

Interoil Exploration and production ASA
2020 annual statement of reserves

Summary

Interoil Exploration & Production ASA (“Interoil”) operates in five licenses in three blocks in Colombia and in one block in Argentina.

The proven reserves (“1P”) amount 1.74 MMboe net after royalties, the 2P reserves are 2.76 MMboe net after royalties and 3P reserves are 2.71 MMboe net after royalties.

The reserves and the volumes underlying have been estimated and classified according to the “petroleum resources management system” (PRMS), which was approved by the Society of Petroleum Engineers, the World Petroleum Council, the American Society of Petroleum Geologist and Society of Petroleum Evaluations Engineers in March 2018, and have been audited by the independent petroleum engineering firm of Gaffney, Cline and Associates Inc. The corresponding reports is included in this statement.

Quantitative Information

A summary of the 1P, 2P and 3P reserves as at 31 December 2019 are shown in Table 1 from Colombian and Table 2 from Argentina. The reserves have been further subdivided into a Developed Producing, a Developed Non-producing and a Non-developed category, in line with the PMRS definitions of these categories.

Reserves	Gross (100%) Volumes		Interoil’s Working Interest volumes		Reserves Net to Interoil’s Interest	
	Liquids (MMBbl)	Gas (Bcf)	Liquids (MMBbl)	Gas (Bcf)	Liquids (MMBbl)	Gas (Bcf)
Proved						
Developed	0.85	2.96	0.60	2.07	0.56	1.94
Undeveloped	0.16	0.90	0.11	0.63	0.10	0.59
Total 1P	1.01	3.86	0.71	2.70	0.66	2.53
Total 2P	1.69	8.80	1.18	6.16	1.09	5.76
Total 3P	1.69	8.80	1.18	6.16	1.09	5.76

Table 1. Reserves Summary from Colombia.

Reserves	Gross (100%) Field Volumes			Gross (W) Company Volumes			Net Revenue Interest Company Volumes		
	Liquids	Gas	Gas Sales	Liquids	Gas	Gas Sales	Liquids	Gas	Gas Sales
	(MBbl)	(MMcf)	(MMcf)	(MBbl)	(MMcf)	(MMcf)	(MBbl)	(MMcf)	(MMcf)
Proved									
Developed	496	-	-	397	-	-	349	-	-
Undeveloped	393	-	-	314	-	-	277	-	-
Total Proved	889	-	-	711	-	-	626	-	-
Probable	919	-	-	735	-	-	647	-	-
Possible	838	-	-	671	-	-	590	-	-

Table 2. Reserves Summary from Argentina.

Management's Discussion and Analysis

Methodology

Interoil's reserves are calculated by preparing production forecast for all existing wells and for all identified future development activities such as drilling new wells, work over and simulations. For each well/activity pessimistic (1P), best estimate (2P) and optimistic (3P) forecast were generated.

The commerciality and economic tests for the December 31, 2019 reserves volumes were based on a crude oil price scenario for Brent. GCA estimated a crude sales price derived from the proposed Brent evolution, estimating a price equivalent and discounts to the Brent prevailing at Lérída, Vasconia and Oropéndola terminals, as shown:

ECONOMIC DATA	DATA	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
OIL PRICES Brent	1% DELTA												
OIL PRICE SCENARIO (US\$/bl)	\$ 60.00	\$ 60.60	\$ 61.21	\$ 61.82	\$ 62.44	\$ 63.06	\$ 63.69	\$ 64.33	\$ 64.97	\$ 65.62	\$ 66.28	\$ 66.94	\$ 67.61
SALES DISCOUNT	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00	\$ 3.00
OIL PRICE SCENARIO (US\$/bl)	\$ 57.00	\$ 57.60	\$ 58.21	\$ 58.82	\$ 59.44	\$ 60.06	\$ 60.69	\$ 61.33	\$ 61.97	\$ 62.62	\$ 63.28	\$ 63.94	\$ 64.61

Table 3. Oil Sales Price Scenarios Ambrosía, Maná, Río Opia, and LLA-47.

The Maná and Río Opia gas sales price for 2019 was estimated by Interoil at USD\$2.82/Mscf extrapolated at 1% per year starting in 2021.

ECONOMIC DATA	DATA	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
GAS PRICES	1% DELTA												
MANA (0,00 US\$/Mscf)	\$ 2.82	\$ 2.82	\$ 2.82	\$ 2.85	\$ 2.88	\$ 2.91	\$ 2.93	\$ 2.96	\$ 2.99	\$ 3.02	\$ 3.05	\$ 3.08	\$ 3.12
Gas Sales Factor	0.96												

Table 4. Gas Sales Price Scenarios Maná and Río Opia.

Uncertainties are inherent to reserves calculation; hence, the volumes included in this report are estimated and should not be constructed as exact quantities. All categories may be subject to revision as additional data becomes available.

Ambrosía, Maná and Río Opia Areas

In 2019 Interoil operated 3 oil fields in the Pulí C block located in the Valle Medio del Magdalena Basin: Ambrosía, Maná and Río Opia. The oil company, Hocol S.A. is a 30% partner in all the fields. In addition, the royalty is also lifted in kind by Ecopetrol on behalf of the state. Reported equity reserves volumes are net working interest after royalty.

A summary of the license conditions per fields is as follows:

Area	Working Interest (%)	Royalty Oil (%)	Royalty Gas (%)	Contract Deadline
Ambrosía	70	8	6.4	27-Dec-2027
Río Opia	70	8	6.4	23-Jun-2030
Maná	70	8	6.4	12-Nov-2028

Table 5. Contract Characteristics.

The associated gas produced from Maná and Río Opia fields, is being sold under an existing gas contract.

In 2019, seven (7) wells were perforating (MN-11, MN-13, MN-15SH, MNS-9, MN-17, RO-4 Doima, RO-4 UOB), from which the estimated production of oil and gas was obtained.

A high gas rate was obtained from well MN-11 (+/- 4 MMscfd). With the perforation of the RO-4 well the productivity of the UOB sands was verified (+/- 30 Bopd).

The technical team has been working on a new static model to generate the dynamic model that will help to understand the behavior of the main producer reservoirs (Doima and UOB Formations). The tasks include the redefinition of a geological framework, stratigraphic sequences zonation, and generation of a petrophysical model that could honor all the existing information of logs (not considered before) and cores besides geophysical reinterpretation of 3D seismic volume and creation of the static model for the two reservoir operational units.

LLA-47 and Altaír Areas

These areas are operated by Interoil under the following conditions

Area	Working Interest (%)	Royalty Oil (%)	Royalty Gas (%)	Contract Deadline
Altaír	90	8	---	27-Dec-2035
LLA-47	78 / 60	8	---	07-Feb-2021

Table 6. Contract Characteristics Altaír and LLA-47.

Interoil operates the Altaír area under an exploitation contract that expires in 2035, and has a 90% working interest. Royalty is 8%. The field is currently shut in due to environmental issues.

The LLA-47 area is an exploration contract that expires in 2021. The area has one well (Vikingo-1) drilled in 2017 producing from the C5 layer of the Carbonera Formation. Interoil operates the Vikingo well with combined royalty scheme of 21.2% (base royalty of 8% and then an additional royalty of 15%).

Developed producing reserves were estimated from the extrapolation of the current oil production until the present contract end. Developed non-producing reserves were estimated by Interoil reviewed by GCA. Vikingo-1 C7 layer of the Carbonera

Formation will be put back on production by removing a plug and produced commingled with the current C5 interval through the end of the contract.

The extrapolation of the production beyond the present exploration contract deadline and up to December 31, 2044 has been classified as Contingent Resources.

Undeveloped Contingent Resources were assigned to a new well, Malevo-1, scheduled after the present contract deadline. The well will target the same reservoirs found at the Vikingo-1 well.

Mata Magallanes Oeste Area:

Interoil’s participation in areas located in the Golfo San Jorge Basin, Chubut province of Argentina, the productive Formations are Matasiete, Castillo and Bajo Barreal from Cretaceous age.

Interoil acquired the rights in April 2019 and become the Operator; the contract expires in April 2043. Interoil holds 80% working interest (WI) in the block. Royalties payable to the provincial states are 12%. Royalties payable to the province have been deducted from reported net interest volumes.

The field was discovered and developed in the 80’s. As of December 2019, 55 wells have been drilled, 6 of them are still active producing a total rate of 57 bpd of oil and 77.2 Mcfd associated gas (GOR 1,347 cf/bbl), with 93% water cut. The gravity of oil is around 20° API.

Interoil has started a plan to reactivate inactive wells and optimize the field status. The plan includes the reactivation of 10 shut-in wells, replace production installation (pulling) in 8 wells and repair another 6 wells (perforation of non-open sandstones).

Proved Developed Non Producing (PDNP) reserves includes the reactivation of 14 wells and 3 workovers. The remaining 4 reactivations and 3 workovers have been categorized as Probable reserves (PB).

Interoil has also plans for a drilling campaign of 10 wells in the next 5 years. Completion include hydraulic fractures to optimize future performance. Volume was obtained from a type curve based on performance of existing wells in the area; the incremental production expected due to hydraulic fracture has been estimated based on analogy of similar jobs in near fields.

An average of the recent GOR value was applied to estimate the future associated gas volumes. Currently the produced gas is consumed in field operations.

The economic tests for reserves were based on Interoil’s future scenario of crude oil prices. Sale prices and costs are quoted in US\$ dollars. The following table shows average liquid prices:

ECONOMIC DATA	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
OIL PRICE SCENARIO (US\$/bl)	\$ 41.27	\$ 41.72	\$ 42.17	\$ 42.63	\$ 43.10	\$ 43.57	\$ 44.04	\$ 44.52	\$ 45.00	\$ 45.49	\$ 45.98

ECONOMIC DATA	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041
OIL PRICE SCENARIO (US\$/bl)	\$ 46.48	\$ 46.98	\$ 47.48	\$ 48.00	\$ 48.51	\$ 49.04	\$ 49.56	\$ 50.10	\$ 50.63	\$ 51.18	\$ 51.18

Table 7. Oil Sales Price Scenarios Mata Magallanes Oeste.

Summary

The total 1P oil net reserves after royalties decreased by 0.1 MMBls, 2P oil net reserves after royalties increased by 0.15 MMBls and the 3P oil net reserves after royalties decreased by 0.12 MMBls. The net annual oil production after royalties was 0.24 MMBls.

For gas the 1P net reserves after royalties increased by 0.05 Bcf, the 2P gas net reserves after royalties increased by 2.73 Bcf and 3P gas net reserves after royalties increased by 1.70 Bcf. The net gas production after royalties was 1.25 Bcf and sales were 1.12 Bcf.

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Leandro Carbone

Interoil Exploration & Production ASA