried out by Akrake affiliate Lime Petroleum AS in Oslo, and XCD to use available legacy and new dynamic and static models of the Sèmè Field.

This Summary QPR has been approved for issue by Mr Ian Mills; the Managing Director of Exceed Torridon Limited, and Mr Stephen Hayhurst; the Qualified Person of Exceed Torridon Limited. Mr Hayhurst has over 35 years in the oil & gas industry and currently holds the position of Production Technology and Petroleum Engineering Manager. He holds the following qualifications: BSc (Honours) Geology, MSc Petroleum Engineering and an MBA in Oil & Gas Management. He is also a Chartered Engineer (CEng) and a Fellow of the Energy Institute (FEI) and has been a member of the Society of Petroleum Engineers (SPE) for 33 years.

2.2 Aim of this Summary

This Summary QPR aims to provide estimates on the remaining reserves of the Sèmè Field as of 31st December 2023. This summary QPR is based on the work done during 2023 and 2024.

2.3 Scope & Standards used in this Summary

This Summary QPR is prepared in line with the standards set out under the Petroleum Resource Management System ("PRMS") to include production from the legacy Sèmè wells until 31st December 2023. Akrake in partnership with Octogone E&P S.A. ("Octogone"), executed a Production Sharing Agreement with the Government of the Republic of Benin in December 2023. This gives the partnership undivided ownership of the Block 1 offshore Republic of Benin, subject to potential backing by the Béninoise state oil company.

2.4 Basis of the Summary

Akrake's internal work carried out throughout 2023 and into 2024 provided an updated static and dynamic model with improved reservoir characterisation and updated volumetrics. XCD used both this and available legacy models as basis of their independent view of the reservoir and remaining resources. These models, after calibration to historical production data, were used to provide, together with production forecasts, an estimate of the remaining reserves under various development options as of 31st December 2023.

2.5 Description of Asset

The Offshore Benin Basin (OBB), which includes the Sèmè oilfield, belongs to the Benin Coastal Basin, one of the coastal basins of the "Dahomey Embayment". The Dahomey Embayment (from western Nigeria to eastern Ghana) is part of the northern Gulf of Guinea, a prolific petroleum province where many fields were discovered on the continental shelf or in waters less than 2,000 metres deep.

The Sèmè Field is located in Benin's offshore coastal sedimentary basin, near the Benin-Nigeria border, and contains two important oil-bearing structures called "Sèmè North" and "Sèmè South". In this coastal basin, Turonian sandstones of Abeokuta formation (Cenomanian-Turonian to Early Senonian age) form two reservoir units differentiated by two seismic horizons H6 and H6.5. The H6 seismic horizon represents the upper reservoir unit and is the main reservoir. Composed of quartz, calcite, dolomite and rutile, these sandstones have good porosity (~18%) and were exploited from 1982 to 1998.

During the 16 years of operation, only 22% of the estimated reserves at the time were produced. In 1998, while crude oil world prices were very low, oil production in this field was accompanied by large volumes of water. Water production from the reservoir gradually reached 90%. This situation led to the cessation of production activities and the definitive closure of the field.

As of 31st December 2023, the Sèmè Field had produced 16.717 MMstb. Based on the recoverable reserves estimate from the 2023/2024 work, the remaining reserves are presented in Table 2-1.

			Akrake's 76.00% Net Entitlement Volume [2, 3]			**Rex's 63.64%* Net Entitlement Volume [2, 3]**				
Category	Field STOIIP (MMstb) (dynamic) XCD 2024	Gross Attributable to Licence (MMstb)[1,2]	Previous Report (MMstb)[4]	Current Report (MMstb)[5]	% Change from Previous Update	Previous Report (MMstb)[4]	Current Report (MMstb)[5]	% Change from Previous Update	Risk Factors[6]	Remarks (Economic Limit)
Reserves										
Low 1P	95	11.4 **	n/a	6.9	n/a	n/a	5.8	n/a	n/a	2032
Base 2P	101	10.9	n/a	7.2	n/a	n/a	6.0	n/a	n/a	2033
High 3P	104	13.6	n/a	7.7	n/a	n/a	6.4	n/a	n/a	2033

Table 2: Sèmè Field Summary of Oil Reserves as of 31st December 2023

1. *Gross field Reserves (100% basis) after economic limit test as of 31st December 2023.*
2. *Economic cut-off year for the 1P, 2P and 3P reserves (first year of negative CF) are 2032, 2033, 2033, respectively.*
3. *Company net entitlement Reserves after economic limit test.*
4. *Not applicable as this is the first report carried out for the Sèmè Field*
5. *Volume as of 31st December 2023 after subtraction of net entitlement production plus revision and maturation of reserves*

N/A Denotes not applicable.

* Based on the Contribution (as defined in the Rex International Holding Limited announcement dated 19 June 2024) having been completed. As of the date of this report, completion has not yet occurred and Rex's entitlement prior to completion would be 51.6%. Reference: Rex International Holding Limited announcement, Rex to hold its interests in Lime Petroleum and Porto Novo Resources under new joint venture, 19 June 2024

** Note: It should be noted that for the Beninese oil and gas assets, 'Gross Attributable to Licence' are the Participants net entitlement of Cost Oil, plus Profit Oil, plus Tax Oil, as it has been defined in the PSC. Please see Section 1.1.

2.6 Background

Based on the Contribution (as defined in the Rex International Holding Limited announcement dated 19 June 2024)* having been completed, Akrake Petroleum Benin AS will be 100% owned by Lime Petroleum Holding AS (100%) and the owners of Lime Petroleum Holding AS will be Rex International Investments Pte Ltd (83.74%), Monarch Marine Holding Ltd (14.72%) and Peter M. Steimler (1.52%). As of the date of this report, completion of the Contribution has not yet occurred. Table 3 gives a detailed description of the asset.

Reference: Rex International Holding Limited announcement, Rex to hold its interests in Lime Petroleum and Porto Novo Resources under new joint venture, 19 June 2024.

Asset name / Country	Akrake Interest (%)	Rex Interest (%)	Development Status	Licence key dates	Licence Area	Type of mineral, oil or gas deposit	Remarks
Sèmè Field, BENIN	76%	63.64%	Field inactive but undergoing redevelopment planning with FDP due 3Q 2024	Signature March 2024, End of Exploration March 2028, End of Exploitation March 2053 End of Extension March 2063	Block 1, Republic of Benin	Oil Field	N/A

Table 3: Sèmè Field Detailed Description

The Sèmè oil field is located within the Block 1 licence in the north-eastern part of the offshore sedimentary basin of Benin at bathymetries ranging from 27 to 54 m (Figure 1). The Field is within an area of 551 km^2, it is positioned 2500 m from the Benin-Nigeria border. The licence is owned and operated by Akrake Petroleum Benin AS.

2.6.1 Discovery

In 1968, Union Oil of California discovered the Sèmè Field (also known as the Seme-Kpodji Field) 15 km off the coast in water depths ranging from 20 to 54 m. In late 1973, Union Oil proposed a development plan to the Benin Government, but negotiations fell through and so relinquished its exploration acreage.

2.6.2 Operational Phases

- Initial Production: The field began production in 1982 under the operation of Saga Petroleum, a Norwegian company.
- Saga Petroleum Era (1979-1985): During this period, Saga Petroleum managed the operations and developed the infrastructure necessary for oil extraction, including offshore platforms and production facilities.
- Pan Ocean Oil Corporation Era (1985-1986): Pan Ocean, a Nigerian company, took over operations. The field saw continued production, but it faced challenges such as declining output and technical difficulties.
- Ashland Era (1988-1992): The field was subsequently operated by Ashland Oil, an American company. Ashland took over operations and attempted to revive production. However, persistent

issues with declining reservoir pressure and aging infrastructure hampered their efforts.

- APIC Era (1992-1999): APIC, a Beninese company, took over production till shut down in 1999 due to economic and technical difficulties after producing around 16.8 million barrels of oil.

- Efforts to revive the Seme Oilfield were undertaken in the mid-2000s. The state-owned company Société Béninoise des Hydrocarbures (SOBEH) and South Atlantic Petroleum (SAPETRO), a Nigerian company, entered into agreements to redevelop the field. Several appraisal wells were drilled during 2008-09. A new platform was installed (2011) and a new pipeline was installed to the onshore tankfarm. SAPETRO withdrew in 2013 prior to production start-up. However, due to the prevailing oil price at the time (approximately US$30) further development activities were deemed non-commercial.

To date, 27 wells have been drilled in Block-1: 24 in the original Sèmè Field, with the last 4 wells having been drilled between 2008 and 2015 to rediscover Sèmè North. These wells discovered and tested oil in the H6 reservoirs, the same reservoirs that were producing in the original Sèmè Field, in a separate structure.

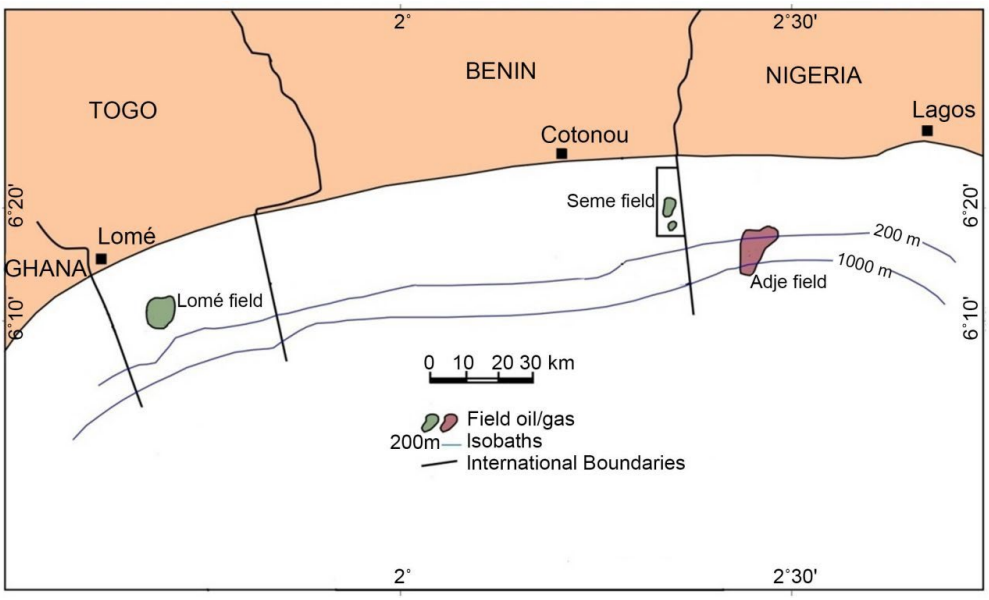

Figure 2-1: Sèmè Field location

Further prospects are being evaluated within the licence area. The principal terms and conditions for the concession are discussed in detail in the XCD QPR, including fiscal conditions, environmental and rehabilitation requirements, abandonment costs and consents.

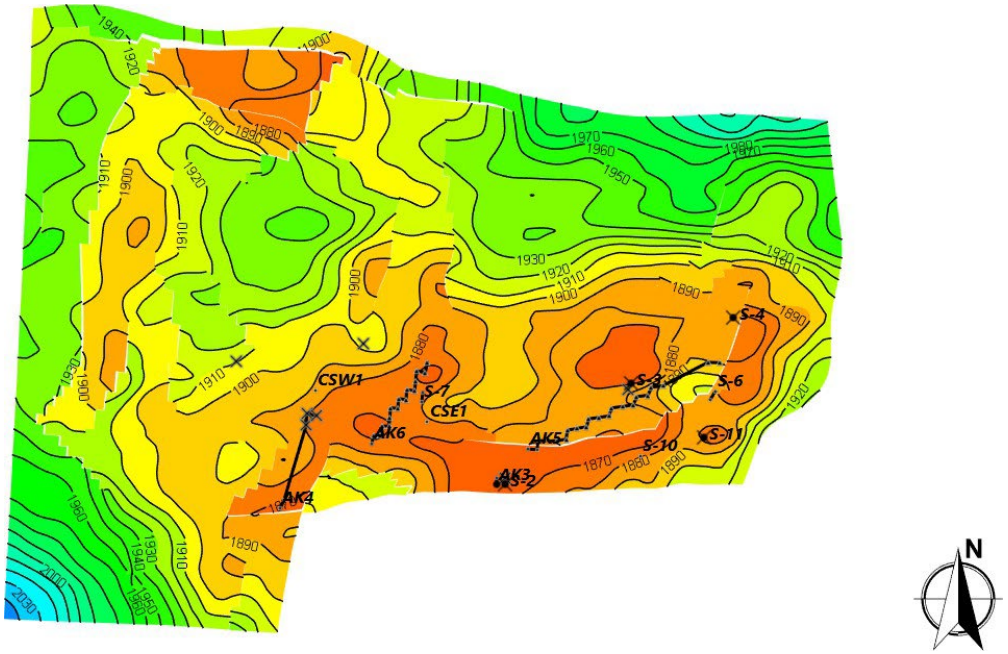

Figure 2-2: Map of the Sèmè Field, at H6 reservoir depth, showing the legacy and new well locations

At the moment, the development of the H6 reservoir will comprise of drilling 4 additional new wells. One vertical well to enable attaining new data from the deeper horizons and performing data acquisition and flow tests (mini DSTs) from H6, H7 and H8 reservoirs. Three horizontal wells are planned to drain the H6 reservoir in addition to the vertical well. One well will be drilled after the first well and the remaining two 12 months later.

The wells will be drilled from a new location from a wellhead template. The production scheme will additionally have a Mobile Production Unit (MOPU) with production facilities and the processed crude will be stored in a Floating Storage and Offtake (FSO) tanker moored in the vicinity of the wellhead template.

The three reserves cases are based on future work programme:

- redeveloping the field with one vertical and three horizontal wells – low dynamic STOIIP
- 2P as above with mid case STOIIP.
- 3P as above but with high dynamic STOIIP

	Gross Attributable to Licence	
	STOIIP (MMstb) (dynamic)	Reserves[1] (MMstb)
	XCD 2024	XCD 2024
Low 1P	95	6.9
Base 2P	101	7.2
High 3P	104	7.7

Table 4: Sèmè Field STOIIP and Reserves

1. *Volume before subtraction of gross production attributable to Licence.*

Static volumes are not reported here as an element of the summary report. The static model provided lacks key information for a thorough review of the volumetrics to be done. GRV cannot be verified due to the lack of geophysical data and there are no workflows to understand how the property models were built. Updating the structural model for new well data and running a property model based on well averages result in a reduction in the volumetrics. Whilst an update of the well locations due to a revised coordinate system has increased the overall GRV, the two most recent wells drilled in the south-west suggest a considerably deeper top reservoir which reduce the GRV in that area. The net-to-gross was considered optimistic in the model when compared to well data. Porosity is consistent but the water saturation is consistent with a low case.

A review of the probabilistic volumes, based on the reference case, show that the dynamic volume is within the range of uncertainty but is considered more biased towards a P10 volume.

Due to the uncertainty surrounding the static model, it is our opinion that the dynamic volumes as listed above in Table 2-3 are within the probabilistic range of the static model. We believe that the dynamic volumes are appropriate to report at this time, until a more robust static model can be developed.

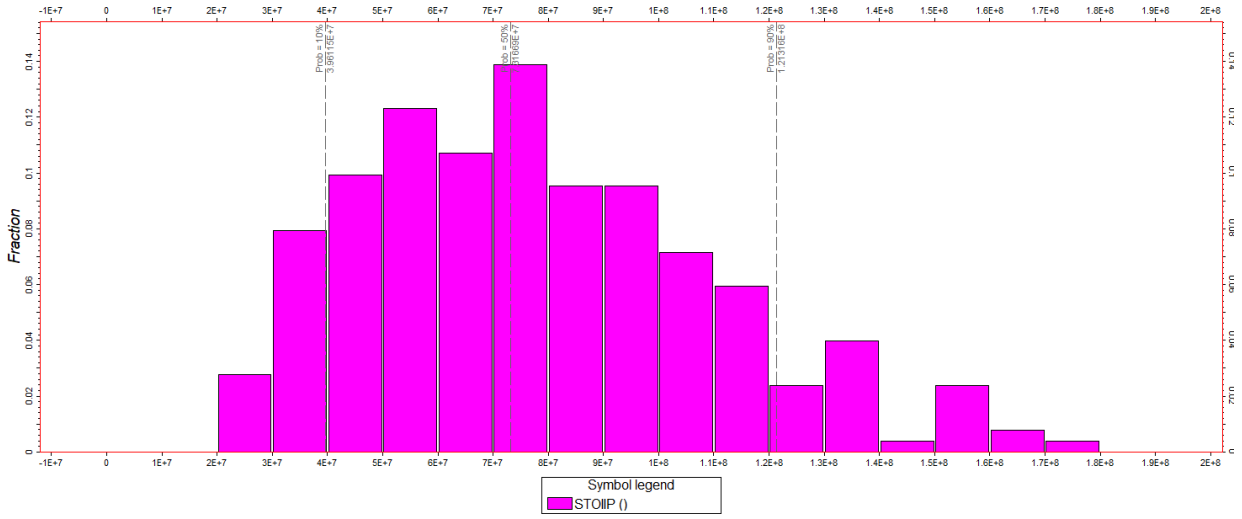

Figure 2-3: Probalistic Static Volumes using existing static model

2.7 Technical review

Up to the end of 2023, 16.717 MMstb gross oil had been produced from the Sèmè Field from the following wells: Sèmè-2, Sèmè-3, Sèmè-4, Sèmè-6, Sèmè-7, Sèmè-10 and Sèmè-11.

The Sèmè Field produced from October 1982 for about 17 years to October 1999 when the operations ceased.

The Field has remained shut-in since then, with several appraisal wells having been drilled in the intervening years. CSW-1 and CSE-1 were drilled and tested in 2008/2009 and CS-1 and WS5-ST4 in 2014/2015. Production rates peaked at 8,400 bopd in March 1985, Figure 2-4.

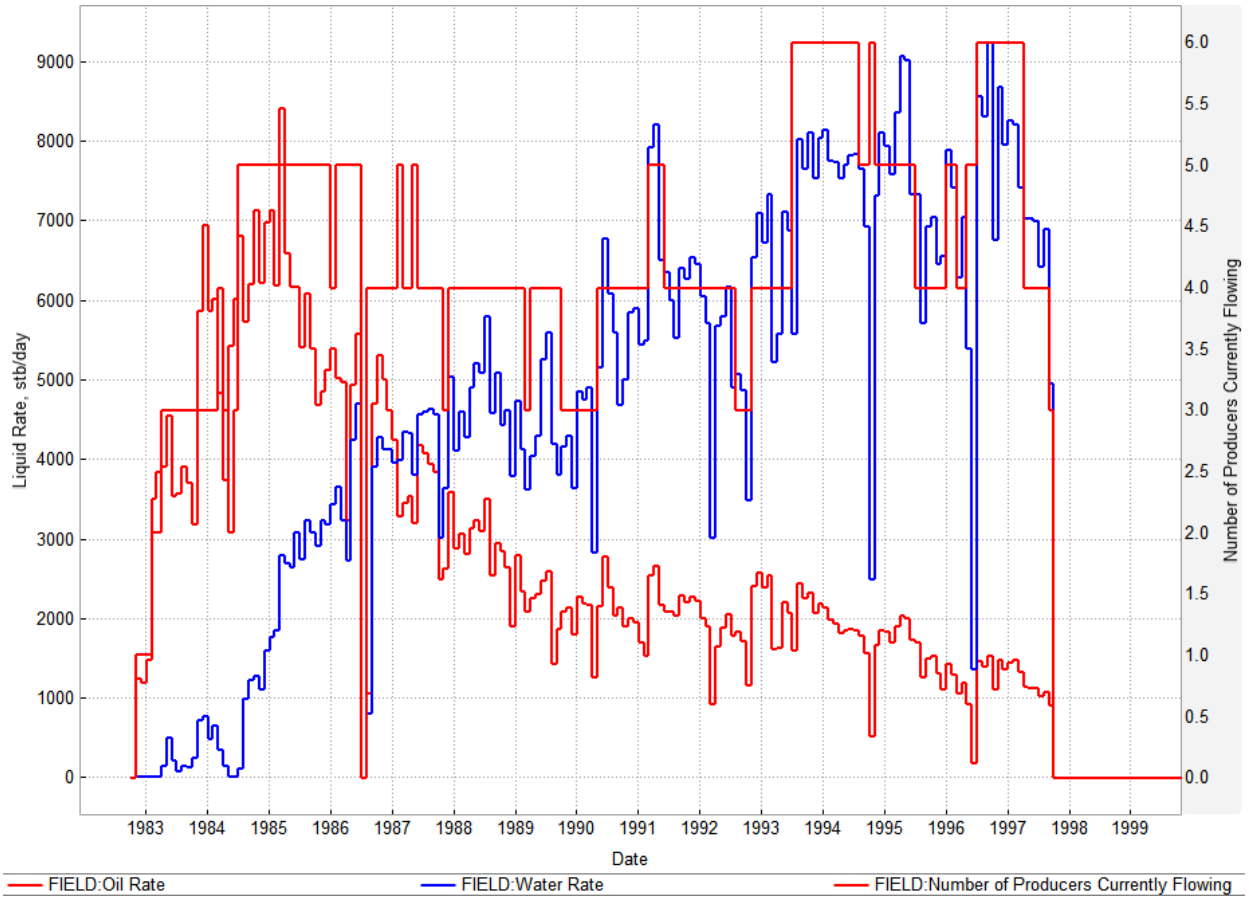

Figure 2-4 Seme Field H6 Reservoir production History, Oil & Water Rates and Number of Producers

The oil rate was maintained at about 2,000 bopd whilst the water rate increased to almost 10,000 bwpd by cessation of production.

2.8 Remaining Reserves

The remaining Sèmè Field reserves are estimated based on the legacy reservoir model as updated by XCD in the QPR, which carries reserves numbers with production up to 31st December 2023. The production data suggests a Recovery Factor of +/- 30% The produced volumes have been subtracted from the updated STOIIP volumes for each of the three cases (Low, Base, High) on a gross basis attributable to the licence, and on a net entitlement basis to Akrake (Table 1). The Akrake net entitlement basis is found after an economic limit test, with economic cut-off year for Low, Base, and High case at a flat oil price of $78 per barrel and no inflation. The remaining reserves are presented in Table 2-1 above.

2.9 Way forward

Further development wells are currently in the plan to drain the Sèmè Field more effectively. A Field Development Plan (FDP) is in progress focusing on the H6 reservoir. Further prospects are also being considered elsewhere in the block including the H7 and H8 reservoirs. These have not been on production but have been tested with flow to surface.

The FDP calls for a phased development which can be considerable to reduce developmental risk. Phase 1 will encompass of drilling one vertical exploration/appraisal well to penetrate H6, H7 and H8 reservoirs. This will be followed by a horizontal development well in H6. Additionally, one exploration will be drilled to fulfil the obligations of the Agreement. The final two wells in Phase 1 will be drilled one year after the first wells have come on production allowing for refinement of the FDP and optimisation of the lower completion of the additional wells. The possibility of applying advanced well technology such as Autonomous Inflow Control Devices (AICD) will be considered. These are widely used in the Norwegian Continental Shelf (NC) are proven to reduce water production and thus increasing oil recovery. This QPR focuses on Phase 1 development.

Phase 2 is planned to concentrate on the deeper H7 and H8 reservoirs with a potential three oil wells (H7) and two gas wells (H8). These resources are not included in the QPR at the moment.

2.10 Summary References

1. SEME QPR REPORT E010 FULL Report, July 2024

Recent announcements by Rex related to Akrake:

Jun 19, 2024
LIME PETROLEUM HOLDING AS ENGAGES EXCLUSIVE MANAGER IN USD BOND FINANCING
Jun 19, 2024
REX TO HOLD ITS INTERESTS IN LIME PETROLEUM AND PORTO NOVO RESOURCES UNDER NEW JOINT VENTURE
Jan 15, 2024
REX ENGAGES EXCLUSIVE CORPORATE FINANCE ADVISOR FOR ITS RECENTLY AWARDED PRODUCTION SHARING CONTRACT IN BENIN
Dec 22, 2023
REX'S JOINT VENTURE COMPANY IS AWARDED A PRODUCTION SHARING CONTRACT IN BENIN, WEST AFRICA
Dec 21, 2023
REX IN JOINT VENTURE FOR OIL & GAS ASSETS IN WEST AFRICA

APPENDIX A – WOOD MACKENZIE OIL PRICE OUTLOOK(S)

Brent, WTI and Dubai Long-Term Oil Price Outlook

								Differentials	
		Brent Price (US$/bbl)		WTI Price (US$/bbl)		Dubai Price (US$/bbl)		Brent-WTI	Brent-Dubai
Year	Inflation Rate Forecast	Nominal	Real	Nominal	Real	Nominal	Real	Real	Real
2021	4.68	70.63	79.40	67.98	76.42			2.98	
2022	7.99	100.97	105.11	94.43	98.30			6.81	
2023	4.10	84.40	84.40	80.20	80.20			4.20	
2024	2.40	90.30	88.18	85.81	83.80			4.38	
2025	2.10	84.50	80.82	80.04	76.56			4.27	
2026	2.00	89.58	84.00	84.78	79.50			4.50	
2027	2.00	89.19	82.00	83.86	77.10			4.90	
2028	2.00	88.76	80.00	83.66	75.40			4.60	
2029	2.00	91.67	81.00	86.35	76.30			4.70	
2030	2.00	94.65	82.00	89.58	77.60			4.40	
2031	2.00	94.19	80.00	89.25	75.80			4.20	
2032	2.00	96.08	80.00	91.21	75.95			4.05	
2033	2.00	98.00	80.00	93.04	75.95			4.05	
2034	2.00	98.71	79.00	93.46	74.80			4.20	
2035	2.00	100.68	79.00	95.84	75.20			3.80	

Table 5: Brent, WTI and Dubai Long-Term Oil Price Outlook, Source: the Argus Group History, Wood MacKenzie forecast

Year on Year Change (US$/bbl)

	Brent Price (US$/bbl)		WTI Price (US$/bbl)		Dubai Price (US$/bbl)	
Year	Nominal	Real	Nominal	Real	Nominal	Real
2021	29.03	30.44	28.67	30.16		
2022	30.34	25.71	26.45	21.88		
2023	-16.57	-20.71	-14.23	-18.10		
2024	5.90	3.78	5.61	3.60		
2025	-5.80	-7.36	-5.77	-7.24		
2026	5.08	3.18	4.74	2.94		
2027	-0.38	-2.00	-0.91	-2.40		
2028	-0.44	-2.00	-0.21	-1.70		
2029	2.91	1.00	2.69	0.90		
2030	2.99	1.00	3.23	1.30		
2031	-0.46	-2.00	-0.33	-1.80		
2032	1.88	0.00	1.97	0.15		
2033	1.92	0.00	1.82	0.00		
2034	0.71	-1.00	0.42	-1.15		
2035	1.97	0.00	2.38	0.40		

Table 6: Brent, Year on Year Change (US$/bbl), Source: the Argus Group History, Wood MacKenzie forecast

Year on Year Change (%)

	Brent Price (US$/bbl)		WTI Price (US$/bbl)		Dubai Price (US$/bbl)	
Year	Nominal	Real	Nominal	Real	Nominal	Real
2021	70%	62%	73%	65%		
2022	43%	32%	39%	29%		
2023	-16%	-20%	-15%	-18%		
2024	7%	4%	7%	4%		
2025	-6%	-8%	-7%	-9%		
2026	6%	4%	6%	4%		
2027	0%	-2%	-1%	-3%		
2028	0%	-2%	0%	-2%		
2029	3%	1%	3%	1%		
2030	3%	1%	4%	2%		
2031	0%	-2%	0%	-2%		
2032	2%	0%	2%	0%		
2033	2%	0%	2%	0%		
2034	1%	-1%	0%	-2%		
2035	2%	0%	3%	1%		

Table 7: Brent, Year on Year Change (%), Source: the Argus Group History, Wood MacKenzie forecast

APPENDIX B – GLOSSARY OF TERMS

1C	The low estimate of Contingent Resources. There is estimated to be a 90% probability that the quantities actually recovered could equal or exceed this estimate
2C	The best estimate of Contingent Resources. There is estimated to be a 50% probability that the quantities actually recovered could equal or exceed this estimate
3C	The high estimate of Contingent Resources. There is estimated to be a 10% probability that the quantities actually recovered could equal or exceed this estimate
1P	The low estimate of Reserves (proved). There is estimated to be a 90% probability that the quantities remaining to be recovered will equal or exceed this estimate
2P	The best estimate of Reserves (proved+probable). There is estimated to be a 50% probability that the quantities remaining to be recovered will equal or exceed this estimate
3P	The high estimate of Reserves (proved+probable+possible). There is estimated to be a 10% probability that the quantities remaining to be recovered will equal or exceed this estimate
1U	The low estimate of Prospective Resources. There is estimated to be a 90% probability that the quantities actually recovered could equal or exceed this estimate
2U	The best estimate of Prospective Resources. There is estimated to be a 50% probability that the quantities actually recovered could equal or exceed this estimate
3U	The high estimate of Prospective Resources. There is estimated to be a 10% probability that the quantities actually recovered could equal or exceed this estimate
AVO	Amplitude versus Offset
B	Billion
bbl(s)	Barrels
bbls/d	barrels per day
Bcm	billion cubic metres
Bg	gas formation volume factor
Bgi	gas formation volume factor (initial)
Bo	oil formation volume factor
Boi	oil formation volume factor (initial)
Bw	water volume factor
boe	Barrels of oil equivalent
stb/d	barrels of oil per day
BHP	Bottom hole pressure
Bscf	billions of standard cubic feet
bwpd	barrels of water per day
condensate	liquid hydrocarbons which are sometimes produced with natural gas and liquids derived from natural gas
cP	Centipoise

Eclipse	a fluid modelling software package
Egi	Gas Expansion Factor
EMV	Expected Monetary Value
EPSA	Exploration & Production Sharing Agreement
EUR	Estimated Ultimate Recovery
FBHP	flowing bottom hole pressure
FSO	Floating Storage and Offloading
FTHP	flowing tubing head pressure
ft	Feet
FWHP	Flowing well head pressure
FWL	Free Water Level
GDT	Gas Down To
GIIP	Gas Initially in Place
GOC	Gas oil Contact
GOR	gas/oil ratio
GRV	gross rock volume
GWC	gas water contact
IPR	Inflow performance relationship
IRR	internal rate of return
KB	Kelly Bushing
ka	absolute permeability
kh	horizontal permeability
km	Kilometres
LPG	Liquefied Petroleum Gases
m	Metres
m3	cubic metres
m3/d	cubic metres per day
ma	million years
M	Thousand
M$	thousand US dollars
MBAL	Material balance software
Mbbls	thousand barrels
mD	permeability in millidarcies
MD	measured depth
MDT	Modular formation dynamics tester tool

MM	Million
MMbbls	million barrels
MMscf/d	millions of standard cubic feet per day
MMstb	million stock tank barrels (at 14.7 psi and 60° F)
MMt	millions of tonnes
MM$	million US dollars
MOPU	Mobile Offshore Production Unit
MPa	mega pascals
m/s	metres per second
msec	Milliseconds
Mt	thousands of tonnes
mV	Millivolts
NTG or N:G	Net-to-gross ratio
NGL	Natural Gas Liquids
NPV	Net Present Value
OWC	oil water contact
P90	There is estimated to be at least a 90% probability (P90) that this quantity will equal or exceed this low estimate
P50	There is estimated to be at least a 50% probability (P50) that this quantity will equal or exceed this best estimate
P10	There is estimated to be at least a 10% probability (P10) that this quantity will equal or exceed this high estimate
PDR	Physical Data Room
Petrel	A geoscience and reservoir engineering software package
petroleum	deposits of oil and/or gas
phi	porosity fraction
pi	initial reservoir pressure
PI	productivity index
ppm	parts per million
PSA	Production Sharing Agreement
PSC	Production Sharing Contract
psi	pounds per square inch
psia	pounds per square inch absolute
pwf	flowing bottom hole pressure
PSDM	Pre-stack depth migrated seismic data
PSTM	Pre-stack time migrated seismic data

PVT	pressure volume temperature
rb	barrel(s) of oil at reservoir conditions
rcf	reservoir cubic feet
REP™	A Monte Carlo simulation software package
RF	Recovery factor
RFT	repeat formation tester
RKB	relative to kelly bushing
rm3	reservoir cubic metres
SCADA	supervisory control and data acquisition
SCAL	Special Core Analysis
scf	standard cubic feet measured at 14.7 pounds per square inch and 60° F
scf/d	standard cubic feet per day
scf/stb	standard cubic feet per stock tank barrel
SGS	Sequential Gaussion Simulation
SIBHP	Shut in bottom hole pressure
SIS	Sequential Indicator Simulation
SMT	A geoscience software package
sm3	standard cubic metres
So	oil saturation
Soi	irreducible oil saturation
Sor	residual oil saturation
Sorw	residual oil saturation (waterflood)
sq. km	square kilometers
stb	stock tank barrels measured at 14.7 pounds per square inch and 60° F
stb/d	stock tank barrels per day
STOIIP	stock tank oil initially in place
Sw	water saturation
Swc	connate water saturation
$	United States Dollars
t	Tonnes
THP	tubing head pressure
Tscf	trillion standard cubic feet
TVDSS	true vertical depth (sub-sea)
TVT	true vertical thickness
TWT	two-way time

US$	United States Dollar
VDR	Virtual data room
VLP	Vertical lift performance
Vsh	shale volume
VSP	Vertical Seismic Profile
W/m/K	watts/metre/° K
WC	water cut
WUT	Water Up To
Z	a measure of the “non-idealness” of gas
ø	Porosity
µ	Viscosity
µgb	viscosity of gas
µob	viscosity of oil
µw	viscosity of water

EXCEED

Leading Energy Transformation

Registered Head Office:
1 Rubislaw Terrace, Aberdeen, Scotland, UK, AB10 1XE
+44(0)1224 577940 | info@xcd.com | xcd.com

SEME_QPR_REPORT_E0101_RES_REP_v2.3

Final Audit Report 2024-08-21

Created:	2024-08-21
By:	Steve Hayhurst (hayhurst.s@xcd.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAoT50EHkBZLfOZgoXibzTEKmHTBso5Yzb

"SEME_QPR_REPORT_E0101_RES_REP_v2.3" History

Document created by Steve Hayhurst (hayhurst.s@xcd.com)
2024-08-21 - 4:02:03 PM GMT

Document emailed to Heikki Jutila (jutila.h@xcd.com) for signature
2024-08-21 - 4:02:10 PM GMT

Document emailed to Ebrahim Heydari (heydari.e@xcd.com) for signature
2024-08-21 - 4:02:10 PM GMT

Document emailed to Katharine Howell (howell.k@xcd.com) for signature
2024-08-21 - 4:02:10 PM GMT

Document emailed to Mark Cullen (cullen.m@xcd.com) for signature
2024-08-21 - 4:02:11 PM GMT

Document emailed to Steve Hayhurst (hayhurst.s@xcd.com) for signature
2024-08-21 - 4:02:11 PM GMT

Document emailed to Ian Mills (mills.i@xcd.com) for signature
2024-08-21 - 4:02:11 PM GMT

Document emailed to Peter Steimler (petersteimler@gmail.com) for signature
2024-08-21 - 4:02:11 PM GMT

Email viewed by Heikki Jutila (jutila.h@xcd.com)
2024-08-21 - 4:02:29 PM GMT

Document e-signed by Heikki Jutila (jutila.h@xcd.com)
Signature Date: 2024-08-21 - 4:02:50 PM GMT - Time Source: server

Email viewed by Katharine Howell (howell.k@xcd.com)
2024-08-21 - 4:02:59 PM GMT

Email viewed by Ian Mills (mills.i@xcd.com)
2024-08-21 - 4:04:11 PM GMT

Document e-signed by Ian Mills (mills.i@xcd.com)
Signature Date: 2024-08-21 - 4:04:31 PM GMT - Time Source: server

Email viewed by Steve Hayhurst (hayhurst.s@xcd.com)
2024-08-21 - 4:09:17 PM GMT

Document e-signed by Steve Hayhurst (hayhurst.s@xcd.com)
Signature Date: 2024-08-21 - 4:09:52 PM GMT - Time Source: server

Document e-signed by Katharine Howell (howell.k@xcd.com)
Signature Date: 2024-08-21 - 4:16:24 PM GMT - Time Source: server

Email viewed by Mark Cullen (cullen.m@xcd.com)
2024-08-21 - 4:21:35 PM GMT

Document e-signed by Mark Cullen (cullen.m@xcd.com)
Signature Date: 2024-08-21 - 4:22:09 PM GMT - Time Source: server

Email viewed by Ebrahim Heydari (heydari.e@xcd.com)
2024-08-21 - 4:25:19 PM GMT

Document e-signed by Ebrahim Heydari (heydari.e@xcd.com)
Signature Date: 2024-08-21 - 4:25:41 PM GMT - Time Source: server

Email viewed by Peter Steimler (petersteimler@gmail.com)
2024-08-21 - 7:10:01 PM GMT

Document e-signed by Peter Steimler (petersteimler@gmail.com)
Signature Date: 2024-08-21 - 7:10:43 PM GMT - Time Source: server

Agreement completed.
2024-08-21 - 7:10:43 PM GMT