

RESEARCH UPDATE

Stable and strong free cash flow generation

Natural gas pure-play stock: Conventional natural gas producer (Upstream) concentrated in Colombia. The company's main gas fields in operation are in the lower and middle Magdalena basin which represents the chief gas supply potential source for the next ten years in Colombia. Despite of operating on the E&P Oil & Gas segment, Canacol's performance relates more to a utility non-cyclical enterprise, since four fifths of its revenues come from dollarized long-term contracts. Emphasis on long term gas supply contracts, in conjunction with relatively low D&C (drilling and completion) costs, result in a strong and, predictable free cash flow. The company's exploratory success track record is impressive, achieved at a relatively low cost when compared to the industry. We update our initialization price at COP 15.219, which represents a 42.6% return potential with respect to current market prices.

› VALUE GENERATING CATALYSTS (PAGE 24)

The company's strong top line growth will be enabled by its asset base, resource life, projected cost structure and operational capacity. The factors that could lead to outperformance include i) expected overdemand (undersupply) in the natural gas market after 2024, ii) The 300 km Jobo – Medellín pipeline should add 100 MMcfpd of additional contracted gas sales iii) Construction of the Tesorito thermoelectric plant should add an additional 30 to 40 MMcfpd of gas sales (assuming the thermo plant operates at a 75% capacity) and iv) The development of high return assets located in the VIM – 5 reservoir will ramp up production from 200 MMcfpd in 2021 to ~ 300 MMcfpd in 2025.

› VALUATION AND RISKS (PAGE 28)

Our buy rating was obtained using a Net Asset Valuation (NAV) model which incorporates our investment thesis, that we find highly feasible. Nevertheless, we acknowledge some risk factors that include the possible halt to drilling and delay on the Jobo – Medellín pipeline project. Our buy rating reflects our view that successful results from gas exploration and drilling will drive outperformance in the coming years, leading to strong EBITDA growth and solid free cash flow generation, we used the DCF-NAV methodology to value Canacols 2P reserves.

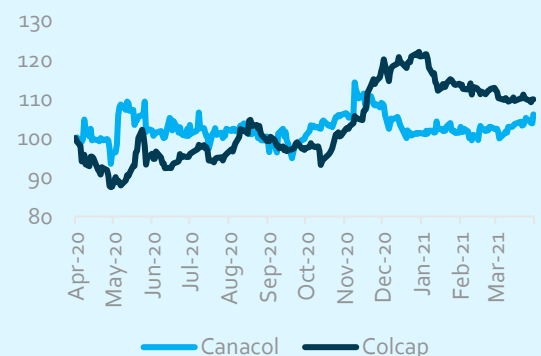
CANACOL

PT: 15,219 COP

TICKER	RECOMMENDATION
CNEC	Overweight
SECTOR	INDUSTRY
Energy	Oil & Gas

Previous Close (COP)	10,670
Discount / Premium	42.6%
52 wk High (COP)	11,490
52 wk Low (COP)	9,400
12-month return	6.1%
YTD return	2.4%
Market Capitalization (COP BN)	1.9
Float %	61.1%

STOCK PRICE


Source: Capital IQ.

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Income Statement (USD Thousands)

	2019	2020E	2021	2022E	2023E	2024E
Revenue	219,522	246,804	269,447	282,657	292,262	321,613
Var. (%)	7.53%	12.43%	9.17%	4.90%	3.40%	10.04%
Gross Profit	202,384	228,799	250,533	262,918	271,807	300,156
Var. (%)	15.48%	13.05%	9.50%	4.94%	3.38%	10.43%
EBIT	111,207	131,522	98,479	102,671	107,423	123,514
Var. (%)	17.88%	18.27%	(25.12%)	4.26%	4.63%	14.98%
Fin. Expenses	(32,902)	(31,012)	(35,529)	(34,305)	(34,011)	(34,615)
EBT	64,734	77,396	62,950	68,366	73,412	88,899
Var. (%)	781.0%	19.6%	(18.7%)	8.6%	7.4%	21.1%
Taxes	(30,487)	(82,139)	–	–	(2,708)	(26,670)
%	212.3%	94.2%	31.0%*	30.0%*	30.0%	30.0%*
Net Income	34,247	(4,743)	62,950	68,366	70,704	62,229
Var. (%)				8.6%	3.4%	(12.0%)
EBITDA	165,490	196,061	198,602	208,207	215,665	239,874
Var. (%)	19.4%	18.5%	1.3%	4.8%	3.6%	11.2%
EBITDA Margin	75.4%	79.4%	73.7%	73.7%	73.8%	74.6%

Source: Canacol and Corficolombiana. * Statutory tax rate.

Balance Sheet (COP MM)

	2019	2020	2021E	2022E	2023E
Cash and Cash Equivalents	46,304	68,222	111,920	157,579	205,587
Total Current Assets	142,131	153,445	202,039	252,075	303,278
Net, PP&E	506,100	524,786	502,869	490,042	484,866
Total Non-Current Assets	611,931	596,314	610,585	626,321	642,444
Total Assets	754,062	749,759	812,624	878,396	945,722
Total Current Liabilities	97,813	92,616	92,995	96,039	99,591
Total Non-Current Liabilities	413,503	449,804	441,091	442,520	443,761
Total Liabilities	511,316	542,420	534,085	538,559	543,353
Total Equity	242,746	207,339	278,539	339,837	402,369

Source: Canacol and Corficolombiana.

Financial Indicators

	2019	2020	2021E	2022E	2023E
ROE	14.1%	(2.3%)	22.6%	20.1%	17.6%
ROA	4.5%	(0.6%)	7.7%	7.8%	7.5%
Net Debt to EBITDA (x)	1.73	1.49	1.25	0.97	0.72
Debt to Equity	1.37	1.74	1.29	1.06	0.89

Source: Canacol and Corficolombiana.

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Canacol Energy: Major resource potential

The dramatic shift in economic outlook, manifested through the deterioration of various economic variables, affected a great deal corporate earnings in 2020. The magnitude differed across industries, and even countries whose governments chose to handle in various ways the spread of the virus. Pro – cyclical industries, with high degrees of operating and financial leverage, naturally, were hit the hardest. On the other hand, traditional defensive sectors were somewhat able to retain value despite the major economic headwinds that presented in 2020, as was the case of Canacol.

Despite of operating on a cyclical commodity driven industry, the story of Canacol could easily resemble that of a major utility company. This is accomplished due to the nature of Canacol's top line revenue structure, where roughly 80% of its income comes from long term dollarized take-or-pay contracts. The company's resilience, exhibited through its predictable and strong cash flow during 2020, along with its medium to long term investment projects and attractive acreage position has led us to issue a buy rating as we continue to see a major potential return with respect to current market prices.

While Canacol's operations are distributed across three major blocks in the Magdalena basin, the company's growth case is levered on its 162 prospects and leads spread over its solid 1.9 million acreage position. Opportunity for growth and near-term catalysts based on the construction of the 300 km Jobo – Medellin pipeline, which will allow it to supply gas to EPM and clients located in the interior of the country, places Canacol in a unique spot to contribute to Colombia's current tightening gas market (possible deficit beginning in 2024). This is added to the company's return to shareholders through its relatively attractive dividend yield (~5.2%) and stock buyback program.

Growth outlooks and strong cash returns must be put into Colombia's gas market context to better understand opportunities for secular growth and inherited risks. Some government policies do more than merely shift the supply or demand curve of a certain industry, and Colombia's bet on the decisive role of gas to improve people's quality of living has proven effective since the program "Gas para el Cambio" was first introduced in 1980. The government's vision back then to expand its use in Colombia, has resulted in more than 9 million households connected to domestic gas networks and half a million vehicles with gas technology. The country now faces major challenges, beginning with an expected gas deficit in 2024, for which several recommendations have been made, including the construction of new infrastructure to import gas (the pacific regasification plant), the renewal of the current regasification plant in Cartagena in 2026, the expansion of transportation capacity, the development of offshore gas fields, and

policies directed towards the recovery of the thermoelectric park gas demand. The resulting market structure in the years to come could determine Canacol's market position, fade away concerns related to gas price realization (imported gas prices) and boost the company's top line performance if current exploration success (80%) and long terms projects are realized as planned.

Canacol

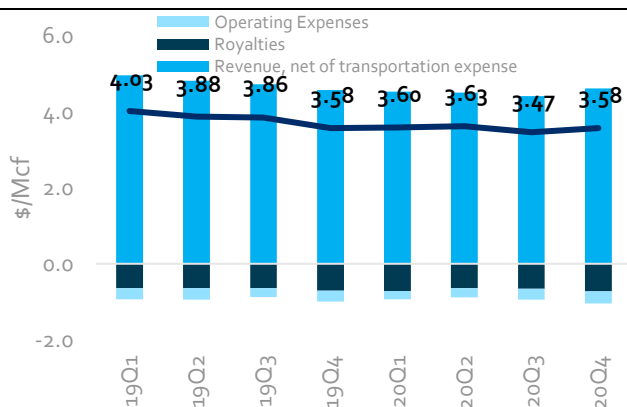
Company Description

Canacol (BVC: CNEC) is a leading natural gas E&P player in Colombia. The corporation is listed in the Colombia stock exchange (BCV), the TSX (Toronto Stock Exchange) under the CNE quote and in the OTCQX exchange in the United States. The company is engaged in the production and exploration activities in the Middle and Lower Magdalena Basin and as of December of 2020 had 395 Bcf (69,262 Mboe) of proven reserves (1P), 637 Bcf (111,798 Mboe) of 2P reserves, and 951 Bcf (166,854 Mboe) of proved, probable and possible (3P) gross reserves.

Since its inception, Canacol has grown its operations mainly inorganically, along with the continuous endeavor of growing its asset base undertaking exploration and development drilling in its core areas in Colombia. Since 2018 the company has decided to specialize in gas explorations and production activities with great success, having an outstanding 11% revenue 5-year compound annual growth rate. In 2020, The company registered USD 246.8 million of natural gas sales revenue (net of royalty and transportation expenses), this represented a 12% YoY growth, mainly attributed to the completion of the Promigas Jobo – Cartagena pipeline.

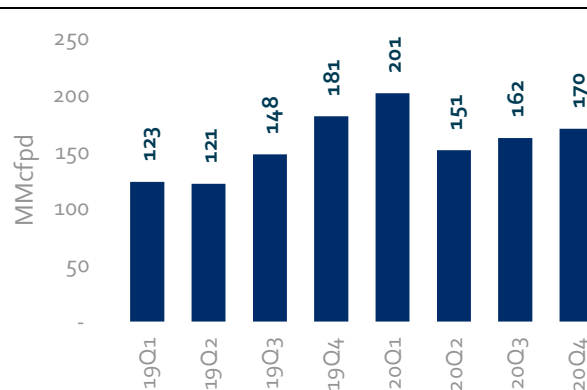
Specifically, the company’s conventional natural gas exploration and production assets are located in the lower Magdalena basin in northern Colombia and include the Esperanza, VIM – 5, VIM – 19, and VIM - 21 contracts. Despite of being a junior E&P gas company, Canacol has relatively low costs, elevated operating margins driven in part by its high operating leverage and growing economies of scale.

Graph 1: Operating Netback



Source: Canacol.

Graph 2: Average daily natural gas production



Source: Canacol.

Oil and Gas properties and operations

Colombia's ANH (National Hydrocarbon Agency, by its initials in Spanish) aims to fully manage the hydrocarbon reserves and resources owned by the Nation, according to the decree 714 of 2012. Its objective focuses on promoting the optimal and sustainable use of the hydrocarbon resources and contribute to the country's energy security. Therefore, this agency is responsible for regulating the Colombian oil and gas industry, assigning the areas for exploration and or exploitation subject to various contracting schemes. In general, the contractor is the owner of the hydrocarbons extracted from the assigned area, except for the royalty volumes that the ANH collects.

Following is a table of the Oil and Gas properties that the company operates and have been assigned by the ANH:

Table 1: Oil and Gas properties and operations

Asset	Oil / Gas	Type	Status	Gross Acres	Net Acres	Working Interest	Partners	Contract Type	Region
VIM - 5	Gas	Conventional	Exploration	638,502	638,502	100%		ANH	Lower M. Basin
VIM - 19	Gas	Conventional	Exploration	62,075	62,075	100%		ANH	Lower M. Basin
VIM - 21	Gas	Conventional	Exploration	51,107	51,107	100%		ANH	Lower M. Basin
VIM - 33	Gas	Conventional	Exploration	155,310	155,310	100%		ANH	Lower M. Basin
Esperanza	Gas	Conventional	Production	33,203	33,203	100%		ANH	Lower M. Basin
SSJN-7	Gas	Conventional	Exploration	670,226	335,113	50%	ONG Videsh (50%)	ANH	Lower M. Basin
VMM - 44	Gas	Conventional	Exploration	8,273	8,273	100%		ANH	Lower M. Basin
VMM - 2	Oil	Unconventional	Exploration	73,056	14,611	20%	ConocoPhillips	ANH	Magdalena Basin
VMM - 3	Oil	Unconventional	Exploration	83,311	16,662	20%	ConocoPhillips	ANH	Magdalena Basin
VMM - 45	Gas	Conventional	Exploration	12,422	12,422	100%		ANH	Magdalena Basin
VMM - 49	Gas	Conventional	Exploration	148,244	148,244	100%		ANH	Magdalena Basin
VMM - 47	Gas	Conventional	Exploration	86,143	86,143	100%		ANH	Magdalena Basin
Rancho Hermoso	Oil	Conventional	Production	10,238	10,238	30%	Ecopetrol	Ecopetrol	Llanos Basin
Total				2,032,110	1,571,903				

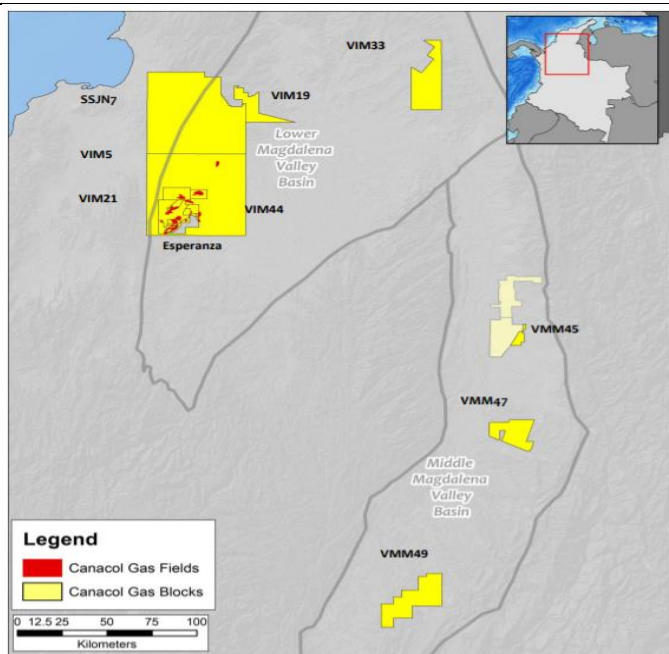
Source: Canacol.

Attractive acreage area in the Magdalena basin

All the company’s reserves are situated in Colombia. Canacol’s exploration portfolio is characterized by its strategic location that allows it to supply gas to the country’s thermal power stations located on the Atlantic coast region (among other clients), taking advantage of the national transportation system in place.

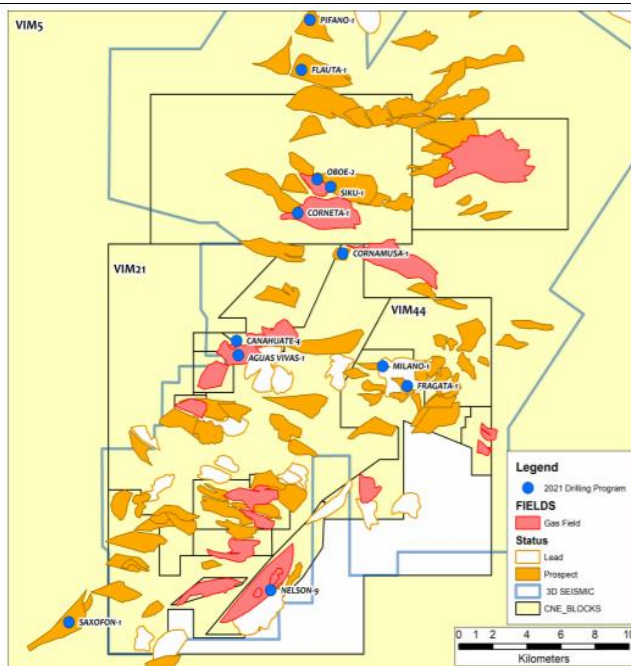
Canacol’s main gas blocks are located in the lower and middle Magdalena Basin and have an area of 1,561,665 acres (6,319 km²), which corresponds to 99.3% of the company’s total exploration area. The remainder 0.7% relates to the Rancho Hermoso Oil block owned jointly with Ecopetrol in the Llanos basin. As of December of 2020, the company had 4.7 Tcf of prospective resources, of which 1.4 Tcf were risked prospective resources, covering a total of 162 prospects and leads (graph 4). One of the main challenges the company faces going forward in our view, is to continue its consistent and low-cost drilling program in order to convert the majority of its 162 individual leads and prospects into booked reserves, maintaining its reserve life index over 8 years. Growing production from its existing VIM – 5 block and other potential exploration areas, is a key part of our valuation analysis as we assume the company gradually depletes its high return inventory.

Graph 3: Resource Base (Location)



Source: Canacol.

Graph 4: Resource base – per gas block



Source: Canacol.

Roughly 42% of Canacol’s production comes from the Esperanza gas block, while the 55% corresponds to the VIM – 5 block production, which according to company data, is subject to an additional royalty factor. Furthermore, the VIM – 5

gas block contains one gas production field (Clarinete) and two evaluation gas fields (Tambourine and Accordion-Ocarina) operated under a contract with the ANH and produces natural gas to local clients under long-term take-or-pay contracts. The most important field in terms of gas production is Clarinete, which had an average daily production in 2020 of 99.5 MMcfpd (17,458 boepd) in 2020, reaching 55% of the year’s total production.

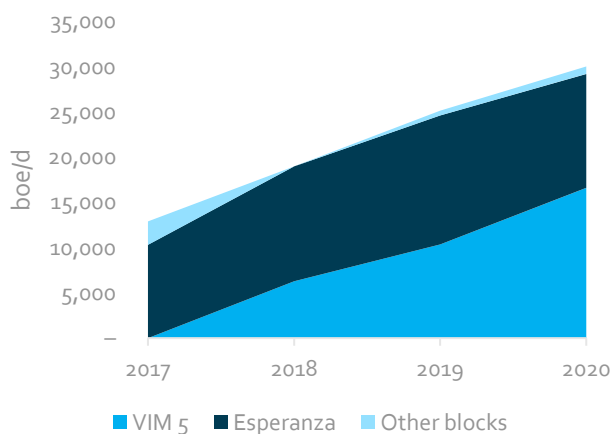
Likewise, The Esperanza block contains gas producing fields and an evaluation area (Cañahuate) operated under an ANH contract, currently producing gas to thermoelectric power generators and industrial clients under take-or pay contracts. The most significant field is Nelson, where most of the gas reserves are located. The average daily production of the Esperanza block during 2020 was 62,6 Mmcfpd (10,980 boepd) in 2020 and corresponded to 42% of gas production in 2020

The remainder corresponds to production coming from the VIM – 21 contract, which was acquired through the acquisition of Shona back in 2012. The block currently has two evaluation areas (Brevia y Toronja) and had average production of 4.7 Mmcfpd in 2020.

Exploration contracts

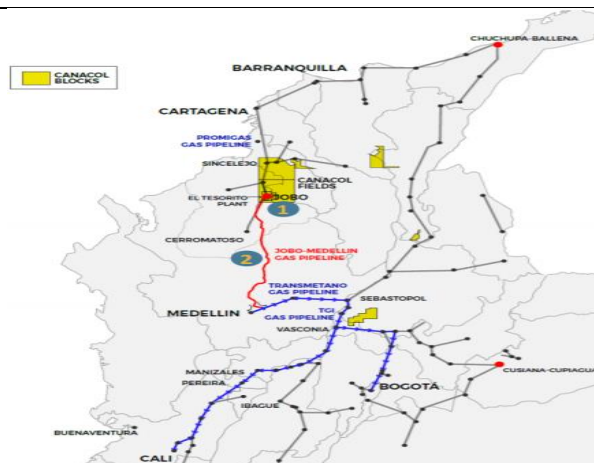
The company has exhibited an outstanding exploration success rate of over 80% in the last four years and while Canacol could be at the early stage of exploration on some blocks, we believe the 3D seismic technology and early results will enable the company to continue building a strong asset base to face future gas long term contracts with offtakers in the coast and in the interior of the country. In fact, medium to long term production projects are already underway and represent the number one catalyst for growth in the future.

Graph 5: Historical Production



Source: Canacol.

Graph 6: Canacol's future projects

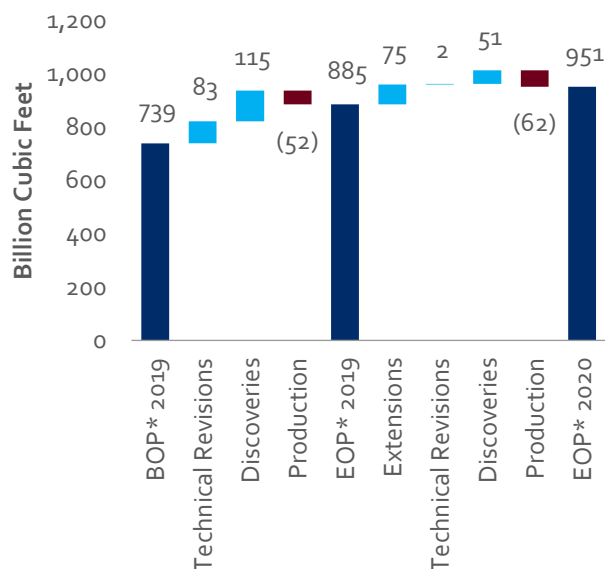


Source: Canacol.

Reserves

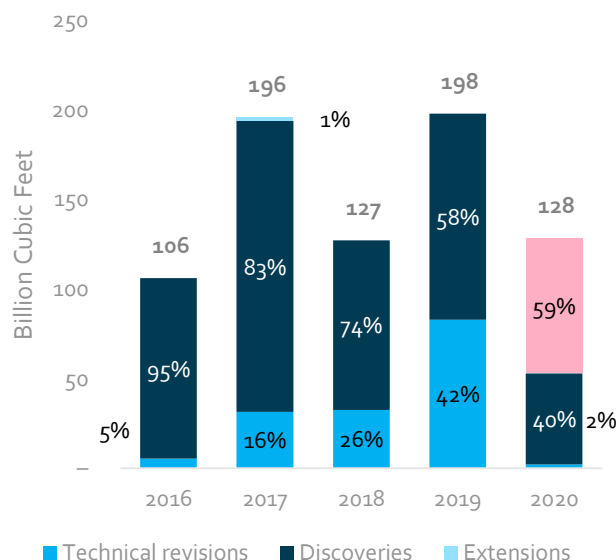
For 2020, Canacol reported proven reserves (1P) of 395 Bcf (69,262 Mboe), increasing just 0.2% compared to 2019 (0.6 Bcf) and registering a proven reserve replacement rate (1P) of 101%. Even though is an acceptable reserve replacement level, it is the lowest rate in the last 5 years, and the lowest growth in 1P reserves (5.5% five-year CAGR). In addition, 59% of 1P reserves incorporation corresponded to extensions (associated with the Clarinete field - Block VIM – 5) and not to new discoveries. Nonetheless, we highlight the 9.9% growth in Proved Developed Producing reserves and the positive 2P reserve replacement rate of 122%, despite being lower than the average of the last five years (204%).

Graph 7: Reserves



Source: Canacol.

Graph 8: 1P Reserves

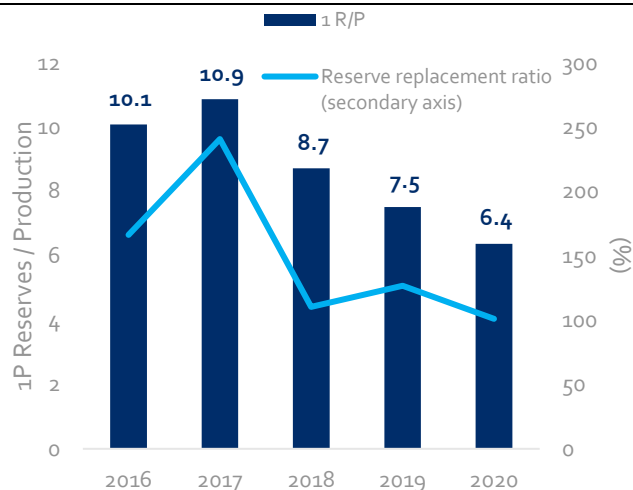


Source: Canacol.

The 101% 1P reserve replacement ratio is lower than the historical average and slightly lower than our expectation. This resulted from a decrease in the addition of new reserves (-5.8% y/y) and production being 18.1% higher compared to 2019. In the same way, the 2P replacement ratio came at 122%, also below the average of the 5-year average of 204% and slightly below our estimates. Furthermore, there was a considerable reduction in the addition of new reserves (-35.7%) compared to 2019. Despite 2020's difficulties to successfully meet the drilling schedule plan, Canacol managed to preserve the reserve replacement ratio above 100%. In the forthcoming future, we believe that this success rate will be difficult to sustain with the expected production levels between 190 MMcfpd - 200 MMcfpd, even continuing with the 3D seismic and drilling program.

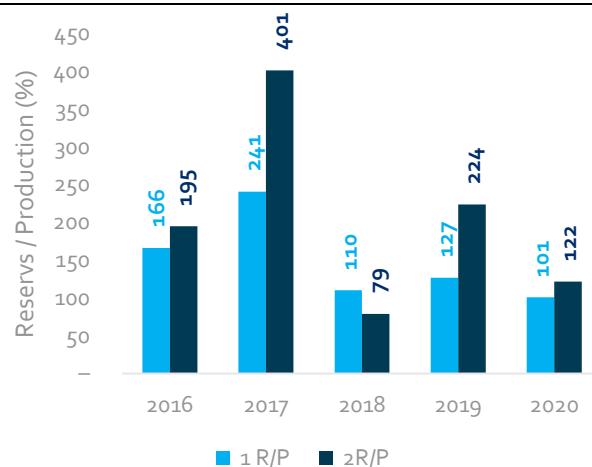
Price Independence

Graph 9: Reserve replacement ratio and reserve life index



Source: Canacol.

Graph 10: Reserve Life Index



Source: Canacol.

67% (637 Bcf) of Canacol's resources correspond to 2P reserves (proven and probable), of which 42% are equivalent to 1P reserves. This level of resources can be maintained even while the company fulfills its strategic plan to increase its production considerably between now and 2024. The challenge will continue to be its commercialization capacity and the construction of infrastructure needed for these assets to be commercially viable.

Fluctuations in the Louisiana reference price (Henry Hub) do not affect Canacol's reserve booking given that sales prices are tied to long-term take or pay contracts. As a reference, in 2020, the Henry Hub's average price was \$ 2.05 / MMBtu, while Canacol's average gas sales price was ~ \$ 4.49 / MMbtu (net of transportation) and price volatility throughout the year was a function of local market dynamics driven in part by the level of the hydraulic reservoirs. Going forward, concerns regarding gas price realizations in Colombia given the expectation of increasing imported gas supply are rising. Nonetheless, even though we expect pricing seasonality, roughly 90% of Canacol's gas is sold through long-term take or pay contracts (between 12 and 15 years).

Reserves can only be booked whenever transportation capacity to deliver gas to offtakers is already in place. This has major repercussion to the company's ability to connect its gas producing fields to potential demand in the interior of the country.

Company's set forth plan to develop its proved, probable, and possible undeveloped reserves

Table 2: Current drilling plan

Gas Block	Well	Schedule
Esperanza	Porquero well - Nelson 9	Work is expected to begin in April 2021.
	Porquero well - Nelson 10	Drilling is planned for 2022.
	Palmer 2	Once the current formations are depleted, development of the middle Cienaga de Oro formations are expected to be completed in 2024.
	Laguneta 1 - Cañahuate 4	Work is expected to begin this year.
	Laguneta 1 - Aguas Vivas 1	Work is expected to begin in April of this year.
VIM - 5	Cañandonga 1	was completed, cleaned-up and successfully flared gas in February 2021
	Porro Norte 1	The company expects to finalize work and testing in the first quarter of 2021
	Tubara	Work is expected to start in June 2021
	Corneta 1	Work is expected to start in June 2021
VIM - 21	Ocarina 2	Is in the drilling inventory and is scheduled for 2023
	Arandala 1	was completed and placed on permanent production in October 2020
	Arandala 2	remains in the drilling inventory and is scheduled for 2023.
	Fresa 1	is awaiting completion, testing and tie-in. This work is expected in 2022

Source: Canacol.

Industry Analysis

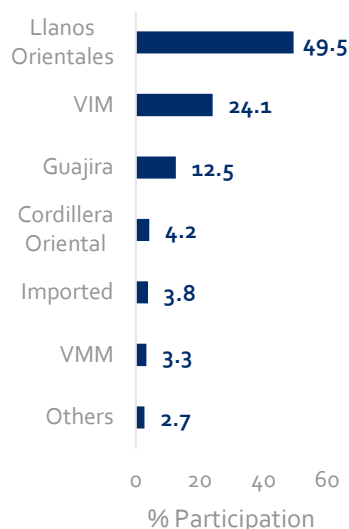
Gas Industry

In terms of the supply and demand equilibrium, the gas sector has performed well in the last two years. However, considering the increasing contribution of the hydropower plants to Colombia’s power generation matrix, coupled with the decline of the Guajira natural gas fields, gas supply has been gradually decreasing after reaching a peak in production of 1,250 GBTUD in 2013. (Reserve data is available up until 2019 figures)

Supply

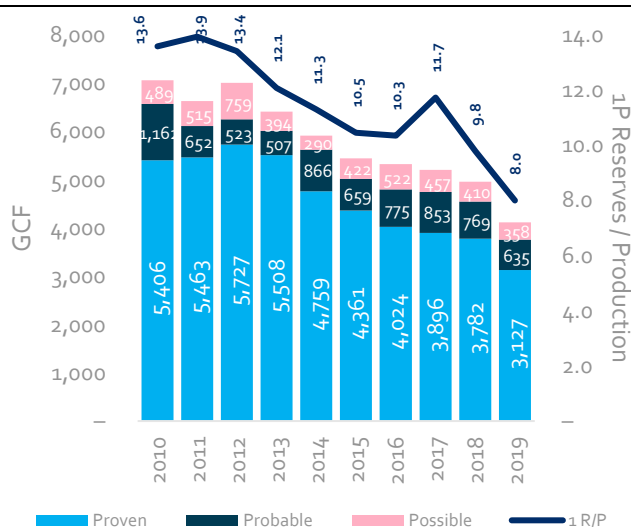
On the supply side, the largest amount of natural gas production comes from the Llanos Orientales fields (52.59%), followed by the Lower Magdalena Valley (22.08%) operated mostly by Canacol, and the fields in decline from La Guajira (17.34%). These basins, contribute to 94% of the proven natural gas reserves in the country (1P reserves), and 86% of production in 2019 (Graph 2). The rest of the local production corresponds to smaller fields located in the Caribbean region and in the interior of the country. As of December 31, 2019, Colombia recorded 4.1 Trillion Cubic Feet (TCF) of natural gas reserves, of which 79.5% corresponded to 1P reserves (Proven Reserves); 15.4% to probable reserves and 8.7% to possible reserves. Evidently, graph 12 shows a clear secular down trend pattern of reserves growth. With respect 2018, total reserves decreased 16.9%, proved reserves decreased 17.3% while probable and possible declined 17.4% and 12.7% respectively. On the other hand, gas production rose 1.3% in 2019 to 391,000 million cubic feet, resulting on 8 years of

Graph 11: Production by gas field



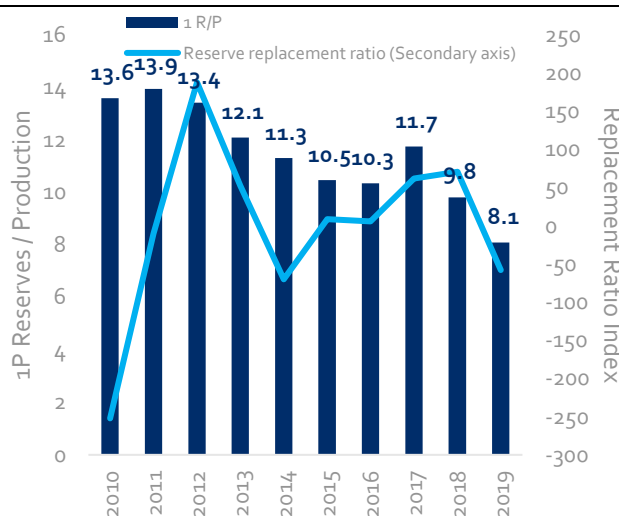
Source: UPME. 2019 Figures

Graph 12: Reserves and Production



Source: UPME.

Graph 13: Reserve Replacement Ratio

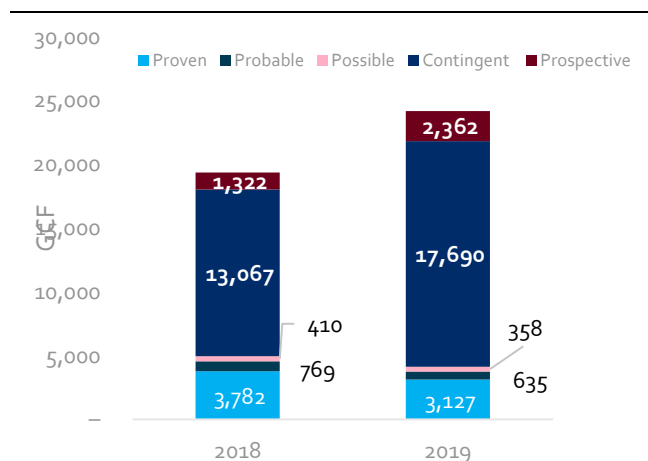


Source: UPME.

life reserve. Now, if we account for both prospective and contingent resources, the country could have enough reserves for almost 60 years . However, even though contingent resources are by definition discovered, they are subject to the development of infrastructure or a new technology for them to be certified or may simply not be commercially and financially recoverable. This can be the case of potentially significant offshore discoveries in the past five years by Ecopetrol, Petrobras, Repsol, and Anadarko. Those discoveries are located in ultra-deep waters, up to 2,000 meters of depth, and they have yet to be fully appraised, which means they need additional drilling to better estimate the size of those discoveries, and on this way, better asses their commercial viability before a decision is made on the investment of infrastructure required. In any case, the uncertainty lies on how large the prospective resources really are, including the offshore discoveries. In this context, and if fully appraised, it will take at least 7 years of development before that gas reserves can be certified. Furthermore, we expect the price levels required for these reserves to be commercially viable quiet high compared to gas developed and produced onshore. A report made by UPME, estimates that the blocks in the Caribbean Sea, namely Kronos, Gorgon-1, Purple Angel-1, Tayrona and Orca-1, could hold reserves between 7 and 30 TPC. The agency also assesses the Colombia's Pacific region to become a major gas producer, with an additional potential of 5.88 TPC in the Chocó Offshore, Tumaco Offshore and Pacífico Profundo blocks.

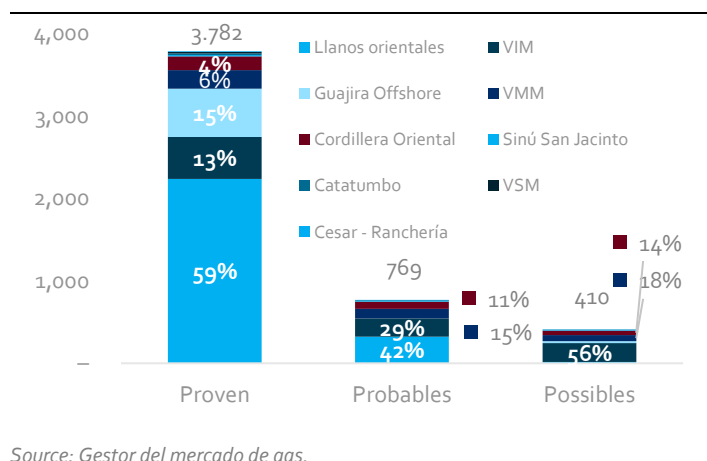
Location wise, the Llanos Orientales region holds 59 and 42% of the proven and probable reserves respectively, followed by the guajira offshore with 15% of the proven reserves. However, the VIM region, where Canacol operates, accounts for 13 and 42% of the proven and probable reserves respectively, making it the region with the greatest potential of natural gas after the llanos Orientales region.

Graph 14: Gas reserves (Tcf)



Source: Gestor del mercado de gas.

Graph 15: Gas reserves (Tcf)



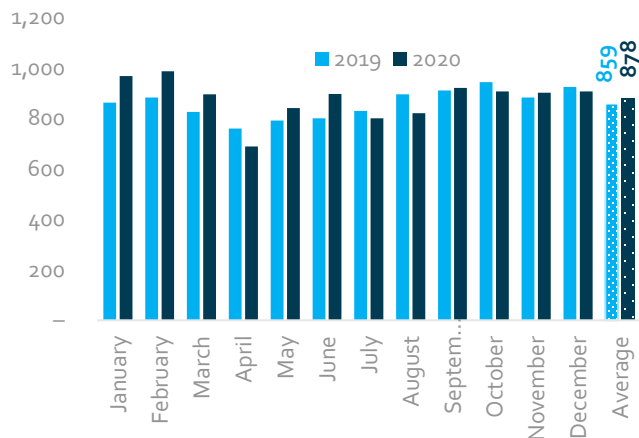
Source: Gestor del mercado de gas.

Demand

The demand for gas in Colombia responds primarily to the level of economic activity in the country, with a greater degree of dependency on some economic sectors such as oil (refineries) and industrial, but also the demand is strongly linked to exogenous factors such as the level of the reservoirs, which in turn depends on the country's rainy season. The latter has to do strictly with the structure of the country's electricity generation matrix, since around 70% of it is based on hydroelectric generation. Despite of COVID-19, natural gas demand rose 2.2% in 2020 to 878 Bcfd with respect to 2019, driven mainly by the thermoelectric sector posting double digit growth of 42%. While the non-thermoelectric sector shrunk 7.3% with respect to 2019. Thus, the thermoelectric industry, whose demand fluctuates depending on the level of the reservoirs, consumes approximately 190 MMcfdpd, which corresponds to 21% of total demand. The industrial and residential sectors account for approximately 29 and 19% of total demand, respectively.

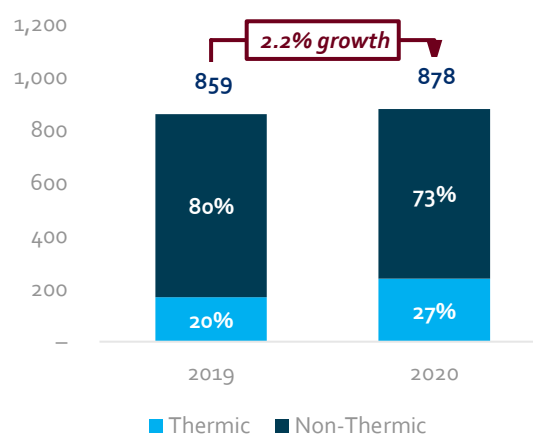
According to a study made UPME there are three important catalysts related to the power generation transition that should boost natural gas demand in Colombia in the next 10 years. In the first place, the thermoelectric sector, whose demand represents about 21% of total aggregate demand, would grow at a fast pace as a result of the auctions made by the government to meet firm energy demand obligations. In the short term to medium term this effect is heightened by the delays of the hidroituango project. Second, a higher installed capacity of the thermoelectric industry couple with the decarbonization initiatives that are taking place around the world, including Colombia, would naturally increase demand for natural gas. Add to this the potential demand from the conversion of coal fuel thermoelectric plants to gas fuel driven plants.

Graph 16: Gas demand (MMcf)



Source: Gestor del mercado de gas.

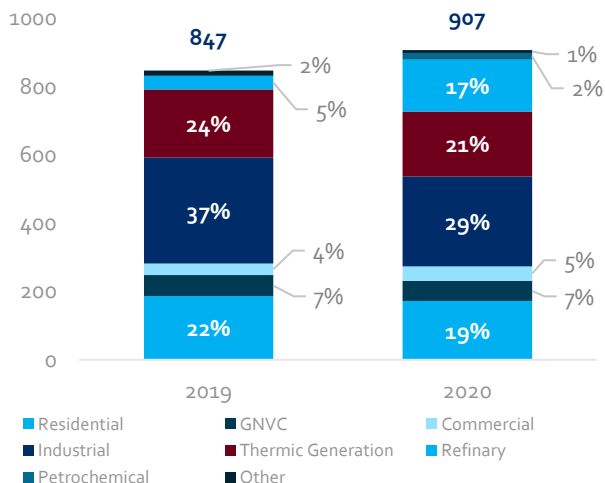
Graph 17: Gas demand (MMcf)



Source: Gestor del mercado de gas.

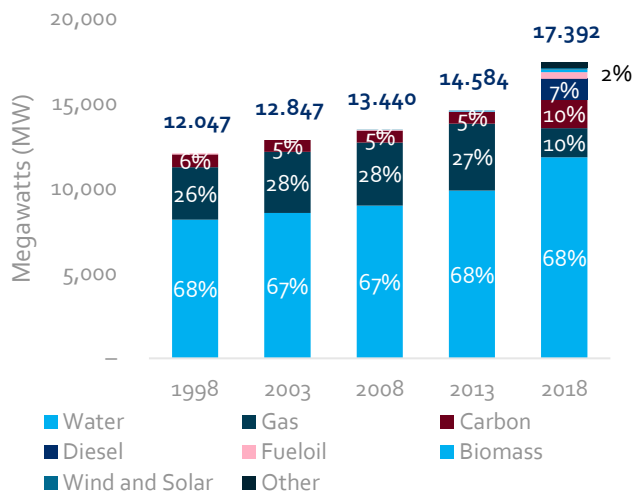
Lastly, the penetration of the renewable energies within the energy matrix, although still somewhat small relative to other sources of energy, would result on higher dispatches from thermoelectric plants, hence boosting demand for natural gas.

Graph 18: Gas Demand by sector (MMcf)



Source: Gestor del mercado de gas.

Graph 19: Energy Matrix (MW)



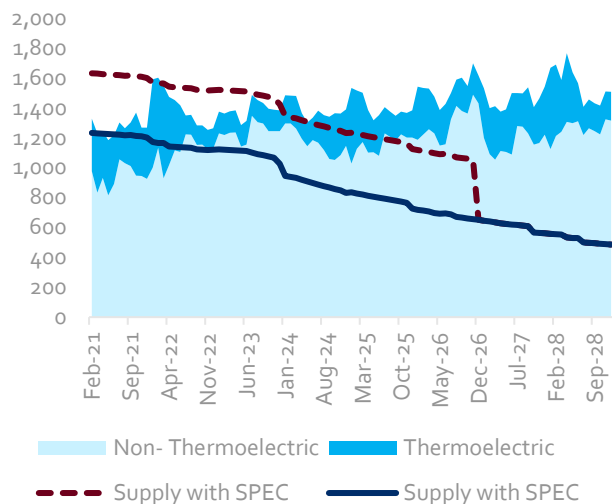
Source: XM and UPME.

Supply/ Demand forecasts

Natural gas as oil, is a depleting resource with an average production decline rate of 6 to 7% in Colombia. In this way, in recent years gas production has outpaced the addition of new resources resulting in a reserve replacement ratio below 100, in fact, the average of the last 5 years is less than 50. In addition to this, the reinvestment of the industry in 2020 was weak because of the economic shock caused by the COVID - 19, which means that probably in 2021 and 2022 the reserve replacement indicator will probably continue below 100. Moreover, together with a growing demand for gas, due to the factors mentioned above, simple population growth will contribute to increase demand, resulting in gas supply deficits beginning in 2024 as it has been outlined by UPME.

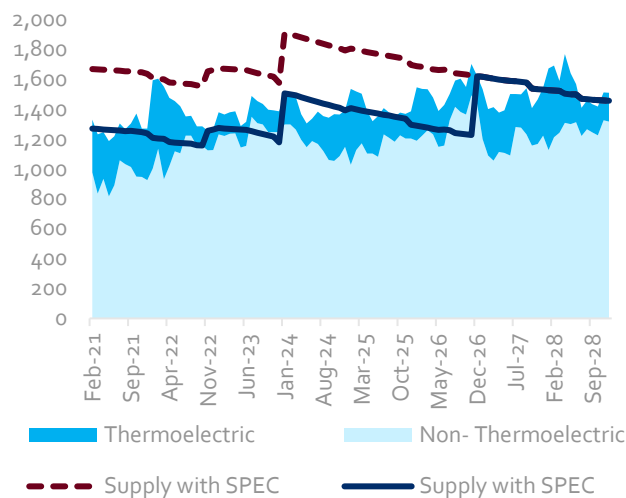
The baseline scenario proposed by UPME, where potential gas supply forecast is based on the production declaration of the oil & gas E&P companies in the country, added to the supply of gas imports through the *El Cayao* plant in Cartagena (without assuming the renewal of the contract in 2026) results in supply deficits beginning in January 2024. We do not consider such a scenario feasible given that the production declaration presented to the ANH tends to underestimate gas production potential and leaves aside prospective, contingent, and sometimes 2P and 3P reserves. Likewise, we are contemplating in our models the renewal of the *El Cayao* plant in 2026, considering the high opportunity cost of non-renewal.

Graph 20: UPME gas-supply imbalance – scenario 1 (MMcf)



Source: UPME.

Graph 21: UPME gas-supply imbalance – scenario 2 (MMcf)



Source: UPME.

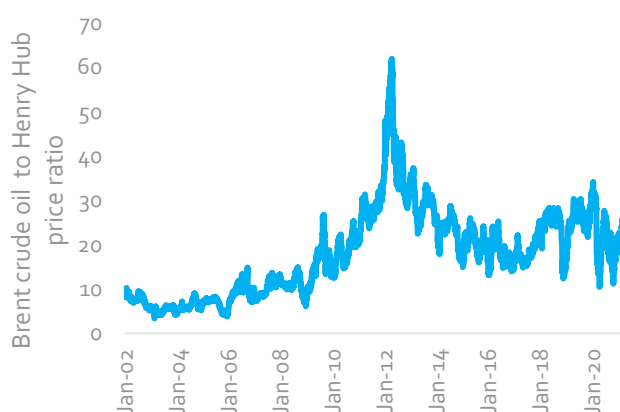
Now the most optimistic of UPME scenario, which includes not only the renewal of SPEC in 2026, but also the set up and operation of the Pacific regasification plant and the realization of gas production from some contingent resources, manages to supply the gas demanded in the medium term. In this scenario, there is a gas deficit in 2028, which should be appropriately covered with the development of prospective offshore natural gas resources and unconventional reservoirs.

Brent and Henry Hub

When observing price differentials between the Brent crude oil price and the Louisiana reference Henry Hub, prices seemed to have moved in tandem prior to 2008. After this period, the breakpoint could be explained by higher associated gas¹ production (natural gas produced by oil wells) induced by increasing oil prices. **As a result, the oversupply of natural gas caused solely by the effect of higher oil prices led in turn to depressed gas prices as show in graph 22.**

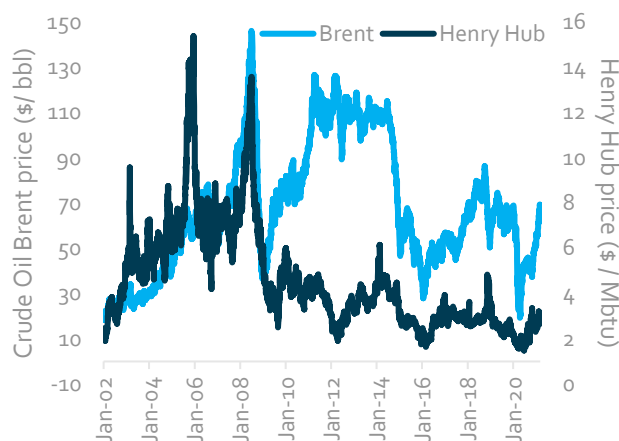
In recent years, the share of associated gas production coming from the five major crude oil-producing regions in the United States has been increasing, partially influenced by shale oil producing companies in the Permian, Bakken, Eagle Ford, Niobrara, and Anadarko tight rock formations². This could add further price differentials between the oil-natural gas price relationship.

Graph 22: Brent to Henry Hub ratio



Source: Corficolombiana.

Graph 23: Brent and Henry Hub



Source: Eikon.

Now, widening gas price differentials is not an indication of concern for a pure play gas producer as has been case for Canacol (since it changed its corporate strategy to gas). While we expect seasonality due to factors such as shortage of production and OPEC’s price manipulation, price differentials tend to narrow overall in the long term.

¹ The U.S. Energy Information Administration uses a gas-oil ratio of 6,000 cubic feet (cf) of natural gas to 1 barrel (b) of oil (cf/b) to assess whether a well is an oil well or a natural gas well.

² U.S. Energy Information Administration, based on Enverus Drilling Info data.

Imported gas price

Concerns related to an increasing participation of imported gas and hence its effects on gas price realizations in the Colombian market have intensified, especially if considering the possible entry of a new regasification plant in the Pacific. Prices at the Gulf of Mexico (Henry Hub price Reference) are used as an initial base price reference for the computation of the imported price that can be observed in Cartagena (cite UPME). Following this and expecting more imported gas due to the supply – demand market imbalance, the minimum acceptable price that will make economic sense will be the imported parity price or the IPP – gas price, which accordingly should incorporate the following³:

Liquefaction:

This allows for gas fields that are situated too far away from the major gas markets to make transportation viable. Increasing demand in Asia and Europe have propelled the rapid growth that the LNG market has had in the last decade. A study made by UPME based on the DECC gas pricing projections for the Sabina Pass Liquefaction plant, suggests that the cost of liquifying natural gas results from the following equation:

$$pLiq = 1.15HH + 2.63 \pm 0.38 \text{ (USD/MBTU)}$$

pLiq: Liquefaction Price

HH: Henry Hub Price

In this case, the 1.15 constant factor corresponds to the cost of transporting gas in its natural state to the corresponding liquefaction plant location, while the second expression of the equation (constant term) relates to the direct cost of liquifying the gas.

Transportation Costs:

Transportation costs from the Gulf of Mexico to Cartagena and Buenaventura: This cost is computed based on the number of days required to transport the gas to the port of Cartagena, the vessel rental costs, tariffs, and tolls. In the case of the regasification plant of Buenaventura, a possible extra cost will have to be paid for crossing the Panama Canal. This extra fee was estimated at roughly USD 0.19/MBTU by UPME.

Regasification:

The cost of regasification aims to compensate the work required to bring the gas back to its natural state from its liquid state form. In practical terms, the regasification fee seeks to remunerate the investment in the infrastructure made

³ Estudio Técnico para el plan de abastecimiento de gas natural. July 2020. UPME.

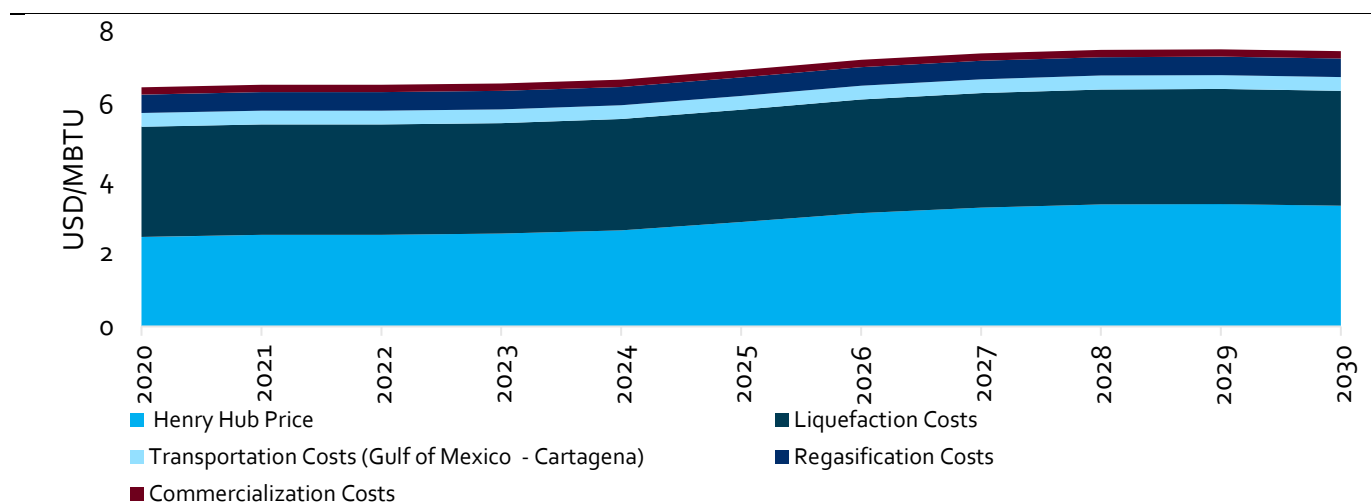
by the private contractor. This fee is calculated as the ratio of the total investment made over the demand served by the plant. This demand assumes the plant operates at a 75% capacity. The UPME has estimated the regasification fee at approximately USD 0.5 MBTU.

Other Costs:

Commercialization and other costs are included on the observed imported gas prices. UPME has estimated this at USD 0.2 /MBTU.

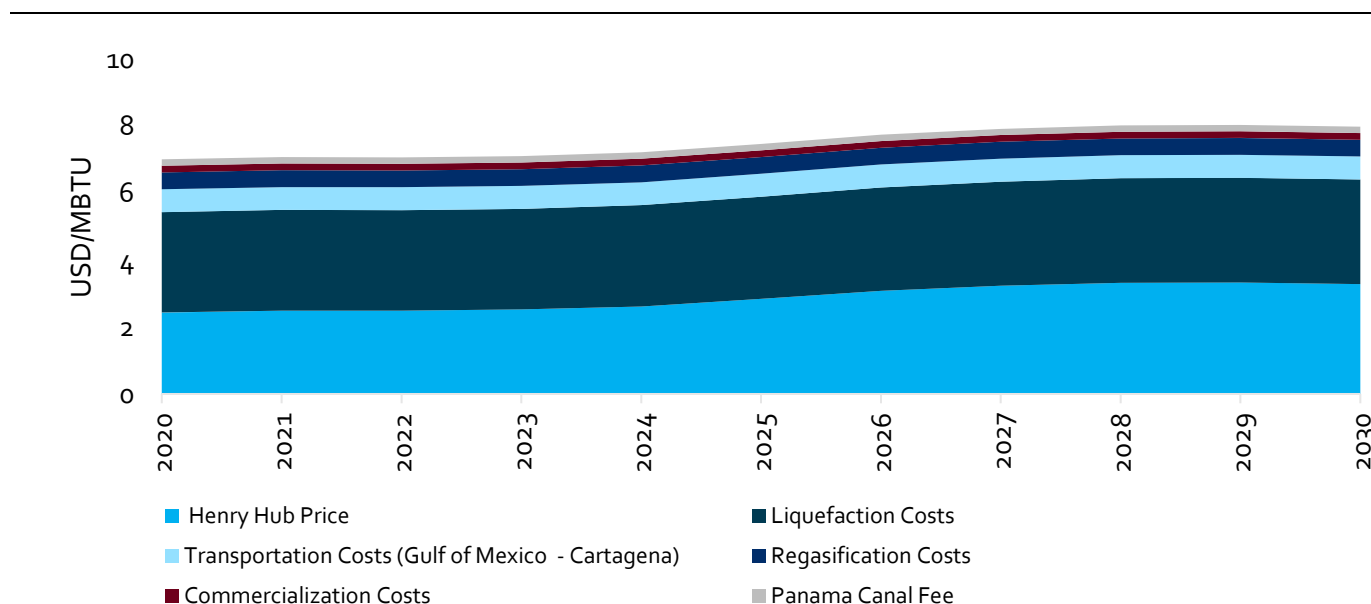
Resulting Imported Gas Prices:

Graph 24: Imported Gas Prices – Forecast (Cartagena Regasification Plant)



Source: UPME.

Graph 25: Imported Gas Prices – Forecast (El Pacifico Regasification Plant)



Source: UPME.

Market Share

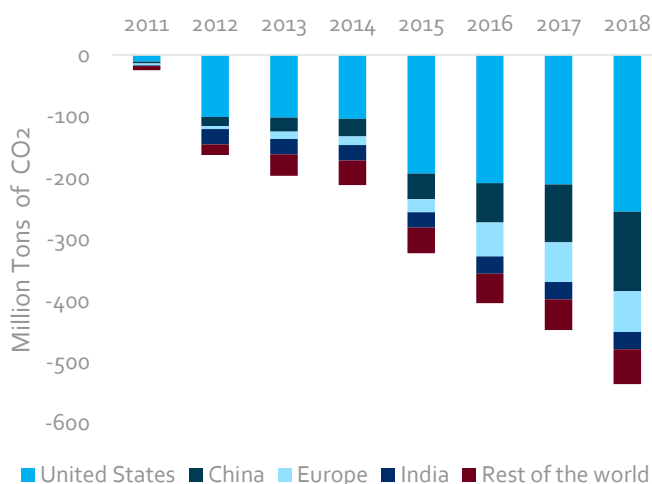
Canacol currently contributes to the development of the natural gas market in Colombia and holds a leadership position in one of the areas with the greatest gas potential in the country (Magdalena Basin). The company currently has 20% of the market and stands behind major Oil & Gas companies such as Ecopetrol and Chevron. This participation, according to the production declaration submitted to Ministry of Energy for the 2020 -2028 period, is expected to remain stable at the 20% level. However, we believe Canacol’s competitive exploration success along with its attractive acreage position will enable the company to gain market participation and reach a 25% level in 2025.

Natural Gas – Energy Transition:

Given its environmental properties gas has been called upon to lead the energy transition towards non-conventional renewable energies. Estimates from the IEA show that, on average, switching from coal to gas reduces emissions by almost 50% for electricity generation and by 33% when supplying heat. The study outlines the importance of enhancing and adopting best practices all along the gas supply chain as efforts on this front have shown to be cost effective and environmentally friendly when it comes to reducing methane leaks. It is important to note that switching to gas on itself does not solve the world’s long term air quality problem, however major gains have been seen since 2010 in terms of CO2 emissions and air quality benefits.

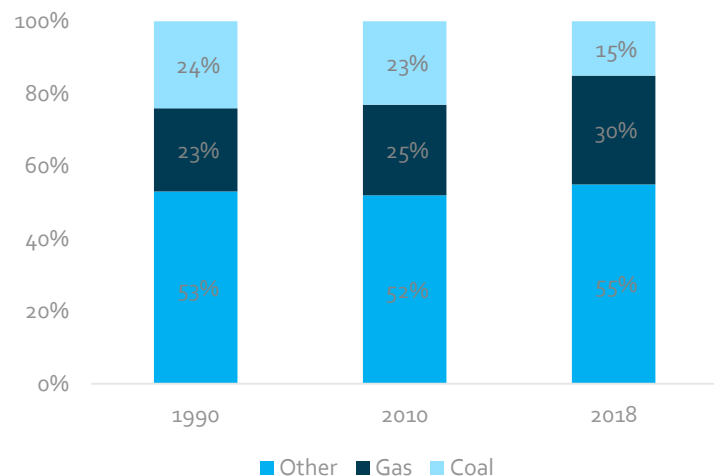
Evidently, the two biggest economies, Unites States and China, are the primary source of CO2 emissions and hence attempts made by these countries on decarbonization efforts have a worldwide effect. In particular, the U.S. the market share of gas has increased from 25% to 30% since 2010.

Graph 26. CO2 savings from coal-to-gas switching



Source: IEA. The Role of Gas in Today’s Energy Transition. 2018.

Graph 27. Share of coal and gas in primary energy (United States)



Source: IEA. The Role of Gas in Today’s Energy Transition. 2018.

On the other hand, the more penetration the renewable non-conventional energy sources have, the better the prospects for the gas sector. This is because non-conventional renewable energies are intermittent by nature. In general, technologies like wind and solar are dependent on the wind blowing and the sun and an appropriate energy storage technology does not exist yet. Hence, natural gas will play an increasingly important role, even more if current carbon, diesel oil, fuel oil and Jet A-1 power generation plants switch from these technologies to gas. Out of a 3.925 MW of power generation capacity (total capacity), 3.647 MW use other technologies different from gas, and 1,835 MW are fueled by imported gas.

Graph 28. CO2 savings from coal-to-gas switching

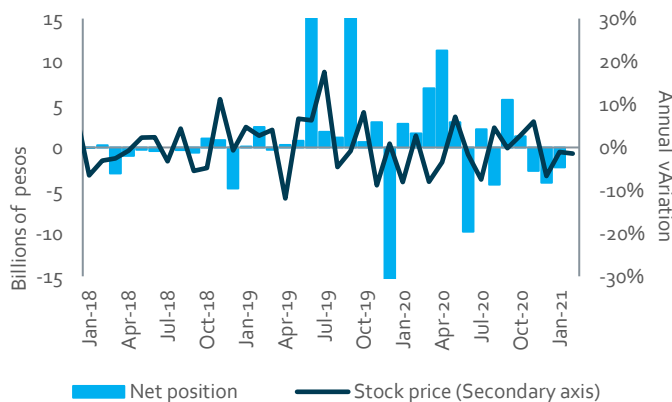
Fuel Used	MW	% of power generating capacity by gas
Imported Gas	1,835	46.8%
Diesel Oil	766	19.5%
Fuel Oil	272	6.9%
Carbon	286	7.3%
Jet A-1	323	8.2%
Total	3,482	88.7%

Source: Misión de la transformación energética – foco 4.

ESG Corporate Governance:

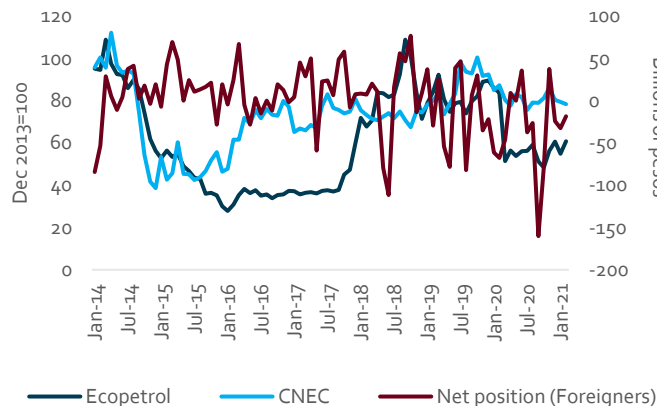
Canacol is committing to ESG investment standards by outlining seven main areas of focus, which includes a Carbon’s emission reduction target, an improvement on health and safety issues, a target to become a more diverse and inclusive workplace environment, the creation of an ESG board committee, and the investment on social and responsible projects, among others. These aspects will continue to be relevant in today’s investors commitment to favor issuers with clear ESF standards, especially among foreign institutional investors.

Graph 29. Net position foreigners - Canacol



Source: Colombian Stock Exchange.

Graph 30. Net position foreigners – Oil and Gas sector



Source: Colombian stock exchange.

Value generating catalysts

Medellin – Jobo gas Pipeline

Canacol plans to increase its transportation capacity by building a 300 km gas pipeline between Jobo and Medellín (see graph 6). Construction will be carried out in conjunction with an infrastructure private equity fund, which will finance approximately 75% of the project. This project will increase Canacol's production by approximately 50% to 300 MMcfpd in 2024.

For this Canacol negotiated a bridge loan of USD 75 MM at a rate of 4.5%. The first USD 25 MM will be employed to finance engineering expenses and environmental licenses until June 2021 according. The remaining USD 50 MM are planned for pipes and other long-term items, according to management reports.

During the term of the bridge loan, Canacol will divest between 75% and 100% of the shares of this subsidiary to a partner, maintaining up to a 25% ownership interest in the project

For the deal to make economic sense for Canacol, the minimum hurdle rate required by the private equity fund has to be the minimum possible, since Canacol will pay gas transportation costs to the investor of this project.

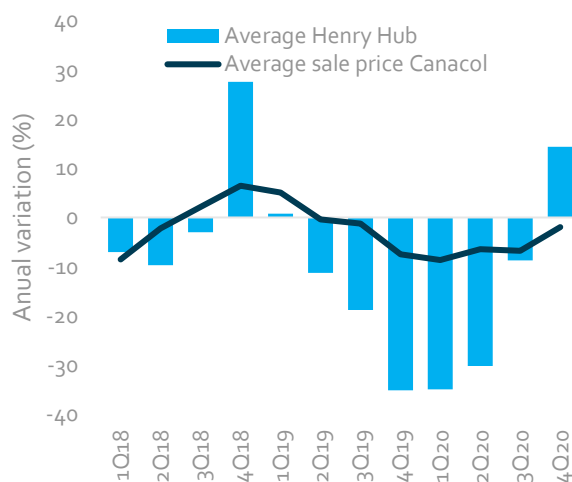
Tesorito power generation plant

The corporation will participate on the construction of a 200 MW power generation plant with a 5% equity ownership, located right next to the Jobo facility plant. The project will allow Canacol to supply gas directly to the power plant, hence no transportation costs will be incurred by the offtaker.

Taking into account delays on the Ituango hydroelectric project, the Tesorito plant will be generating between 50% and 75% capacity, and this translates into 20 to 30 MMcfpd of gas sales beginning in 2021.

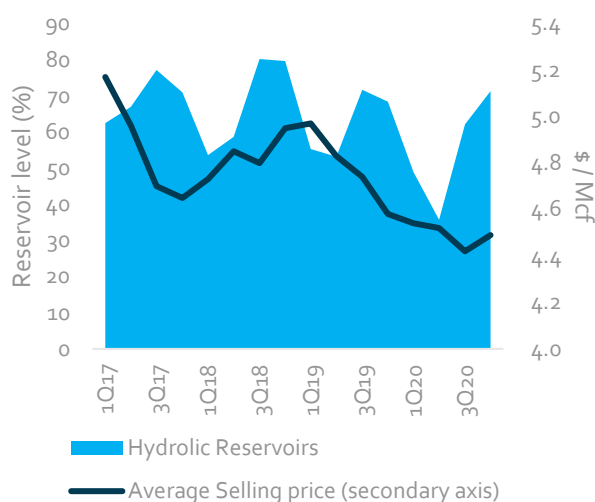
Canacol's natural gas sales price differentials with respect to Henry Hub

Graph 31: Henry Hub and Canacol's gas selling price



Source: Eikon and Canacol.

Graph 32: Reservoirs and Canacol's average selling price



Source: XM and Canacol.

Approximately 90% of Canacol's gas is sold through long-term take or pay contracts (between 12 and 15 years). These contracts are set in U.S. dollars and are indexed to U.S. inflation (CPI). Under this contracting scheme, Canacol guarantees the supply of gas to its clients, that require a stable flow of gas supply to operate. Simultaneously, Canacol ensures a strong layer of cash flow growth as it adds more contracts to its existing portfolio. The remaining 10% corresponds to sales made on the spot market to off takers in the thermo and industrial sectors. Both contract and spot gas prices are influenced by the supply and demand dynamics governing the gas market in Colombia and hence are subject to the level of the hydraulic reservoirs (graph 32).

In 2020, a 15 MMcfpd contract was not renewed, and hence the participation of spot sales increased to roughly 20%. The impact is slightly material with profitability metrics (i.e., Operating Net Back, EBITDA margin, ROE) on average weakening when compared to historical results, yet still strong industry wise.

On the other hand, Henry Hub price dynamics are strongly linked to factors such as energy demand, US dollar exchange rate and gas consumption, in contrast, Canacol's realized gas sale price dynamics evolve over time and exhibit stronger correlation to the level of the hydraulic reservoirs and to local gas dynamic market forces. Historically, Canacol's average selling price have been USD 2.1/Mbtu above Henry Hub's price reference.

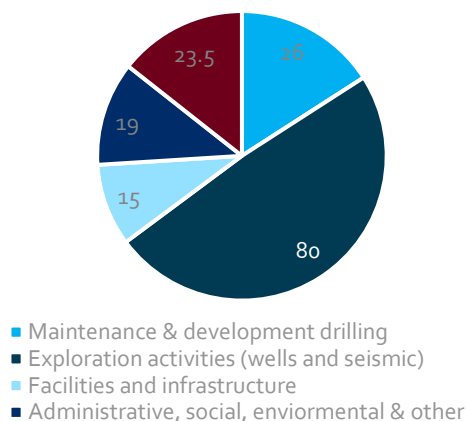
Valuation

Canacol's 2021 Investment Plan

The release of the new investment and drilling plan for 2021 includes the continuation of the possible halt to drilling in the gas fields due to COVID-19 uncertainty. However, less than expected exploration drilling would not affect Canacol's production level in 2021 as current capacity stands at 220 MMscfpd, yet it could have a negative effect on production after 2021. The current capex plan outlines a drilling schedule of 12 wells on the Esperanza, VIM-5 and VIM-21 gas field blocks with an estimated investment of USD 66 million. The drilling program is comprised of 3 development wells and 9 explorations wells, which aims to continue building up reserves and target a 2P replacement ratio of more than 200%. On our view, Canacol's sustained exploration success could add further value as it adds more prospects and leads to its existing portfolio of 1.4 Tcf risked resources. Nevertheless, up-to-date success rate of 80% is hardly difficult to sustain, even if current 3D seismic technology continues.

Total investment relies on an EBITDA forecast between USD 165 MM and USD 210 MM, and natural gas sales on the 153 - 190 MMscfpd range. This should result on a net debt to EBITDA ratio of 1,7x considering the company reduces its debt in USD 12 MM. We continue to expect depressed gas prices in the first half of 2021, mostly improving in 2022 as interruptible gas demand recovers. Canacol expects gas prices to be between 4,10 \$/Mcf and 4,50 \$/Mcf, slightly below our base case scenario and the 2020 average well head gas prices. Notwithstanding, we find that Canacol remains resilient and somewhat shield from current market volatility. Canacol long-term contracts represent about 80% (153 MMscfpd) of total revenue, while the remainder 20% is highly dependable on interruptible gas demand.

Graph 33. 2021 Investment Plan



Source: Canacol.

Graph 34. Financials Forecast

	Take or Pay Contracts Only	High End Guidance
Natural Gas Sales Volumes (MMscfpd)	153	190
EBITDAX (USD MM)	165	210
CAPEX (USD MM)	98	140

Source: Canacol.

Furthermore, Canacol's estimates of average wellhead net backs after operating costs and royalties for 2021 (3.20 \$/Mcf – 3.50 \$/Mcf) are very conservative considering our 2020 end of year estimate of 3.52 \$/Mcf and 2021 forecast. This difference could come as a result of higher royalty expenses and below average gas sales prices.

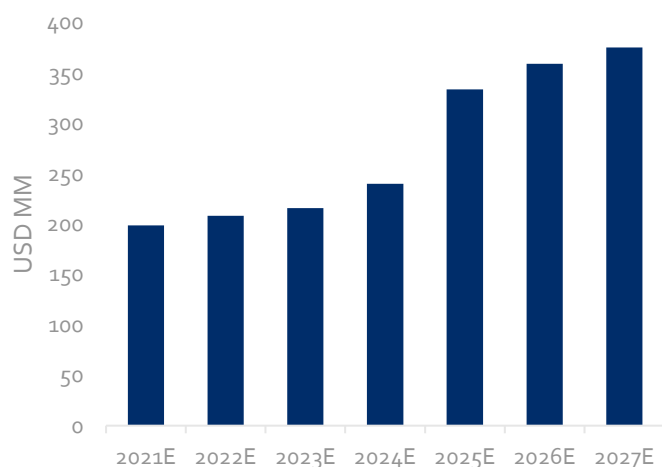
On the other hand, Canacol committed on its 2021 plan on the effective resolution of the Jobo-Medellin gas pipeline agreement, estimating its completion by 2024. For our valuation, as a baseline scenario, we assume the effective delivery of the gas pipeline at the end of the fourth quarter of 2024 (about six months after the date initially agreed). It is important to note, that the performance of Canacol's business operation in the long term is strongly linked to the construction of the Jobo -Medellin gas pipeline, which will connect the Jobo processing plant with the main points of demand on the interior of the country. Delivery on time will result in a target price of \$ 15,211. An additional year of delay would reduce company valuation by almost 15% on our NAV model. Under the worst-case scenario, where the gas pipeline is not delivered and an alternative expansion in transportation capacity is not carried out, the company could see its share price at levels close to 11.000 in the long term.

DCF - Valuation

Based on a DCF approach we value Canacol’s business at USD 859 MM, this represents a 63.9% premium from current market valuation. Financial projections from 2021 to 2026 assume a production compound annual growth rate of 19.7 % driven partially by the completion of the 300 km Jobo – Medellín pipeline and the tesorito 200 MW project. Our analysis includes impact of future employee stock options as well as capital expenditure on exploration, evaluation, and PP&E. In particular we are forecasting a USD 171 MM capital expenditure in 2026 in order to maintain a reserve life index of nine years. This result assumes an 80% exploration success rate. Performing a financial sensitivity analysis by evaluating discount rates (Ke) within a 11.5% - 13.5% range yields a valuation range of COP 17,737 – COP 16,618. Terminal value was evaluated using an implied EV/2P reserve multiple. In this case, our model assumes the company sells its 2P reserves at a USD USD 6.2 /kboe multiple. In other words, we are evaluating the implied value of the company’s 2P resource by dividing enterprise value by the sum of the company’s 2P reserves and our estimate of future expected reserves. The multiple was computed by performing a peer group analysis and correcting for oil and gas business segment multiple discrepancies (The sale price of a barrel of oil differs from the sale price of a gas equivalent barrel of oil).

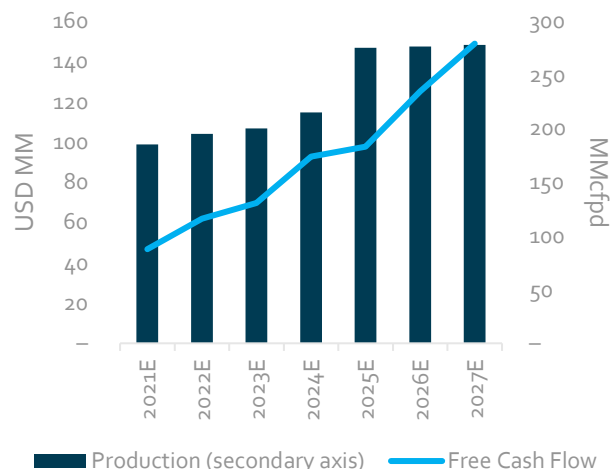
Accordingly, in our model tax rate trends from 31% in 2021 to 30% in 2022 following the tax reform advocated by the government. Likewise, we incorporated in our Model Canacol’s USD 25 MM loss carryforwards which we expect to be used in 2021 and 2022. The absolute dollar amount could vary as it is recorded in pesos. As a reference, Canacol received a USD 25 MM deferred tax expense hit in the first quarter of 2020 as a result of the 24% devaluation of the Colombian peso during this period.

Graph 35. Projected EBITDAX



Source: Corficolombiana.

Graph 36. Free Cash Flow and Production



Source: Corficolombiana.

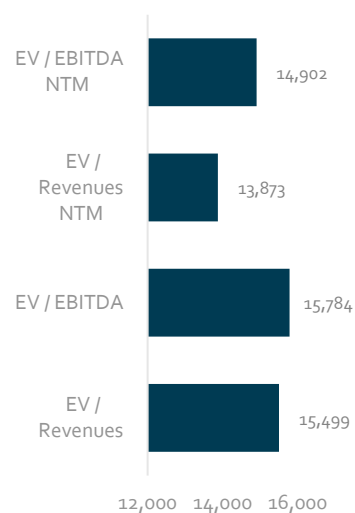
Attractive relative Valuation

Canacol's seems relatively undervalued when compared to its peers on both forward and current EV/ EBITDA and EV/ Revenue multiples. On a Price to Book basis, Canacol's ratio is above its peers average and lower to its 3-year historical average. The latter has to do with the major sell off (risky assets) undertaken in mid-March of 2020 as result of COVID-19, from which prices have recovered to pre-pandemic levels. Also, the difference with its peers does not imply the stock could be undervalued given the non-cyclical nature of Canacol's free cash flows vs its peer's commodity driven cyclical businesses.

By performing a relative valuation, Canacol has an attractive upside potential of 31% with respect to current prices which we think is feasible longer term if upside risks are realized. This includes the effective construction of the Jobo-Medellin Pipeline which should add 100 MMcfd of additional gas sales, the entry into operation of the Tesorito thermoelectric plant (30 MMcfd of additional gas sales) and the successful completion of the drilling schedule outlined by the company, along with a reasonable reserve replacement ratio moving forward.

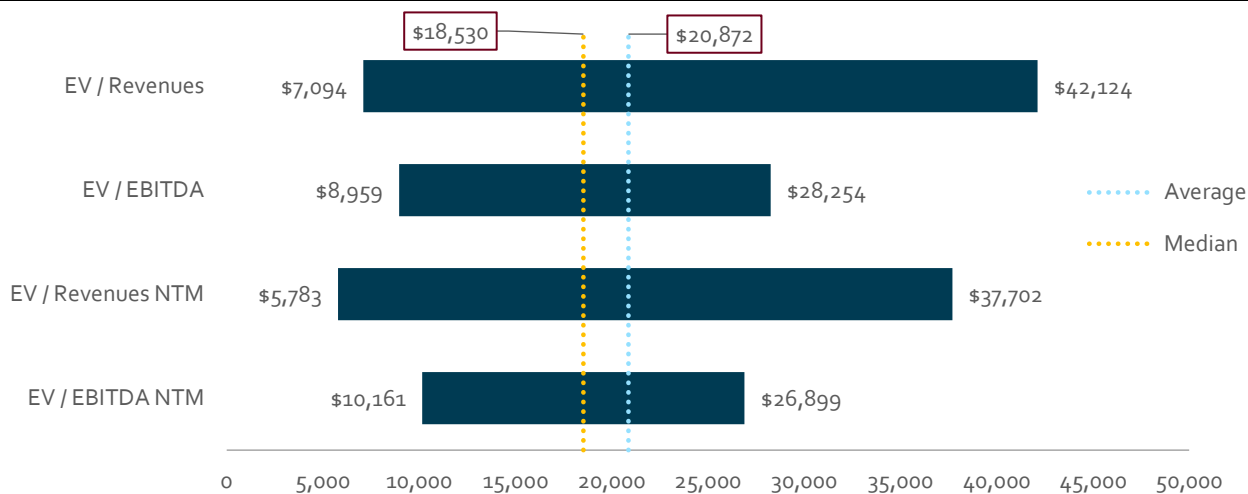
The value of the company could easily stagnate on a scenario where Canacol is not successfully capable of commercialize its gas reserves. Although we recognize the potential of natural gas resources in the mid-Magdalena valley region, where Canacol operates, together with Canacol's successful exploration rate and its ambitious projects in the medium term, a possible breakdown in negotiations with EPM would realize one of our possible downside risks. Immediately, the market would lose confidence in Canacol's ability to successfully commercialize its reserves, despite of its potential 1.4 Tcf prospective gas resources.

Graph 37: Stock prices base on Comparable Multiples (Mean)



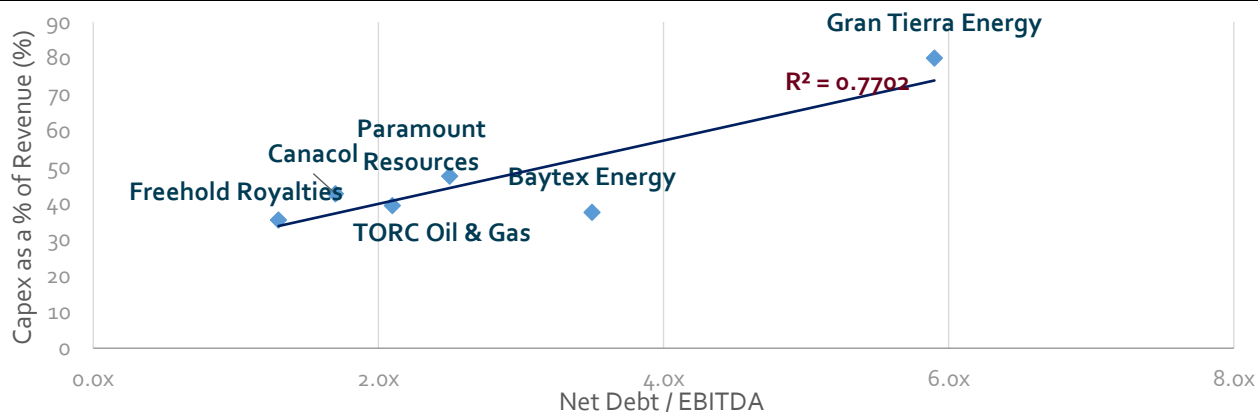
Source: Corficolombiana

Graph 38: Comparable Multiples (Valuation Range)



Source: Corficolombiana.

Graph 39: Comparables: Investment vs Leverage



Source: Corficolombiana.

On the other hand, Canacol maintains healthy leverage indicators with respect to the industry, however part of this result is due to the low level of reinvestment, whose effect has not yet materialized into loss of future potential production due to the relatively low production levels the company has uphold. However, In the medium to long term if the plan of the company is to sustain an average production of 250 MMcfd or more it would require higher capex spending and strict compliance with the drilling plan. In any case we see room for leverage, which, together with the current operating leverage, would result on additional returns.

NAV Canacol

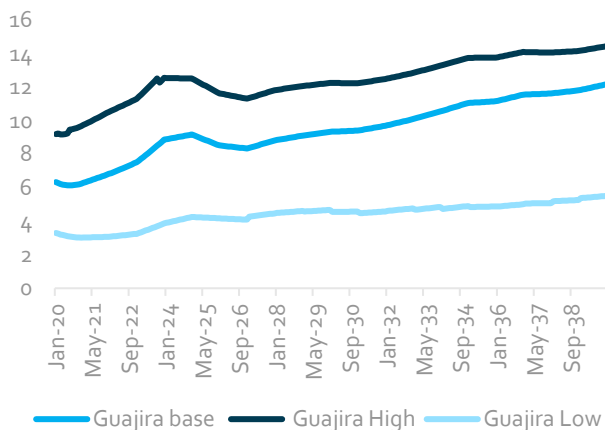
For our valuation exercise using the Net Asset Value (NAV) methodology, we projected cash flows until depleting completely the company’s risk-adjusted resources with existing capex requirements. We are assuming a weakening outlook for gas demand beginning in 2021.

Despite our negative fundamental view on the gas market fueled by the demand disruption, caused by the current economic slowdown, we find that Canacol remains resilient and somewhat sheltered from current market volatility. Canacol’s long-term contracts represent about 80% of its total revenue, while the remainder 20% varies as a function of current gas demand and gas spot prices.

We based our Net Asset Value Model on changing price scenarios. Our valuation model assumes a minimum annual gas production of 170 Mmcfe, fixed in long-term supply contracts. Future sustained production is subject to the company’s drilling capacity, reinvestment of CAPEX, and prospective risk-adjusted reserves. Our base case scenario yields a blended valuation of COP 15,216, and this represents a 42.6% return potential from current market price.

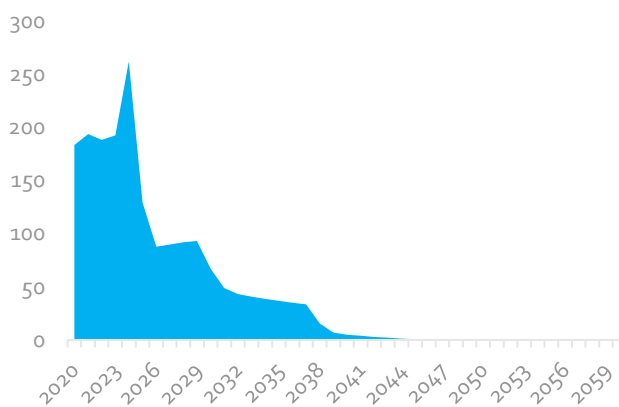
Moreover, to extrapolate the capital investment required to develop and exploit proved undeveloped, probable, and possible reserves, we considered the average historical cost of D&C (Drilling and Completion) per well for the Esperanza, VIM 5 and VIM21 gas blocks. We took the 162 prospects and leads within its 1.4 million net acres of exploration and development area, the company management has alluded to, as a reference. Compliant with with Canacol’s operational and investment capacity, we projected a drilling campaign of 12 wells per year on average, with an estimated Estimated Ultimate Recovery (EUR) of 3.8 Bcfe.

Graph 40. Long Term Gas Prices (\$/Mcf)



Source: UPME.

Graph 41. Canacol’s production schedule (MMcfd)



Source: Corficolombiana.

In line with the reduction of available prospects and the depletion of risk-adjusted reserves, drilling activity gradually decreases, Nevertheless, to the extent that fundamentals of the gas market evolve positively, and considering an upside risk in the formation of wellhead gas prices, we considered additional scenarios with higher drilling activity and henceforth long-term gas production. er drilling activity and henceforth long-term gas production.

With respect to production, for proved developed producing and proved developed non-producing reserves, we assumed a constant decline rate and an initial production rate based on company provided data to the energy department in Colombia. Regarding operational costs and SG&A expenses, in light of the limited information disclosed per gas field, we calculated a historical average cost per Mcf, and assumed a dilution of operational expenses of \$0.22 per Mcf as the company ramps up production in 2024. Going forward we expect these costs to remain constant at these levels indefinitely into the future.

Furthermore, we estimated increasing royalty rates in the later years of operation, as the company gradually depends more heavily on production coming from the VIM5 gas block, which exhibits an additional x-factor royalty of 13%.

Finally, we considered tax depreciation and amortization expense deductibility for cash tax outflows. In general, considering that PP&E reflects the cost of finding reserves, we depreciated Canacol's property, plant and equipment at the rate of depletion of reserves, resulting in higher depreciation expenses in the first years of production, hence, ensuring lower tax cash outflows in the early years of valuation, which enhances present value. Similarly, we included the carry forward net operating losses accumulated up until 2019, as a tax relief for 2020 as company management intends to do.

Upside

Canacol's sustained exploration success could generate more value as it adds more prospects and leads to its existing portfolio of 1.4 Tcf of risk resources. However, up-to-date success rate of 80% is hardly difficult to sustain, especially if current 3D seismic and drilling program investment is not continued into future.

If Canacol wants to further increase its efficiency and become a low-cost gas producer, without affecting its drilling and appraisal program, lowering its D&C costs per well between 10-15% could significantly represent an upside on its implied per share price. According to its MD&A, Canacol's D&C costs varies per gas block, where we estimated that its Esperanza gas field has a current D&C costs of \$6.8 million per well, while VIM5 of approximately \$6.0 million per well.

Downside

Recovery will be conditioned on the length of the mandatory quarantine measures and the speed at which the industrial, petrochemical and transport sectors

resume their activities at full capacity. Therefore, if the rebound takes more time than anticipated, initial production rates will be lower, which impacts present value greatly.

The positive effect of COP/USD depreciation on Canacol's income statement could be partially offset as the sector risks losing competitiveness in the medium future with other types of fuels such as GLP, assuming the price of gas in pesos remains at high levels.

Lastly, exploration failure and investment decision delays, we believe, are downside risks that could potentially lead to lower production and reserve build up, reducing the value of the company.

Abbreviations

Natural gas

Natural Gas	
Mcf	thousand cubic feet
MMcf	million cubic feet
Mscf	thousand standard cubic feet
Bcf	billion cubic feet
Mcfpd	thousand cubic feet per day
MMcfpd	million cubic feet per day
MMBTU	million British Thermal Units
MMBTU _{pd}	million British Thermal Units per day
NGL	natural gas liquids
LNG	liquified natural gas

Oil

Oil	
bbl	barrel
Mbbl	one thousand barrels
MMbbl	one million barrels
bbl _{pd}	barrels per day
Mcf _{pd}	thousand cubic feet per day

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El presente informe fue elaborado por el área de Investigaciones Económicas de Corficolombiana S.A. ("Corficolombiana") y el área de Análisis y Estrategia de Casa de Bolsa S.A. Comisionista de Bolsa ("Casa de Bolsa").

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