ASSET REPORT

Wood Mackenzie
A Verisk Business

SEPTEMBER, 2021

Bucskin (KC 872)

Key facts

Onstream			Offshore
Location		**Timetable**	
Sector, Basin: Central Gulf, West Gulf Coast Tertiary		Discovery Date	Feb 2009
Block: KC/785, Area: 23 km^2		FID	Feb 2017
Block: KC/828, Area: 23 km^2		Production Started	Jun 2019
Block: KC/829, Area: 23 km^2		Peak Oil Production (41,490 b/d)	2026
Block: KC/830, Area: 23 km^2		Peak Gas Production (10 mmcfd)	2026
Block: KC/871, Area: 23 km^2			
Block: KC/872, Area: 23 km^2			
Water Depth: 2110m			
Operator		**Participants**	**%**
LLOG Exploration		LLOG Exploration	33.80
		Repsol	22.50
		Beacon Offshore Energy	18.70
		Ridgewood Energy	8.75
		Riverstone Holdings	8.75
		Navitas Petroleum	7.50
Primary Reservoir(s):			
Paleogene\Eocene\Ypresian\Wilcox\Wilcox			
Initial Resources (2P/2C)		**Hydrocarbon Quality**	
269 mmbbl Oil		Gravity (°API)	28
65 bcf Sales Gas		GOR (scf/bbl)	250
Remaining Resources at 01/01/2021		Permeability (mD)	15 - 25
255 mmbbl Oil		Porosity (%)	20 - 23
62 bcf Sales Gas		H_2S (ppm)	
Contract		**Financial Summary**	
Concession		Capital costs (2021 terms)	US$1,930M
		Capital costs per boe (2021 terms)	US$6.89/boe
		Operating costs (2021 terms)	US$4,308M
		Operating costs per boe (2021 terms)	US$15.37/boe
		Remaining PV (10.0% nominal)	US$2,605M
		Remaining PV per boe (10.0% nominal)	US$9.81/boe
		Rate of return	49.9%

Source: Wood Mackenzie

Summary and key issues

Summary

Buckskin (KC 872) is a large oil field in the southeast corner of the Keathley Canyon protraction area in the Central Gulf of Mexico. The closest infrastructure to the field is Lucius, which is located 13 kilometres (8 miles) to the southeast. Appraisal work at the project was completed in November 2014 and FEED commenced in late-2014. A PHA agreement with the Lucius facility was announced in early-2015. An FID decision to develop the first phase of the field was achieved in early 2017. First oil was achieved on 14 June 2019.

Key issues

Reservoir deliverability

Buckskin has performed strongly since coming onstream in June 2019 due to its exceptional reservoir properties. The KC 829 #SS002 and KC 829 #SS003 wells have peaked at 23,000 b/d and 18,510 b/d, respectively. As a result, the last six months of production has exceeded the 30,000 b/d processing capacity allotment. We expect a third well to start drilling in September 2021 and come onstream in Q2 2022. We believe that the Buckskin JV will need to secure an additional 10,000 b/d processing capacity if the third well produces in line with existing wells.

Further development

Our model assumes the field will be developed in two phases, with some uncertainty around the timing of the second phase. Phase 2 will consist of another six wells bringing the total producers to nine. We expect the JV will utilise riser based artificial lift to aid in recovery and arrest declines.

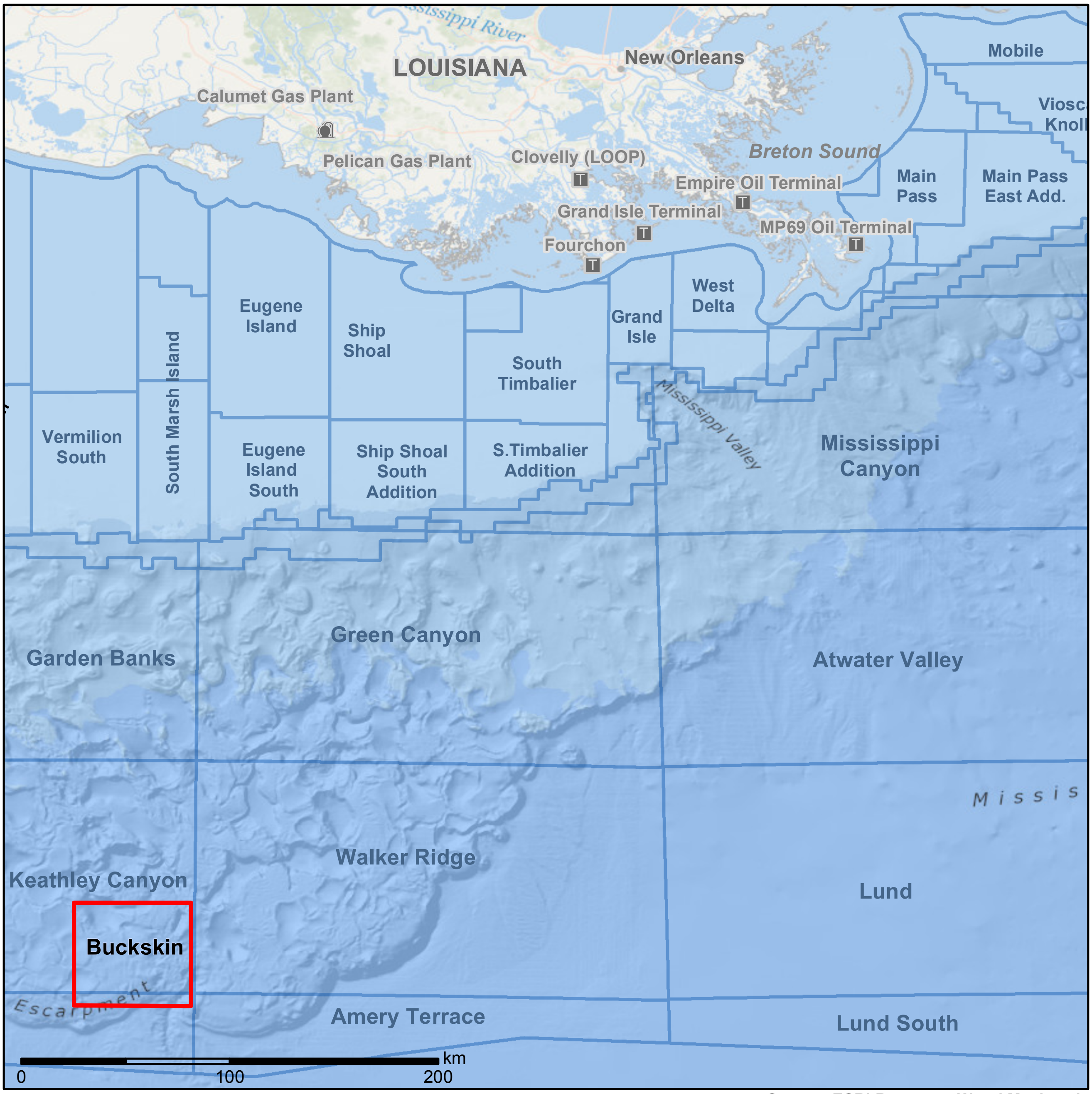
Ownership changes

Buckskin was previously operated by Chevron and originally a candidate for a standalone facility to be co-developed with Chevron's Moccasin discovery, which is located 24 kilometres (15 miles) to the northwest. In late 2014, Chevron announced that it had secured 30,000 b/d in firm processing capacity at a third-party platform, indicating that the project was likely to be developed as a subsea tieback to Lucius. However, in early 2016, Chevron announced that it would not move forward with the project. The three remaining partners, Maersk, Repsol and Samson took over Chevron's share of the project on a pro-rata basis and the operatorship was turned over to Repsol.

The leases at Moccasin were terminated but later acquired by LLOG. In February 2016, Maersk farmed-out and LLOG farmed in acquiring 55% interest and operatorship, which later changed. Navitas Petroleum also makes its debut in deepwater GoM by taking 7.50% ownership of the project. The company was started by the former chairman of Delek Drilling, the energy division of the Israeli Delek Group. See the Participation section for the current ownership table.

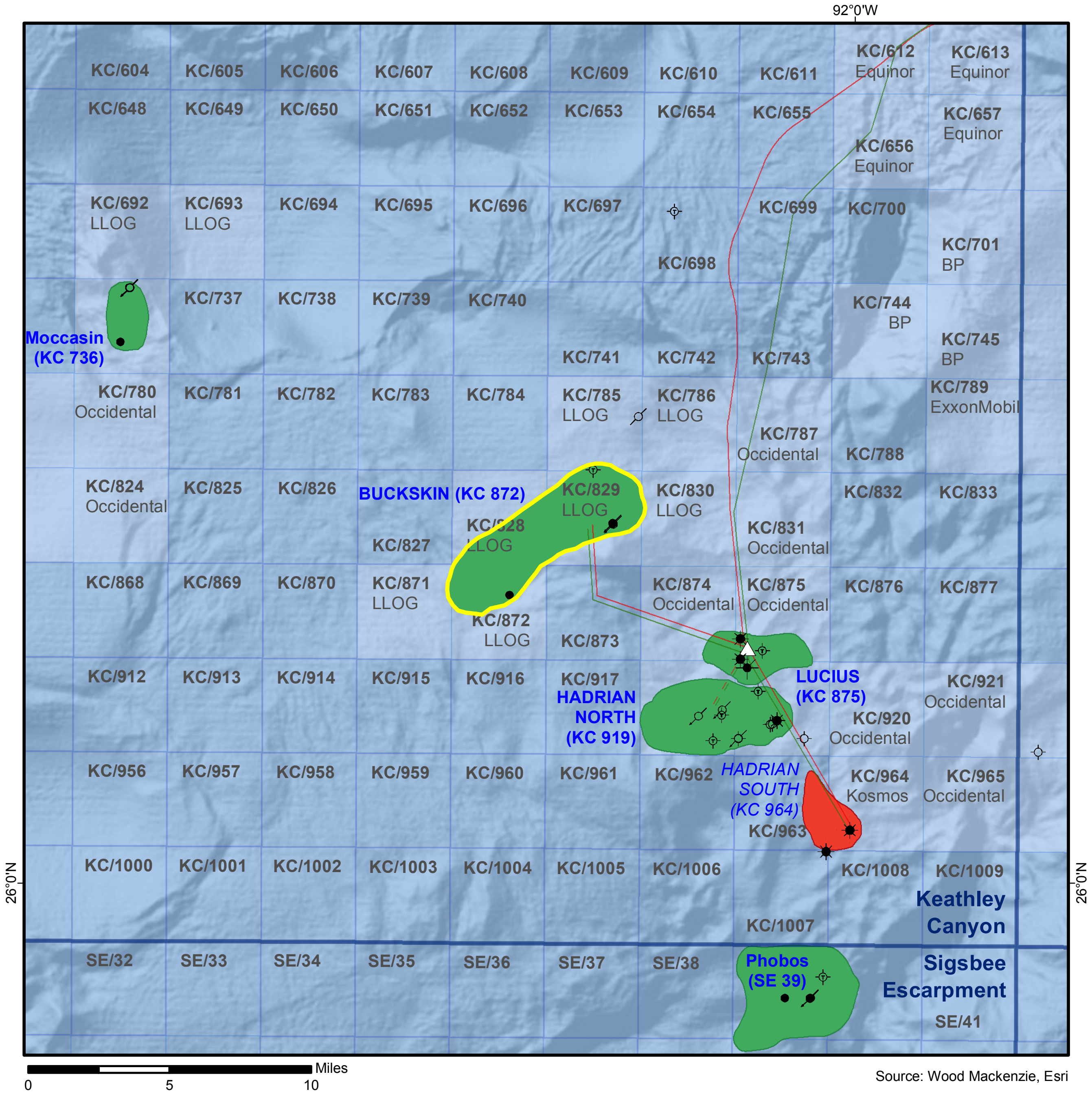
Location maps

Index Map



Source: ESRI Basemap, Wood Mackenzie

Detail Map



Source: Wood Mackenzie, Esri

Participation

Participation

Company	(%)
LLOG Exploration	33.80*
Repsol	22.50
Beacon Offshore Energy	18.70
Ridgewood Energy	8.75
Riverstone Holdings	8.75
Navitas Petroleum	7.50
Total	**100.00**

Source: Wood Mackenzie

** Operator*

The interest in the field has changed to LLOG (33.80%, operator), Repsol (22.50%), Beacon Offshore (18.70%), Ridgewood Energy (8.75%), Riverstone Holdings (8.75%) and Navitas Petroleum (7.50%).

The Buckskin field is thought to lie in up to eight blocks but a Federal Unit 754315001 was created effective 1 August 2014 that consists of six blocks, KC 785, KC 828, KC 829, KC 830, KC 871 and KC 872. A suspension of production extension had been granted through 31 March 2018.

KC 785, 828, 829, 830 and 872

The leases over KC 785, 828, 829, 830, and 872 (as G25806, G25813, G25814, G25815 and G25823) were all awarded to Chevron (100% and operator) in 2003 following Lease Sale 187 for gross bonuses of between US$0.3 million and US$0.4 million each. Effective 1 December 2003, the leases had primary terms of 10 years. However, the terms of the lease was extended by one year through a Suspension of Operation approval. Changes in ownership were identical in all four leases. Chevron farmed-out a 12.5% interest to Repsol YPF, effective June 2007. Effective August 2008, Maersk gained a 20% interest through an exploration agreement with Chevron covering a multi-well drilling programme. Samson earned a 12.5% interest from Chevron once the exploration well reached TD in December 2008.

In January 2016, Chevron decided to not move forward with the project and Repsol took over the operatorship. The new interest was Repsol (27.78%, Operator), Maersk (44.44%) and Samson (27.78%). Effective February 2016, Maersk farmed out and LLOG Exploration acquired 55% interest and operatorship. The interest changed several times, leading to the interest effective 23 June 2017 of LLOG (17.6%, operator), Samson Offshore (22.5%), Repsol (22.5%), Beacon Offshore (18.7%), Buckstone Development (13.7%), and Navitas (5.0%). In October 2017, Samson farmed out of the development, effective 1 January 2017. The current interest is LLOG (33.80%, operator), Repsol (22.50%), Beacon Offshore (18.70%), Ridgewood (8.75%), Riverstone (8.75%) and Navitas (7.50%).

KC 871

The current lease over block KC 871 was awarded (as G32650) to Chevron (87.5% and operator) and Repsol YPF (12.5%) following Lease Sale 206 in 2008 for gross bonuses of US$6.8 million and US$0.5 million, respectively. Effective 1 August 2008, both leases have primary terms of 10 years. Samson farmed-in for a 12.5% interest in block KC 827 from Chevron, effective 25 July 2011. Maersk gained a 20% interest in block KC 871 through its exploration agreement with Chevron, effective August 2008. Samson earned a 12.5% share from Chevron in the block once the exploration well reached TD in December 2008. KC 871 became part of the Federal Unit 754315001 effective 1 August 2014. In January 2016, Chevron decided to not move forward with the project and Repsol took over the operatorship. The new interest for Block KC 871 was Repsol (27.78%, Operator), Maersk (44.44%) and Samson (27.78%). Effective February 2016, Maersk farmed out and LLOG Exploration acquired 55% interest and operatorship. The participation effective 1 February 2016 was LLOG (55% and operator), Samson (22.5%), and Repsol (22.5%). Interest effective 23 June 2017 was LLOG (17.6%, operator), Samson Offshore (22.5%), Repsol

(22.5%), Beacon Offshore (18.7%), Buckstone Development (13.7%), and Navitas (5.0%). In October 2017, Samson farmed out of its interest effective 1 January 2017. The current interest is LLOG (22.80%, operator), Repsol (22.50%), Beacon Offshore (18.70%), Ridgewood (8.75%), Riverstone (8.75%) and Navitas (7.50%).

Geology

The Buckskin discovery well hit 100 metres (328 feet) of net pay with a final depth of 8,962 metres (29,404 feet). The well is believed to have been targeting Paleogene aged Wilcox sands. Chevron (the previous operator) did not announce any geological properties of the field. Typical Paleogene properties can have porosity between 15-25% with an extremely low permeability.

Buckskin has reservoir properties that are better than the trend average. Buckskin's mobility ratios are some of the highest among US GoM Wilcox wells. The KC 829 #SS003 well has a mobility-thickness ratio of 7,000 mD-ft/cp, which is roughly twice the average mobility-thickness ratio of other Wilcox wells.

Well data

Well Name Type	Operator	Spudded Completed	TMD(m) WD(m)	Result	Discovery Field	Comment
KC 872 #1 (G25823) Exploration	Repsol YPF	03 Sep 2008 25 Nov 2008	8,658 2,110			Mechanically sidetracked as KC 872 #1ST1.
KC 872 #1ST1 (G25823) Exploration	Repsol YPF	26 Nov 2008 04 Feb 2009	8,962 2,110	+ Oil	Buckskin (KC 872)	Encountered 100 metres (328 feet) of net oil pay in Lower Tertiary sands.
KC 785 #1 (G25806) Appraisal	Chevron	16 May 2011 13 Sep 2011	8,534 2,010	Tight Hole		Located 8 km (5 miles) northeast of the discovery well. Suspended.
KC 829 #1 (G25814) Appraisal	Chevron	26 Mar 2013 26 Aug 2013	3,529 1,961			Sidetracked as KC 829 #1ST1.
KC 829 #1ST1 (G25814) Appraisal	Chevron	10 Sep 2013 10 Oct 2013	5,340 1,959			Sidetracked as KC 829 #1ST2.
KC 829 #1ST2 (G25814) Appraisal	Chevron	06 Nov 2013 25 Nov 2013	5,880 1,959			Sidetracked as KC 829 #1ST3.
KC 829 #1ST3 (G25814) Appraisal	Chevron	31 Dec 2013 06 Jan 2014	6,236 1,959			Sidetracked as KC 829 #1ST4.
KC 829 #1ST4 (G25814) Appraisal	Chevron	30 Jan 2014 08 Feb 2014	5,985 1,959			Sidetracked as KC 829 #1ST5.

KC 829 #1ST5 (G25814) Appraisal	Chevron	21 Mar 2014 15 May 2014	8,966 1,959		Sidetracked as KC 829 #1ST6.
KC 829 #1ST6 (G25814) Appraisal	Chevron	02 Jul 2014 09 Sep 2014	8,957 1,961	Oil	Permanently Abandoned. Appraisal results not released.
KC 785 #2 (G25806) Appraisal	Chevron	02 Sep 2014 22 Oct 2014	4,148 2,081		Sidetracked as KC 785 #2ST1.
KC 785 #2ST1 (G25806) Appraisal	Chevron	27 Oct 2014 13 Dec 2014	6,267 2,081		Third and final appraisal well. No results released by the operator. Permanently abandoned.

Source: Wood Mackenzie

+ Commercial Discovery

Exploration

The discovery well, KC 872 #1, was spudded in September 2008 in 2,110 metres (6,924 feet) of water using the *Stena DrillMAX* drillship. The well was bypassed, as KC 872 #1ST1, for coring in November and drilled to a TD of 8,962 metres (29,404 feet), encountering a 100-metre (328-foot) thick hydrocarbon column.

An appraisal well, originally planned for H2 2010, was spudded in May 2011 in 2,010 metres (6,594 feet) of water using the Transocean *Discoverer Deep Seas* drillship from a location in block KC 785. The well reached TD in September 2011 and was temporarily abandoned in October. Well results were not released, although it is understood that they were positive. In March 2012, Chevron received approval for an Exploration Plan to drill up to 13 additional wells. The second appraisal, KC 829 #1, was spudded on 26 March 2013 using the *Pacific Santa Ana* drillship in 1,961 metres (6,435 feet) of water. The well was temporarily abandoned on 7 April 2013 and the Transocean *Discoverer Clear Leader* re-entered the borehole in July of the same year. The well is located between the discovery and first appraisal wells. The well was sidetracked six times and was permanently abandoned in October 2014, but no appraisal results were announced. A third appraisal well, KC 785 #2, was simultaneously being drilled by the *Pacific Sharav*. The well was spud on 2 September 2014 and then later sidetracked as KC 785 #2 ST1 on 27 October 2014. The appraisal drilling at this well was completed in November 2014 but no results were disclosed.

Reserves and resources

Wood Mackenzie's current reserves estimates are provided in the accompanying table.

Reserves (2P) at 01/01/2021

	Init Oil (mmbbl)	Init Gas (bcf)	Rem Oil (mmbbl)	Rem Gas (bcf)
Buckskin (KC 872)	268.8	65.4	254.7	62.1

Source: Wood Mackenzie

Production

The first two wells - KC 829 #SS002 and KC 829 #SS003 - began producing in June 2019. The KC 829 #SS002 well came onstream at an initial rate of 8,900 b/d and ramped up to 19,525 b/d after six months of production. The well has continued to perform well and peaked at 23,000 b/d in March 2021. The well produces at 21,650 b/d as of May 2021 and we expect monthly decline to average 0.25% over the next 22 months.

The second well, KC 829 #SS003, came onstream at half the rate of the KC 829 #SS002 well but quickly ramped up to 16,460 b/d after five months of production. The well recently reached a peak of 18,510 b/d after two years of production. The well produces at 17,720 b/d as of May 2021 and we expect monthly decline to average 0.25% over the next 22 months.

The third well is expected to come online in Q2 2022.

Phase 2 will consist of another six wells to be drilled starting in 2024. Our estimated peak production range is from 6,700 to 11,120 barrels of oil per day.

Our model incorporates some risk for downtime arising from issues such as maintenance, hurricanes, equipment failure, etc. In addition, the annual average does not reflect daily or monthly production troughs and peaks, which can be substantially lower or higher.

Production (2019-2028)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Oil ('000 b/d)	15	24	35	38	40	41	41	41	40	39
Sales Gas (mmcfd)	3	6	8	9	10	10	10	10	10	10

Source: Wood Mackenzie

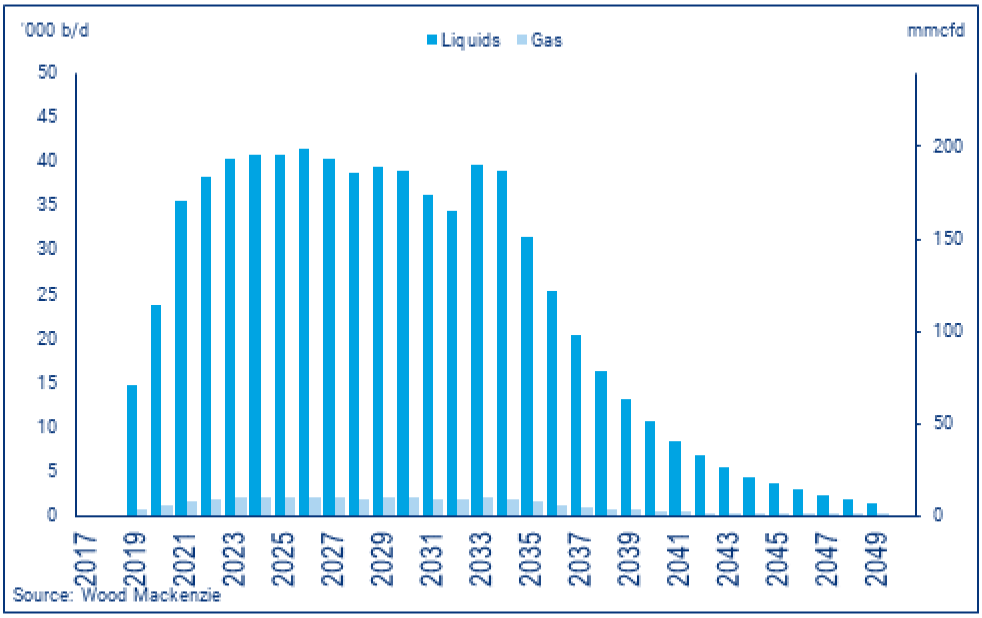
Production (2029-2038)

	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038
Oil ('000 b/d)	39	39	36	34	40	39	31	25	20	16
Sales Gas (mmcfd)	10	10	9	9	10	9	8	6	5	4

Source: Wood Mackenzie

Please refer to our Upstream Data Tool (UDT) for life of field production data.

Production Profile



Development

Key Development Metrics

Buckskin is developed as a subsea tieback to the Lucius facility.

- The field will be developed with nine wells (of which two have already been drilled).
- The remaining wells will be drilled on the following schedule - 1 in 2022, 1 in 2024, 1 in 2025, 1 in 2027, 1 in 2028, 1 in 2029, and 1 in 2031.
- Estimated IP rates for the future wells range from 6,700 - 11,120 b/d of oil with an average GOR of 250.
- Average cost to drill and complete a well is an estimated at US$140 million.
- The development design will include standard 15,000 psi subsea kits.
- Riser-based artificial lift capabilities will be added to improve recovery

Buckskin was initially thought to be developed through a spar or semi-submersible hull concept, which would be shared with the Moccasin discovery. Chevron (the previous operator) announced that the project entered FEED in late-2014 and 30,000 b/d of firm capacity was secured at the Anadarko-operated (now Occidental Petroleum) Lucius facility. The PHA signaled a switch from a standalone co-development to a subsea tieback development scenario. The project design was executed by LLOG which took over operatorship in 2016. The 30,000 b/d of capacity remains secure, .

Infrastructure

Production from Buckskin is transported 13 km (8 miles) southeast to the Lucius facility. Processed liquids from the Lucius facility are transported via South East Keathley Canyon Pipeline (SEKCO), which is owned by Genesis Energy (100%). The construction of the pipeline was announced in January 2012 and has capacity of 115,000 barrels per day of liquids. The crude is carried 161 kilometres (100 miles) to the South Marsh Island 205 Platform. From there, the crude is carried 80 kilometres (50 miles) via the retired Red Hawk export line to Port Fourchon.

The Williams-operated Keathley Canyon Connector transports bulk gas from the Lucius spar to the South Timbalier 283 Junction Platform via a 370-kilometre (230-mile), 20-inch diameter pipeline. The line has a capacity of 450 mmcfd, matching that of the spar. From the tie-in point, gas continues through the 30-inch diameter Discovery system which delivers to Larose, Louisiana. The Discovery pipeline system is owned by Williams (60% and operator) and DCP (40%).

Pipeline Summary

Pipeline	Type	From	To	Length (km)	Diameter (inches)	Capacity ('000 b/d,mmcfd)
SEKCO Oil Pipeline	Oil	Lucius (KC 875)	SM205A	240	18/18	115
Keathley Canyon Connector	Gas	Lucius (KC 875)	Discovery System 30 in. tie-in	346	20	450

Source: Wood Mackenzie

Costs

Exploration and Appraisal Costs

The discovery well, including the sidetrack KC 872 #1ST1, is estimated by Wood Mackenzie to have cost around US$140 million. The first appraisal well, KC 785 #1, is estimated to have cost around US$150 million. The second appraisal well, KC 829 #1, including the six sidetracks, is estimated to cost US$490 million. The third appraisal well, KC 785 #2, including the sidetrack is estimated to cost US$115 million. All bonuses, exploration and appraisal costs have been excluded from Wood Mackenzie's cash flow analysis.

Capital Costs

The estimated capital costs are outlined in the accompanying table.

Capital Costs 2018 to 2027 (US$ million)

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Subsea	50	10	-	13	-	13	116	7	13	13
Dev. Drilling	240	20	-	75	64	101	43	144	58	86
Abandon. Costs	-	-	-	-	-	-	-	-	-	-
Total	**290**	**30**	**-**	**88**	**64**	**114**	**159**	**151**	**71**	**99**

Source: Wood Mackenzie

Nominal to 2021 and real (in 2021 terms) thereafter.

Capital Costs 2028 to Post-2036 (US$ million)

	2028	2029	2030	2031	2032	2033	2034	2035	2036	Post-2036
Subsea	13	-	13	-	-	-	-	-	-	-
Dev. Drilling	144	144	14	130	-	135	-	-	-	-
Abandon. Costs	-	-	-	-	-	-	-	-	-	225
Total	**157**	**144**	**27**	**130**	**-**	**135**	**-**	**-**	**-**	**225**

Source: Wood Mackenzie

Nominal to 2021 and real (in 2021 terms) thereafter.

Please refer to our Upstream Data Tool (UDT) for life of field capital expenditure data.

Operating Costs

We have made assumptions for direct field fixed costs, variable operating costs (which are calculated as a function of throughput), and transport tariffs. We estimate processing tariffs paid to the Lucius facility will cost US$4.50/bbl for liquids and US$0.60 per mcf for gas, while tariffs for the transportation of produced oil and gas to shore will cost US$4.70/bbl of oil and US$2.75/mcf of gas, all in 2021 terms.

Operating Costs 2019 to 2028 (US$ million)

	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Field Fixed	12	12	12	18	18	24	30	30	36	42
Field Variable	8	14	20	22	23	23	23	24	23	22
Tariff Oil	49	80	119	129	135	137	137	139	135	130
Tariff Gas	4	7	10	11	12	12	12	12	12	12
Total	**73**	**113**	**161**	**180**	**188**	**196**	**202**	**205**	**206**	**206**

Source: Wood Mackenzie

Nominal to 2021 and real (in 2021 terms) thereafter.

Fiscal and regulatory

The leases over blocks KC 872, 828, and 829 were issued with a gross royalty rate of 12.5%. Because the leases were awarded after November 2000 under the provisions of royalty suspension legislation, the first 12 million barrels of oil equivalent from each lease is eligible to be produced royalty-free, as long as oil and gas prices remain below price thresholds set by the BOEM.

The lease over block KC 871 was issued with a gross royalty rate of 18.75% and the first 16 million barrels of oil equivalent from each lease is eligible to be produced royalty-free, as long as oil and gas prices remain below price thresholds set by the BOEM.

Economic assumptions

A cash flow has been prepared for Buckskin, using the following economic assumptions. It has been run on a stand-alone basis using Wood Mackenzie's **Global Economic Model** (GEM). It does not reflect corporate synergies. These are included in company valuations, which can be produced in GEM and also in Wood Mackenzie's **Upstream Data Tool** (UDT).

Cash flow

The following cash flow is in nominal terms.

Discount rate and date

Wood Mackenzie's discount rate is 10% nominal. The discount date is 1 January 2021.

Inflation rate

Wood Mackenzie's inflation rate is 2.8% in 2021 and our long term assumption of 2.0% remains unchanged from 2022 onward.

Oil price

Wood Mackenzie's LLS price assumption is US$64.84/bbl in 2021, US$63.20/bbl in 2022, US$60.54/bbl in 2023, US$55.56/bbl in 2024 and US$50.53/bbl in 2025

Crude that is considered sour and with API gravity from 23.0-27.9 is assumed to trade at a 6% discount to LLS.

Gas price

Wood Mackenzie's Q3 2021 Henry Hub gas price assumption (nominal terms) is US$3.02/mcf in 2021, US$2.86/mcf in 2022, US$2.69/mcf in 2023, US$2.79/mcf in 2024 and US$2.98/mcf in 2025 inflated at 2% per annum thereafter. This equates to a long-term Henry Hub price assumption of US$2.75/mcf (real, 2021 terms) from 2025 onward.

The corresponding GEM file name is **Buckskin (KC 872)**.

Economic analysis

Cash flow

Year	Production Liquids 000b/d	Production Gas mmcfd	Gross Revenue US$M	Op Costs US$M	Capital Costs US$M	Royalty US$M	State Taxes US$M	Federal Tax US$M	Total Field Cash Flow US$M
2017	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
2018	0.0	0.0	0.0	0.0	530.0	0.0	0.0	0.0	-530.0
2019	14.7	3.4	319.6	73.9	30.0	32.7	0.0	0.0	183.1
2020	23.9	5.6	338.7	112.7	0.0	0.0	0.0	9.5	216.5
2021	35.5	8.3	794.5	161.5	87.7	82.1	0.0	62.4	400.8
2022	38.3	9.1	835.2	183.1	65.8	85.7	0.0	105.1	395.5
2023	40.3	9.7	842.9	195.9	118.2	85.6	0.0	94.3	348.9
2024	40.7	9.8	782.5	208.1	168.8	77.5	0.0	78.1	250.1
2025	40.7	9.9	751.2	218.4	163.1	73.3	0.0	63.4	233.0
2026	41.5	10.1	781.9	226.8	77.8	76.3	0.0	84.8	316.3
2027	40.2	9.9	772.6	231.9	111.8	75.4	0.0	76.9	276.7
2028	38.8	9.6	760.3	236.6	180.1	74.1	0.0	60.9	208.5
2029	39.4	9.7	788.3	251.6	168.5	76.9	0.0	61.4	229.9
2030	38.9	9.6	793.7	254.1	31.8	77.4	0.0	87.5	342.9
2031	36.2	9.0	753.2	252.6	158.7	73.4	0.0	56.7	211.9
2032	34.4	8.6	730.7	248.3	0.0	71.2	0.0	81.0	330.2
2033	39.5	9.7	855.2	280.3	171.5	83.5	0.0	69.3	250.6
2034	38.8	9.5	857.6	282.2	0.0	84.2	0.0	98.4	392.9
2035	31.4	7.7	707.7	246.5	0.0	69.8	0.0	78.9	312.5
2036	25.3	6.2	581.2	216.6	0.0	57.3	0.0	62.4	244.9
2037	20.3	5.0	476.6	186.7	0.0	47.0	0.0	49.6	193.3
2038	16.4	4.0	390.8	166.8	0.0	38.5	0.0	38.0	147.5
2039	13.2	3.2	320.6	150.8	0.0	31.6	0.0	28.4	109.8
2040	10.6	2.6	263.1	130.7	0.0	25.9	0.0	22.0	84.4
2041	8.5	2.1	216.1	120.4	0.0	21.3	0.0	15.6	58.8
2042	6.9	1.7	177.5	112.2	0.0	17.5	0.0	10.0	37.8
2043	5.5	1.4	145.9	105.7	0.0	14.4	0.0	5.4	20.4
2044	4.5	1.1	119.8	100.6	0.0	11.8	0.0	1.5	5.8
2045	3.6	0.9	98.6	88.8	0.0	9.7	0.0	0.0	0.1
2046	2.9	0.7	81.2	85.7	0.0	8.0	0.0	0.0	-12.5
2047	2.3	0.6	66.8	66.7	0.0	6.6	0.0	0.0	-6.5
2048	1.9	0.5	55.1	64.8	0.0	5.4	0.0	0.0	-15.2
2049	1.5	0.4	44.3	45.8	174.1	4.4	0.0	0.0	-180.0
2050	0.0	0.0	0.0	0.0	222.0	0.0	0.0	0.0	-222.0
Totals:	**268.8**	**65.4**	**15,503.3**	**5,306.7**	**2,459.8**	**1,498.5**	**0.0**	**1,401.7**	**4,836.7**
PVs		Total PV	7,550.6	2,201.7	1,585.6	716.0	0.0	676.5	2,370.9
		Rem PV	6,826.7	1,998.4	878.3	678.3	0.0	666.5	2,605.3

Source: Wood Mackenzie

Discounted at 10.0% from 01/01/2021

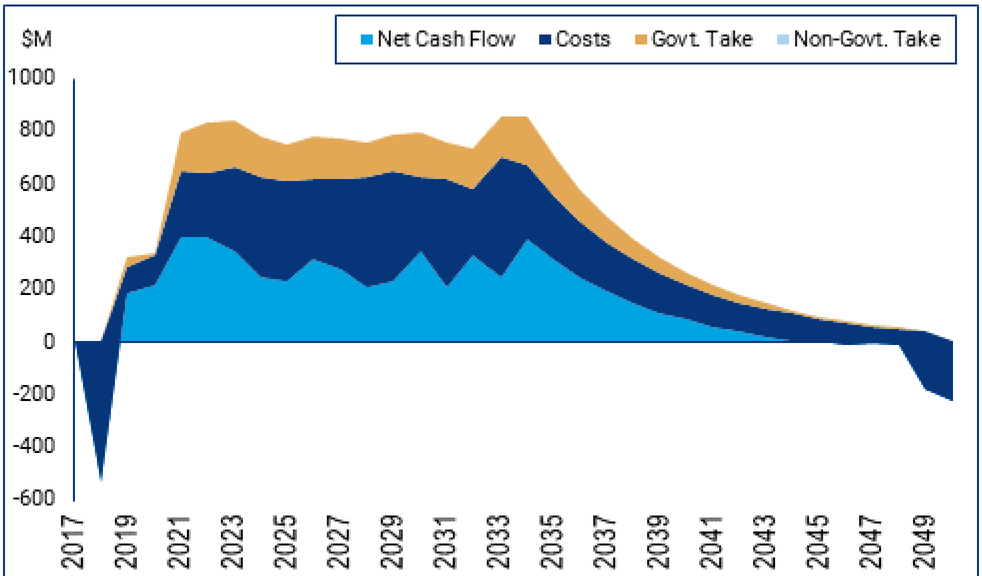
Discount Rate %	Total PV Post-Tax US$M	Total PV Pre-Tax US$M	Remaining PV Post-Tax US$M	Remaining PV Pre-Tax US$M	Remaining PV/boe Post-Tax US$	Remaining PV/boe Pre-Tax US$	Total Gov. Take US$M	Total Gov. Take %	Remaining Gov. Take US$M	Remaining Gov. Take %	P/I Ratio	Capex Boe US$	Opex Boe US$
0.0	4,836.7	7,736.8	4,967.1	7,825.1	18.70	29.45	2,900.1	37.5	2,858.0	36.5	3.0	8.77	18.93
5.0	3,327.9	5,248.2	3,507.9	5,383.2	13.20	20.26	1,920.2	36.6	1,875.4	34.8	2.8	6.55	11.45
7.0	2,892.4	4,564.8	3,093.5	4,719.9	11.64	17.77	1,672.4	36.6	1,626.5	34.5	2.7	6.10	9.72
8.0	2,702.8	4,271.4	2,914.8	4,436.8	10.97	16.70	1,568.6	36.7	1,522.1	34.3	2.6	5.93	9.01
9.0	2,529.6	4,005.3	2,752.6	4,181.3	10.36	15.74	1,475.7	36.8	1,428.6	34.2	2.6	5.78	8.40
10.0	2,370.9	3,763.4	2,605.3	3,950.0	9.81	14.87	1,392.4	37.0	1,344.8	34.0	2.5	5.66	7.85
11.0	2,225.4	3,542.8	2,471.2	3,740.4	9.30	14.08	1,317.4	37.2	1,269.2	33.9	2.4	5.55	7.37
12.0	2,091.6	3,341.3	2,349.0	3,550.0	8.84	13.36	1,249.7	37.4	1,201.0	33.8	2.4	5.46	6.95
15.0	1,748.4	2,830.5	2,042.1	3,073.8	7.69	11.57	1,082.1	38.2	1,031.6	33.6	2.2	5.26	5.92
25.0	997.0	1,750.8	1,425.0	2,122.5	5.36	7.99	753.8	43.1	697.5	32.9	1.7	5.12	4.04

Source: Wood Mackenzie

Discount Date	Jan-2021
Remaining Liquid Reserves (mmbbl)	254.7
Remaining Gas Reserves (bcf)	62.1
Total Remaining Reserves (mmboe)	265.7
Total Reserves (mmboe)	280.3
Project IRR (post tax)	49.93%
Company IRR (post tax)	49.93%
Pre-tax IRR	62.85%
Payback Period (years)	3.3
Liquid Breakeven Price at 10% (US$/bbl)	22.00

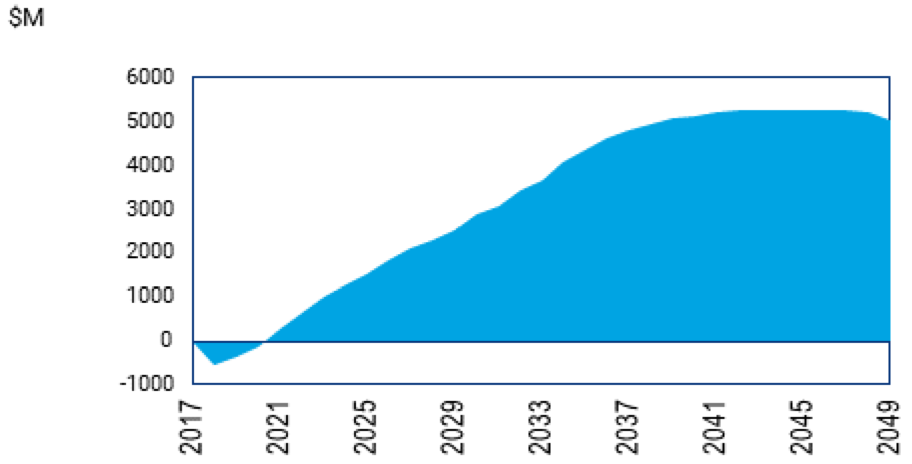
Source: Wood Mackenzie

Split of Revenues



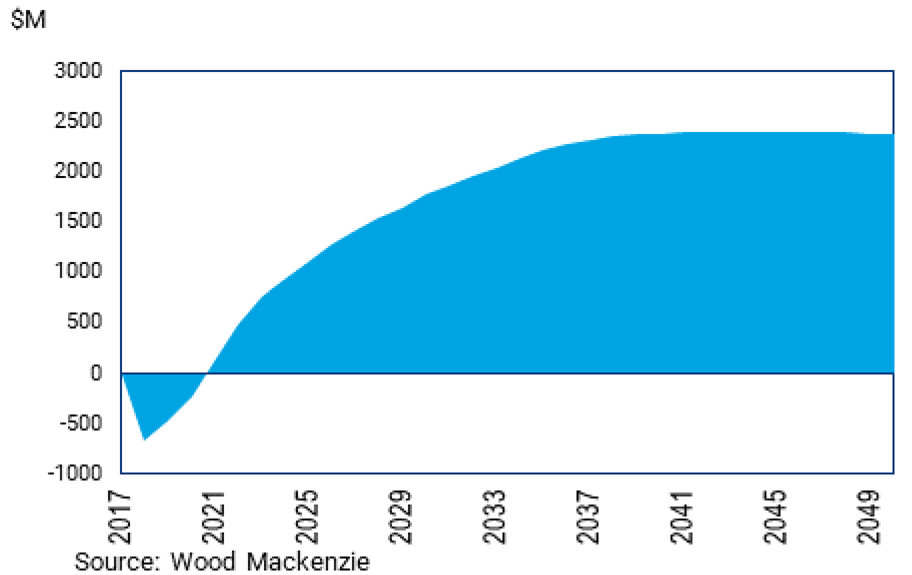
Source: Wood Mackenzie

Cumulative Net Cash Flow - Undiscounted



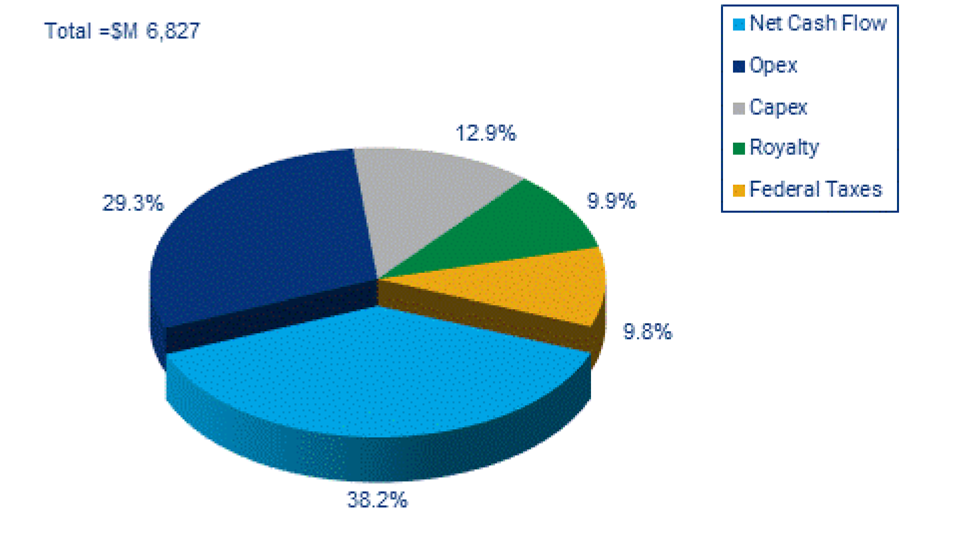
Source: Wood Mackenzie

Cumulative Net Cash Flow - Discounted at 10% from 01/01/2021



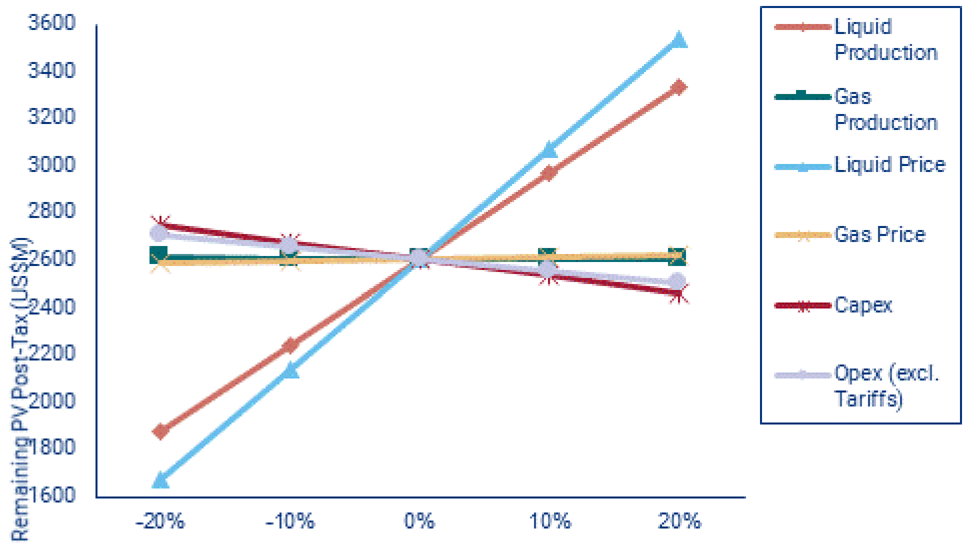
Source: Wood Mackenzie

Remaining Revenue Distribution (Discounted at 10% from 01/01/2021)



Source: Wood Mackenzie

Remaining PV Price Sensitivities



Source: Wood Mackenzie

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Client Helpdesk:

Europe +44 131 243 4477
Americas +1 713 470 1700
Asia Pacific +65 6518 0888
Email support@woodmac.com
Website www.woodmac.com