EDISON

Canacol Energy

Outlook for operations

Shift towards high-impact drilling

Oil & gas

Canacol's recent independent prospective resources audit has assigned 7.6tcf to the company's Lower and Middle Magdalena Valley (LMV and MMV) assets, up from 1.7tcf in 2021 and with 6.6tcf sitting in the untapped MMV. This will be key to the company's success as it looks beyond its core LMV producing area to secure its targeted reserves replacement ratio of 200% per year (on average). The company's first test of the MMV will be the Pola-1 well spudding in Q322, targeting 470bcf of mean gross risked prospective resources. Success here would be transformational given that Canacol currently holds 607bcf of 2P reserves. We believe the share price does not reflect the exploration upside and value the company at C$6.29/share, more than double the current share price.

Year end	Revenue* (US$m)	Adjusted EBITDAX**(US$m)	Cash from operations (US$m)	Net debt*** (US$m)	Capex (US$m)	Dividend yield (%)
12/20	247	188	152	299	89	5.5
12/21	250	194	124	356	101	6.0
12/22e	263	200	162	453	180	7.8
12/23e	303	239	181	525	187	7.8

Note: *Revenue net of transport expense and royalty. **Adjusted EBITDAX is before non-recurring or non-cash charges and exploration expense. ***Cash and equivalents minus short- and long-term debt.

Resources potential beyond core area

12 wells are planned in the 2022 drilling programme, of which eight will be exploration wells. Three of these exploration wells will be high-impact wells in previously undrilled areas, including Pola-1 in the Cretaceous La Luna reservoir. Pola-1 can be tied in quickly to a nearby pipeline if successful, and Canacol has so far identified 18 further prospects and leads in the La Luna reservoir. In the core LMV area, larger features have been identified on 2D seismic and will be covered by the 470km^2 3D seismic programme planned for this year.

Reserves replacement below target in 2021

Canacol did not meet its target of a 200% reserves replacement ratio (RRR) in 2021, despite adding 70bcf through drilling, up from the 18bcf discovered in 2020. The 54% RRR was due to the company completing only six of the nine planned exploration wells along with a 2P reduction of 34bcf due to technical revisions in existing fields. This underlines the need for the company's strategy of drilling some wells in the MMV where there is potential for high-impact discoveries. Success in Pola-1 alone would equate to three years' worth of RRR at 200% pa.

Valuation: Significantly undervalued

Our total net asset value (NAV) is based on a combination of 2P reserves and additional 'to be developed' risked reserves that we expect to be added over the next five years. We calculate the core NAV at C$2.24/share, to which we add C$4.05/share for additional risked reserves to arrive at our valuation of C$6.29/share, more than double the current share price. We believe the share price does not fully reflect the potential upside from exploration.

25 May 2022

Price	**C$2.75**
Market cap	**C$470m**
	C$1.25/US$
Reported net debt (US$m) at end-Q122	429
Shares in issue	170.9m
Free float	60%
Code	CNE
Primary exchange	TSX
Secondary exchange	BVC

Share price performance

%	1m	3m	12m
Abs	(10.9)	(15.1)	(15.3)
Rel (local)	(6.9)	(13.1)	(18.5)
52-week high/low		C$4.08	C$2.60

Business description

Canacol Energy is a natural gas exploration and production company primarily focused on Colombia.

Next events

Q222 results	Mid-August 2022
Pola-1 well spudding	Q322
VIM 5 seismic acquisition	2022

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Edison profile page

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Investment summary

Gas a key transition fuel for Colombia

Canacol offers investors a pure play on the Colombian natural gas market, a market expected to move into gas deficit in 2024 in the absence of LNG imports. Gas plays an important part in the Colombian government's decarbonisation plans with demand growth forecast at 2.9% per year over the next 30 years under the Modernisation scenario (see Colombian energy transition section). The transportation and industrial sectors are strong growth areas. Canacol is a key component of national demand, currently holding a c 20% market share and which management expects to rise to 30% once the new Jobo to Medellin pipeline comes onstream in late 2024. High exploration and appraisal success rates (historically c 80%) and 7.6tcf of gross mean risked prospective resource should enable a reserves life index (RLI) expansion. Low well costs at c US$5m, excellent reservoir quality and high unconstrained flow rates combined with largely fixed gas pricing contribute to a company that has material free cash flow (FCF) generation potential after investment in new well inventory and shareholder returns.

Valuation

Canacol currently trades 23% above our 2P NAV, with the market ascribing very little value to the additional prospective resource. Our risked NAV of C$6.29/share (based on a WACC of 12.5%) includes an estimated five-year exploration drilling programme with 743bcf risked additional reserves and fully assumes a 200% RRR as we have removed a 30% discount applied previously. This is a result of Canacol's shift to high-impact drilling and the increased potential to access greater resources per well in the untapped MMV. For instance, if successful, Pola-1 could add risked resources of 470bcf (more than 60% of our assumed additional reserves); we assume a c 45% chance of success. In addition, there is significant further upside potential once the planned Medellin pipeline is operational. It could add another c 100 mmscfd of sales by FY25. We do not fully include this upside in our base valuation as we are waiting for project to de-risk. In a scenario that fully reflects the potential volumes from the Medellin pipeline (330mmscfd from FY25), our valuation increases to C$7.70/share. This scenario assumes the additional volumes in FY25 are delivered from 2P reserves and maintains our assumption of 200% RRR, implying 942bcf risked additional reserves. We believe this is achievable given the company's increased gross mean risked prospective resource (of 7.6tcf); it effectively assumes c 12% of this resource could become reserves over the next five years.

Financials: Fixed-price gas contracts provide visibility of FCF

In FY20 and FY21, Canacol sold c 80% of its gas based on fixed-price contracts, with realisations forecast to average c US$4.74/mcf post-transport in FY22. It sells the rest (c 20%) of its gas on the interruptible (spot) market. We believe Canacol's 2022 guidance is conservative as it assumes 0–20% is sold on the spot market, implying sales of 160–200mmscfd, with 160mmscf underpinned by fixed-price contracts. We adopt 185mmscfd in our forecasts, which although above the mid-point of the guidance, still only implies 12.5% is sold on the spot market. We will be monitoring Canacol's monthly sales figures and believe risks are weighted to the upside. With company-guided wellhead netback (after operating costs and royalties) of US$3.60/Mcf, we expect strong operating cashflow generation of US$162m in FY22, an increase of 31% versus FY21 (US$124m) and US$181m in FY23. The company is investing heavily in its high- impact drilling programme as seeks to achieve its 200% RRR target, which will likely result in negative FCF over the next few years but with significant future return potential. Canacol has a solid balance sheet, with reported net debt of US$429m at end-Q122, which includes cash of US$126.1m. Trailing 12M EBITDAX of US$197m implies net debt to EBITDAX of c 2.2x. Q122 EBITDAX increased 6% to $49.6m(versus $46.7m in Q121), this was assisted by a 10% increase in natural gas revenues to $64.3m in Q122, which was due to an increase in production (+2%) and average sales prices (+7%).

Risks and sensitivities

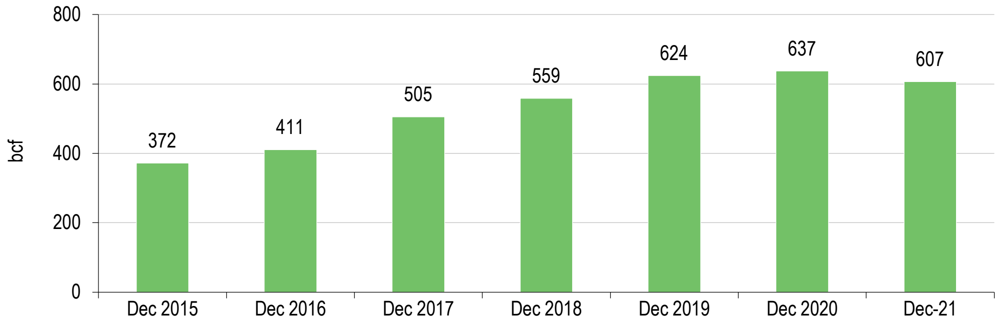
We see the key risk as infrastructure access. Canacol is reliant on Promigas pipeline infrastructure to transport its gas to end-users. While an unforeseeable event limiting gas transport capacity would have a material impact on cash flows, this is mitigated by the fact that pipeline availability has been in excess of 95% since operations began and through comprehensive business insurance. Other key risks include Colombian geopolitical risk and exploration success rates. Exploration and appraisal success in 2021 dropped from the historical average of 80% to 62%, and three of the six exploration wells drilled were dry holes, which, together with a downward technical revision, saw 2P reserves drop by 4.8% to 607bcf.

A total of 6.6tcf in the Middle Magdalena Valley

As Canacol looks beyond its core Lower Magdalena Valley (LMV) producing area to meet its target reserves replacement ratio of 200%, its recent independent prospective resources audit shows the scale of what the Middle Magdalena Valley (MMV) has to offer. Boury Global Energy Consultants (BGEC) estimates that, as of December 2021, the company's LMV and MMV exploration blocks hold 7.6tcf of gross mean risked prospective resources, a huge increase from Gaffney Cline & Associates' December 2020 estimate of 1.7tcf. The bulk of this, at 6.6tcf, sits in the Cretaceous reservoirs of the MMV, underpinned by 18 prospects and leads. The addition of on block resources in the VMM 10-1 and VMM 53 blocks (Exhibit 3) in the MMV contributed the most to this increase. The first test of this new area will be the Pola-1 exploration well, due to be drilled in Q322 and targeting 470bcf of mean gross risked prospective resources. Success here would be transformational for the company, given that existing 2P reserves are 607bcf.

Canacol discovered 70bcf in 2021, with a higher-than-average 23bcf added per exploration well drilled in the year. This was achieved despite only six exploration wells being drilled over the year versus the nine originally planned. However, a downward technical revision of 34bcf resulted in a 4.8% decrease in 2P reserves to 607bcf. The company had previously seen continuous growth since 2015. Canacol has an RLI of 8.3 years based on gas production of 200mmscfd, in line with company high-end guidance for 2022. To achieve a reserves replacement ratio of 200% per year, we estimate that the company will need to maintain a drilling programme of 12–16 wells per year and to move beyond its existing licences. In 2022 Canacol is planning to drill up to 12 wells, of which three will be high-impact exploration wells, including Pola-1. 470km^2 of 3D seismic will also be acquired in block VIM 5 to mature a number of larger leads identified on 2D.

Exhibit 1: Canacol 2P gas reserve evolution (bcf)



Source: Canacol Energy

Beyond the drilling programme and seismic acquisition, Canacol is progressing its selection of a contractor for the Jobo to Medellin pipeline which will add 100mmscfd of gas sales to the interior from 2024 and increase the company's share of Colombian gas supply to 30%. Canacol has received binding offers from four different international pipeline construction consortiums, several of which include the option to upsize the initial capacity to 200mmscfd at the company's request. Having secured an 11 year take or pay sales contract with Empresas Publicas de Medellin for 54mmscfd, Canacol is negotiating further similar contracts for the remaining 46mmscfd of initial capacity. The company also plans to lower operating expenses through the rental of facilities equipment and the installation of gas compression.

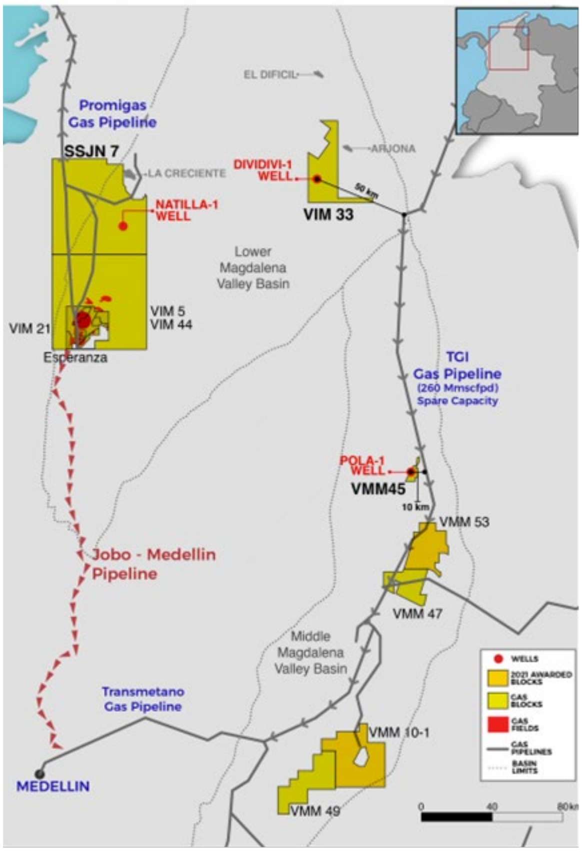
Gas sales of 181.8mmscfd for Q1 2022 were up 2% on the same period in 2021, and this sits around the mid-point of 2022 guidance of 160–200mmscfd.

During the first half of 2022, we expect Canacol to announce its short- and medium-term carbon emission reduction targets, together with a projected timeline for achieving net-zero emissions. The company strives to achieve scope 1 and 2 GHG emissions intensities that are at least 40% lower on average than gas focused peers (and 90% lower on average than oil focused peers) in North and South America. Ahead of the company's emission reduction announcement, we take a closer look at the energy transition in Colombia in this note.

High-impact opportunities in 2022

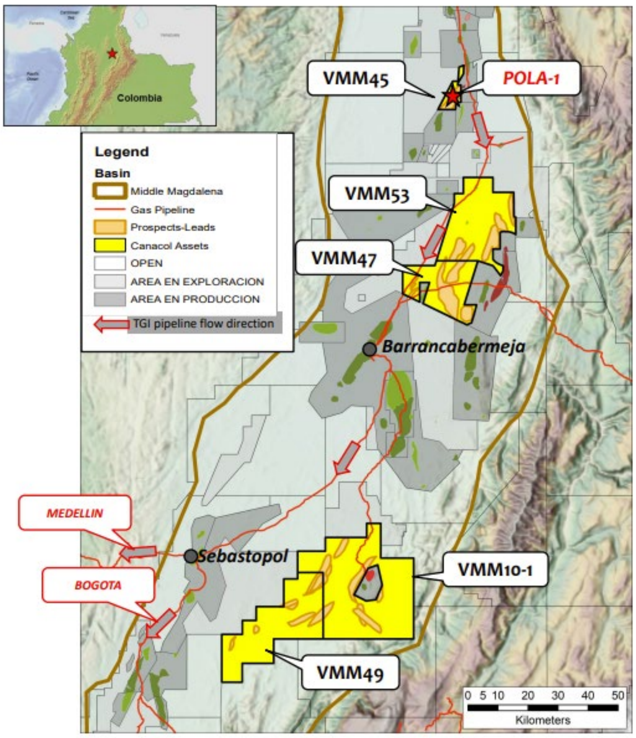
Canacol is continuing to target a RRR of 200% per year, on average. To achieve this, the company will drill up to 12 wells in 2022 and will target larger than average resources, with up to eight of the wells expected to be exploration wells. The programme will also include three high-impact exploration wells in new areas, including one in the new core area of the MMV. Canacol is planning a multi-year exploration programme here, including 3D seismic acquisition and exploration drilling to evaluate this high-potential conventional gas play. In the LMV, the company will high-grade larger prospects and focus on targeting three-way faulted closures in upthrown blocks since these have historically been the most successful. The company plans to acquire 470km^2 of 3D seismic across the VIM 5 licence in 2022 to mature these leads into prospects.

Exhibit 2: Canacol acreage with 2022 high-impact well locations



Source: Canacol Energy

Exhibit 3: MMV acreage with prospects and leads

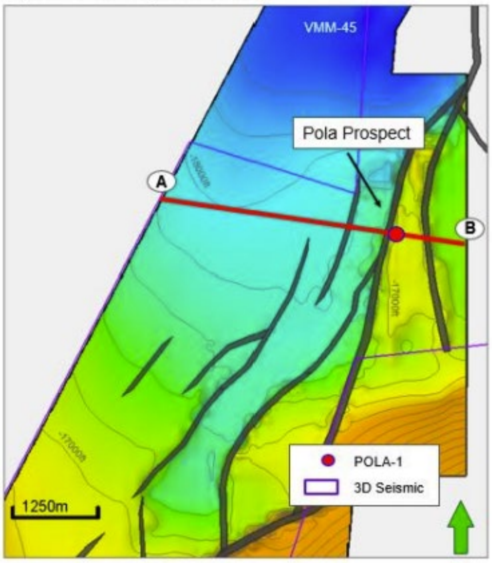


Source: Canacol Energy

Extending exploration activity into the MMV is key to allowing access to larger exploration resources in order to replace declining production from the mature Llano Basin fields, and success here would rival the LMV as a core producing area for the company. The area has a long history of oil and gas production from multiple reservoirs. The deep Cretaceous La Luna gas play consists of up to 3,300ft of marine carbonates and clastics and is the primary source rock for most of the proven oil and gas reserves in Colombia, Venezuela and Ecuador, being productive in various oil and gas fields in Colombia. Canacol has acquired a 100% working interest (WI) in five blocks in the MMV over the last three years, covering 610,981 net acres.

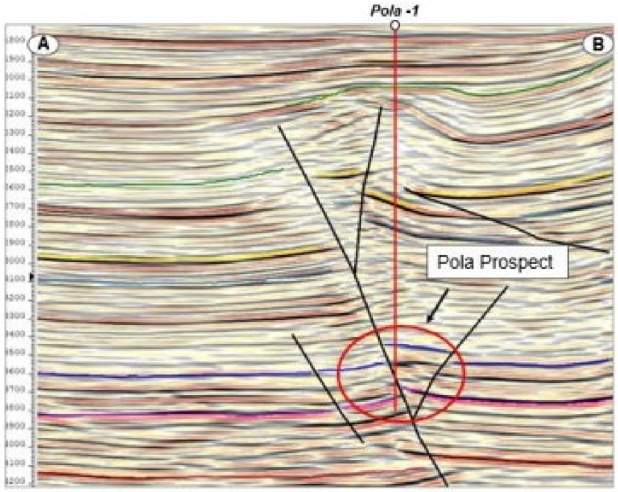
The first of the company's wells to target the La Luna reservoir will be the Pola-1 well, which sits at the northern end of the play in VMM 53 and has been independently assessed by BGEC to hold gross mean risked resources of 470bcf. Pola-1 sits in an uplifted structure that is intensely fractured and the well will be drilled through a major fault. The well will be drilled to a target depth of 17,370ft, compared to the 7,000–9000ft wells typically drilled in the LMV, and this, together with a higher pressure profile, will result in a higher well cost of c US$30m (compared to c US$5m in the LMV). Pola-1 is due to spud in Q322 and is expected to take around five months to drill, complete and test. Key risks for the well will be the presence of fractures and their connectivity. In the event of success, the well location can be tied into the Transmetano Gas Pipeline (TGI), c 10km away, which connects the interior to Bogota and Cali, and has spare capacity.

Exhibit 4: Pola-1 depth structure



Source: Canacol Energy

Exhibit 5: Pola-1 3D seismic line



Source: Canacol Energy

Two further high-impact wells are also planned in previously undrilled areas of the LMV in 2022. In the VIM 33 licence, the Dividivi-1 well will target the Cienaga de Oro (CDO), the primary producing reservoir in Canacol's acreage. VIM 33 sits c 80km east of the company's core producing area, and here the CDO produces from the nearby Aronja and El Dificil gas condensate fields. The Dividivi-1 location sits 50km to the west of the TGI pipeline, allowing tie-in of the well if successful.

The Natilla-1 exploration well will be drilled on the SSJN-7 E&P Contract where Canacol has a 50% operated working interest. The company acquired 185km^2 of 3D seismic on the block in 2021, and identified 10 gas prospects, Natilla being the largest. The Natilla-1 exploration well is situated midway between Canacol's gas fields located approximately 60km to the south, and the Frontera operated La Creciente gas fields located approximately 30km to the north. The well will target gas-bearing reservoirs within the CDO and Porquero sandstone along an exploration fairway that connects the La Creciente gas fields to the north with Canacol's producing gas fields to the south.

2022 programme successfully underway

The first three wells in the programme have already been successfully drilled. The Toronja-2 well encountered 29ft true vertical depth (TVD) net gas pay in the Porquero sandstone and has been placed on production. The first exploration well, Carambolo-1, discovered a 67ft gas column in the CDO, and has been cased as a gas discovery., while the Chirimia sidetrack 20ft net gas pay in the CDO. The rig is now drilling Alboka-1 also targeting the CDO.

Exhibit 6: 2022 key wells

Well	Block	Type	Result
Toronja-2*	VIM 21	Development	Gas
Carambolo-1*	VIM 21	Exploration	Gas
Chirimia-1 ST*	VIM 5	Development	Gas
Alboka-1	VIM 5	Exploration	
Cornamusa-1	VIM 21	Exploration	
Natilla-1	SSJN 7	Exploration	
Pola-1	VMM 45	Exploration	
Dividivi-1	VIM 33	Exploration	

Source: Canacol Energy. Note: *Wells drilled/underway.

A second rig has been contracted and mobilised to drill Cornamusa-1 targeting the CDO in a faulted anticlinal closure defined on 3D seismic and exhibiting the signature amplitude versus offset (AVO) response that has underpinned the company's high historical exploration and appraisal drilling success rate (of c 80% between FY16-21).

Reserves replacement below target in 2021

Canacol's 2021 drilling programme delivered 12 wells as planned, however the number of exploration wells was fewer than originally expected, with six exploration wells drilled instead of nine. In addition, out of the six exploration wells drilled, only three were gas discoveries. Nevertheless, these three discoveries – Aguas Vivas in VIM 21, San Marcos-1 in Esperanza and Siku-1 in VIM 25 – added 70bcf to 2P reserves, giving an average of 23bcf per discovery. This is broadly in line with an addition of 69bcf from discoveries in 2019 and an improvement on the c 18bcf added in 2020.

Despite the exploration successes, the target RRR of 200% was not met, reaching only 54% in 2021. Technical revisions at the Cañahuate field in Esperanza and the Oboe field in VIM 5 resulted in a c 34bcf reduction in 2P reserves (cf the over 55bcf positive contribution from technical revisions to 2P reserves in 2020).

Colombian energy transition: Gas as a transition fuel

Canacol is committed to strengthening its environmental, social and governance (ESG) strategy. The company supports global goals to meet the Paris Agreement targets as well as Colombia's commitment to a 51% reduction in emissions by 2030, in which natural gas will play a crucial role in a fair and equitable transition.

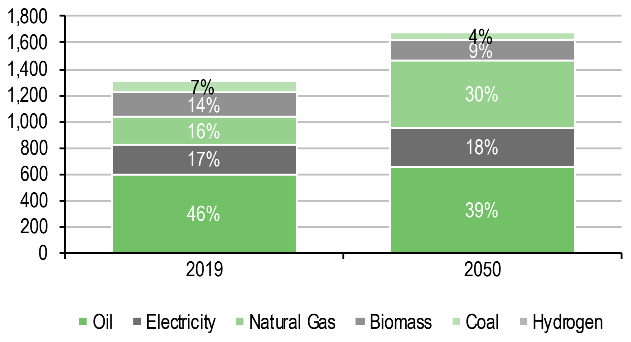
Colombia's Plan Energético National (PEN) is the national energy plan that sets out the country's long-term vision for its energy sector. The document provides four possible scenarios that could be followed to achieve Colombia's energy transition from 2019 out to 2050.

These four scenarios are:

- Upgrade: brings together initiatives that are generally expected to be implemented.
- Modernisation: a transitory path towards decarbonisation.
- Inflection: a new energy era that addresses the start of the electrification of the economy.
- Disruption: technologies that are currently at an incipient stage of development and would involve large investments and substantial changes in the global energy structure.

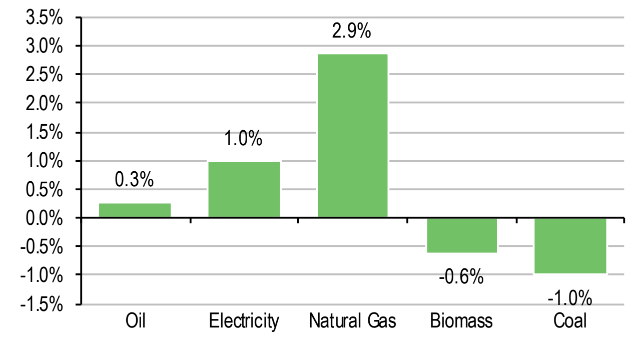
Here we focus on the modernisation scenario, which sets out a transitional pathway requiring additional funding beyond current confirmed levels. This scenario sees the gas share of the fuel mix increase from 16% in 2019 to 30% in 2050 (Exhibit 7), making it the most dominant of the transitional fuels. Although the share of oil under this scenario is higher than for gas, at 39%, this is on a downward trajectory, having fallen from a share of 46% in 2019.

Exhibit 7: Fuel mix 2019 to 2050 (Modernisation scenario) (PJ)



Source: Plan Energético National 2020–50

Exhibit 8: CAGR 2050 (Modernisation scenario)

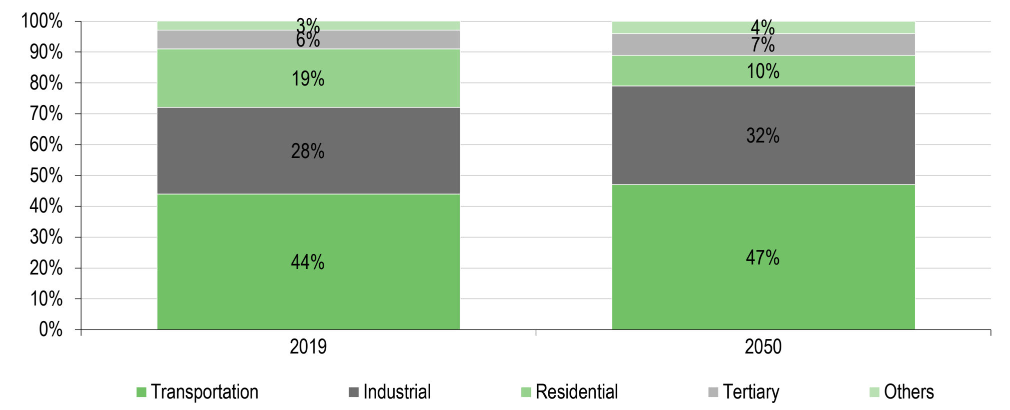


Source: Plan Energético National 2020–50

Exhibit 8 shows that gas sees the strongest growth across the fuel mix under this scenario, with a compound annual growth rate (CAGR) of 2.9%, almost three times higher than electricity. Gas maintains the highest growth across all scenarios, with the exception of the disruption scenario, in which electricity would be expected to grow at 2.4% pa, with gas coming second at 1.3%, and all other fuels seeing negative growth.

Energy demand is dominated by the transportation and industrial sectors, which account for 72% of energy demand in 2019, rising to 79% in 2050, and as such are the strongest growth areas for gas.

Exhibit 9: Energy demand per sector



Source: Plan Energético National 2020–50

Management

Charle Gamba – president and CEO: Mr. Gamba is currently the President and Chief Executive Officer of Canacol, a role he has held since he founded the Corporation in 2008. Mr. Gamba has 28 years of international oil and gas experience, and has previously worked for Imperial Oil, Canadian Occidental Oil and Gas, Occidental Petroleum, and Alberta Energy Company in Southeast Asia, the Middle East, West Africa, Canada, and Latin America. He has served on the board of directors of several publicly listed and private oil and gas companies where he held positions on the ESG, audit, reserves, HSE and compensation committees. Mr. Gamba currently sits on the board of the Asociacion Colombiana de Petroleo and Naturgas, two industry groups that form upstream, midstream and downstream policy for the oil and gas industry in Colombia. Mr. Gamba holds a B.Sc., M.Sc. and PhD in Geology.

Jason Bednar – CFO: Mr. Bednar is a Chartered Professional Accountant with more than 25 years of direct professional experience in the financial and regulatory management of oil and gas companies listed on the TSX, TSX Venture Exchange, American Stock Exchange and Australia Stock Exchange. In 2008, he was a founding director and Chair of the Audit Committee of Canacol and in 2015 he resigned from this position to become Canacol's CFO. Mr. Bednar has been the CFO of several international oil and gas exploration and production companies, most notably the founding CFO of Pan Orient Energy Corp., a Southeast Asian exploration company. He has previously sat on the board of directors of several internationally focused exploration and production companies. Mr. Bednar holds a Bachelor of Commerce degree from the University of Saskatchewan.

Ravi Sharma – COO: Mr. Sharma has 30 years of oil and natural gas experience in the Americas, the Middle East, Russia, Australasia, and Africa. He has held senior management roles at major exploration and production companies worldwide. He was Head of Production & Operations with Afren Plc., Global Petroleum Engineering Manager for BHP Billiton Petroleum and Worldwide Chief Reservoir Engineer for Occidental Oil & Gas Company. Mr. Sharma holds a B.Sc. and M.Sc. in Mechanical Engineering from the University of Alberta.

Mark Teare – SVP exploration: Mr. Teare has 35 years of experience with international Canadian energy companies in Brazil, Ecuador, Colombia, Argentina, Australia, and Canada. Over the nine-year period prior to joining Canacol, Mr. Teare held a series of senior management roles at EnCana Corporation including Country Lead for Brazil, and Vice President of Exploration and Joint Ventures in Ecuador. Mr. Teare also held a variety of lead technical roles at Alberta Energy Company in Australia, and Home Oil Company in Argentina and Canada. Mr. Teare holds a M.Sc. in Geology from McGill University.

Sensitivities

Generic sector risks are as follows:

- Commodity price: as with all companies operating in the upstream oil and gas sector, returns are driven by underlying commodity prices. Canacol is not immune, with the bulk of the company's gas sales leveraged to contracted gas prices. Over 80% of gas is currently contracted, with average pricing after transport of c US$4.37/mcf in 2021.
- Supply chain: upstream project returns are driven by a combination of commodity price, project operating and capital costs and fiscal regimes. An important consideration is the availability and cost of equipment and personnel.
- Political: risks are largely specific to the country of operation. The Colombian oil industry continues to be affected by pipeline attacks, with Ecopetrol recording that 51 attacks occurred on oil infrastructure in 2020. The 770km Caño Limon is a top target for bombings and suffered several attacks in 2021, according to Ecopetrol. In most instances, operators find alternative routes for production and exports. Gas pipeline attacks appear to be far less common; Canacol has never experienced any attacks.

Company-specific risks are as follows:

- Fiscal/country risk: Canacol's operations are geographically concentrated. On a standalone basis, the company is exposed to changes in fiscal terms and perceived country risk. Fiscal terms are viewed as compelling relative to other comparable jurisdictions, with low royalty rates and tax offsets.
- Geological: Canacol is focused on a proven basin with proven play types and high historical exploration and appraisal success rates across its core area (VIM 21, VIM 5, Esperanza and SSJN 7, VIM 19, VIM 33). From 2022 it will also commence drilling beyond this area in new

licence VMM-45 in the MMV. Geological risk is typical of an exploration-biased independent E&P, but reduced through the company's historical success and ability to tie AVO anomalies to gas-bearing sands.

- Financial: Canacol is well financed with reported net debt of US$429m at end-Q122, which includes cash of US$126.1m. Trailing 12M EBITDAX of US$197m implies net debt to EBITDAX of c 2.2x. We expect strong growth in operating cashflow, with good visibility (more than 80% of revenue from fixed-price contracts), driven by a continued increase in production, coupled with solid wellhead netbacks (US$3.60/Mcf in FY22e). However, heavy investment in the coming years will drag on near-term FCF, as Canacol pursues its targeted 200% RRR per year (on average).
- Major shareholders: Fourth Sail Capital is the largest shareholder of Canacol with a 20.5% participation. The second major shareholder is Cavengas, which holds a c 19.1% stake, followed by BlackRock (6.3%). Fourth Sail Capital is a privately held boutique asset manager focused on investment opportunities throughout Latin America. Cavengas Holdings is a Barbados-based private investment company with a focus on the energy and mining industries. Both Cavengas and Fourth Sail have representatives on Canacol's Board of Directors.

Valuation and financials

We update our valuation to reflect the FY21, and Q122 results, end-2021 2P reserves, our adjusted expectations of Canacol's exploration programme (and assumed reserves additions) and a more conservative outlook on long-term gas prices, consistent with the company's reserves auditor and reflected in the end-2021 reserves data.

Exhibit 10: Old versus new forecasts

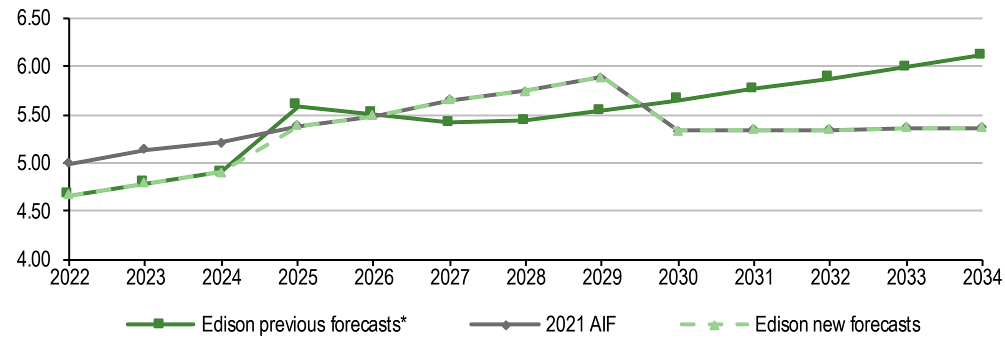
	New	Old	Difference	Comment
Valuation (C$/share)				
Adjustments*	(3.63)	(2.84)	28%	Mostly higher net debt (end-FY21 net debt used rather than end-FY20) but some impact from higher SG&A costs.
Producing assets	5.85	5.70	3%	
Core NAV	2.24	2.86	-23%	Higher adjustments
Additional reserves	4.05	2.83	43%	Remove cautious 70% discount on reserves replacement
Valuation	6.29	5.69	10%	
Select financial results (US$m, unless otherwise stated)				
FY21**				
Production (mmscfd)	183	183	0%	
Pricing (US$/mmscfd)	4.35	4.35	0%	
Revenue	250	241	4%	Change in production mix***
EBITDAX	194	197	-1%	Increase in SG&A overriding the increase in revenue
CFO	124	150	-18%	Working capital outflow combined with non-recurring items not included in previous forecasts
Capex	101	108	-6%	Lower exploration spend capitalised
FY22e				
Production (mmscfd)	185	180	3%	Sales run rate for Jan-Apr 2022 is 3% higher than Jan-Apr 2021****
Pricing (US$/mmscfd)	4.67	4.67	0%	
Revenue	263	255	3%	Higher production/volumes sales
EBITDAX	200	197	2%	Higher revenue partially offset by increased SG&A
CFO	162	158	3%	Higher cash earnings (EBITDAX)
Capex	195	190	3%	Higher production
FY22-25e				
Production	846	819	3%	Ripple effect of higher production in FY22
Capex	745	725	3%	Higher production (at same F&D costs per mscf)

Source: Canacol data, Edison Investment Research. Note: *See Exhibit 12 for composition of adjustments. **For FY21, 'new' are reported figures and 'old' are previous Edison forecasts. ***Increased portion of production from VIM 21 gas field at a lower royalty rate than VIM 5 and Esperanza. ****Our new FY22 production forecast is still only 1% higher than FY21, as we remain cautious for now.

Gas price assumptions

We adopt the latest Boury Global Energy Consultants compiled gas price assumptions in our model from FY25, consistent with the long-term prices in Canacol's Annual Information Form (AIF) published with the FY21 results. For FY22–24, we adopt the mid-point of Canacol's guidance for FY22 (US$4.67/Mcf), which is consistent with the average realised sales price in Q122 of US$4.66/mcf, and increase by inflation of 2.5% pa for FY23 and FY24. Our previous forecasts followed the same profile for FY22–24 then adopted the forecast in the 2020 AIF. The differences between our previous forecasts, new forecasts and 2021 AIF are shown in Exhibit 11.

Exhibit 11: Change in gas price assumptions (US$/mcf)



Source: Canacol Energy, Edison Investment Research. Note: *Edison previous forecasts were in line with the 2020 AIF from 2025.

Additional expected reserves added from exploration

In our valuation, we include an estimate of additional reserves added from the ongoing drilling programme over the next five years. Based on our analysis outlined at the start of the previous section, we estimate that additional 2P reserves of 743bcf will be added over 2022–26. Based on an estimated NPV of C$0.78/mcf, this equates to potential additional value of US$580m, or C$4.05/share. This is notably higher than our previous estimate of US$423m (or C$2.83/share) and is driven by us relaxing our 70% discount on the company's targeted RRR of 200%. We have increased confidence that the 200% RRR can be achieved following the company's shift to drilling higher impact wells. For instance, if successful, Pola-1 could add risked resources of 470bcf (more than 60% of our assumed additional reserves); we assume a c 45% chance of success.

In calculating the NPV/mcf for additional reserves, we assume there will be an increase in capex as a result of increased exploration activity. This results in negative FCF in the near term (2021–24), but should assist a significant increase in production from 2025 once the Medellin pipeline is complete; we assume a production plateau of 330mmscfd.

Valuation implications

Our core NAV for Canacol decreases from C$2.86/share to C$2.24/share, mainly as a result of rolling our valuation date forward one year and thus adjusting for FY21 net debt of US$356m, or US$369m when adjusted for shares repurchased in Q122 (C$2.58 per share) as opposed to FY20 net debt of US$307m (C$2.05 per share) previously (which was adjusted for share buybacks during FY20), combined with an increase in SG&A (C$1.12 per share versus C$0.90). The contribution to core NAV from producing assets stays roughly the same. This is due to the decrease in 2P reserves (from 637bcf at end-FY20 to 607bcf at end-FY21) being offset by higher near-term production and a more favourable field production mix from a royalty perspective. However, our valuation of additional reserves increases from C$2.83 per share to C$4.05 per share, due to our increased confidence that Canacol can achieve its 200% RRR target, resulting in total NAV increasing by c 10% from C$5.69/share to C$6.29/share. The breakdown of our base case valuation is shown in Exhibit 12.

Exhibit 12: Base case valuation

Asset				Recoverable reserves			Net risked value	
	Country	Diluted WI	CoS	Gross	Net WI	NPV	Absolute	C$/share**
		%	%	bcf	bcf	$/mcf	$m	12.5%
Net (debt) cash end FY21*							(369)	(2.58)
SG&A - NPV of 5 years							(161)	(1.12)
Decommissioning provisions							(26)	(0.18)
Cash in from assumed exercise of options							35	0.25
Producing assets								
Esperanza	Colombia	100%	100%	190	190	1.32	252	1.76
VIM 21	Colombia	100%	100%	57	57	2.07	117	0.82
VIM 5	Colombia	100%	100%	360	360	1.31	473	3.30
Core NAV				**607**	**607**		**321**	**2.24**
Exploration/development upside								
5 year programme (assumes 200% RRR)		100%	100%	743	743	0.78	580	4.05
Total NAV				**1,349**	**1,349**		**901**	**6.29**

Source: Edison Investment Research. Note: *Adjusted for shares repurchased since year-end. **We use fully diluted number of shares of 179.1m.

Discount sensitivity rate

We have used a generic discount rate of 12.5% in our valuation. This is in line with that used for funded, cash-generative E&Ps with operations in emerging markets, resulting in our valuation of C$6.29/share. At a 10% discount rate, it would increase to C$6.95/share. We provide a sensitivity to this key input below.

Exhibit 13: 2P and risked exploration NAV sensitivity (C$/share) to WACC

	8.0%	10.0%	12.5%	15.0%
2P NAV	3.53	2.90	2.24	1.69
Total NAV	7.57	6.95	**6.29**	5.73

Source: Edison Investment Research

Medellin pipeline scenario

There is significant further upside potential once the planned Medellin pipeline is operational. It could add an additional c 100 mmscfd of sales by FY25. We do not fully include this upside in our base valuation as we are waiting for project to de-risk. In a valuation scenario that fully reflects the potential volumes from the Medellin pipeline (330mmscfd from FY25), our valuation increases to C$7.70/share, 22% above our base-case valuation and almost triple the current share price of C$2.75. The increase in valuation is due to increased near-term utilisation of 2P reserves (production of 330mmscfd in FY25 versus 216mmscfd in our base case) and corresponding increased additional reserves, assuming the 200% RRR is achieved; additional reserves would increase from 743bcf to 942bcf. This increased estimate equates to the equivalent of two successful Pola-1-sized discoveries in the next five years, so is not inconceivable given the company's shift to high-impact drilling and 7.6tcf of gross mean risked prospective resources, including 6.6tcf in the untapped MMV

Exhibit 14: Full Medellin pipeline valuation

Asset				Recoverable reserves			Net risked value	
	Country	Diluted WI	CoS	Gross	Net WI	NPV	Absolute	C$/share**
		%	%	bcf	bcf	$/mcf	$m	12.5%
Net (debt) cash end FY21*							(369)	(2.58)
SG&A - NPV of 5 years							(161)	(1.12)
Decommissioning provisions							(26)	(0.18)
Cash in from assumed exercise of options							35	0.25
Producing assets								
Esperanza	Colombia	100%	100%	190	190	1.44	274	1.92
VIM 21	Colombia	100%	100%	57	57	2.20	125	0.87
VIM 5	Colombia	100%	100%	360	360	1.38	496	3.46
Core NAV				607	607		367	2.57
Exploration/development upside								
5-year programme (assumes 200% RRR)		100%	100%	942	942	0.78	735	5.13
Total NAV				1,549	1,549		1,102	7.70

Source: Edison Investment Research. Note: *Adjusted for shares repurchased since year-end. **We use fully diluted number of shares of 179.1m.

Relative valuation

Canacol trades at a P/CF multiple of 2.9x in FY22e and 2.6x in FY23e compared to its Canadian (junior) E&P peers on 3.1x and 3.3x respectively and its North American E&P peers with South American operations on 1.6x and 1.8x respectively. North American E&P peers with South American operations include Frontera Energy, Gran Tierra, Parex Resources, Petrotal and GeoPark.

Exhibit 15: Peer group valuation

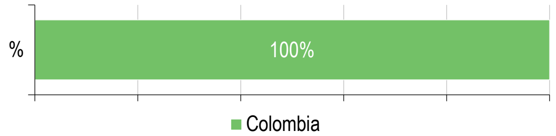
	Market cap (US$m)	EV (US$m)	P/CF FY22e (x)	P/CF FY23e (x)	EV/ EBITDA FY22e (x)	EV/ EBITDA FY23e (x)	FCF yield FY22e(%)	FCF yield FY23e (%)	Div yield FY22e (%)	Prod growth FY23e (%))	EV/kboed FY22e (x)
Canacol Energy Ltd	351	725	2.92	2.56	3.52	3.09	-0.06	0.04	0.06	0.08	21.8
North American E&P peers with South American operations	**1,009**	**1,246**	**1.58**	**1.79**	**2.05**	**2.12**	**0.26**	**0.22**	**0.01**	**0.25**	**35.8**
Frontera Energy Corp	769	1,070	2.60	1.88	3.11	2.51	-1.30	0.18	0.00	6.30	28.1
GeoPark Ltd	788	1,406	4.57	2.35	4.79	3.69	8.50	0.15	0.77	-1.46	37.2
Gran Tierra Energy Inc	317	991	1.54	0.93	3.84	2.60	17.52	0.43	0.00	18.95	37.1
Parex Resources Inc	2,350	1,991	4.21	3.36	2.89	2.46	12.71	0.11	2.18	13.78	42.4
Petrotal Corp	287	369	3.11	1.90	3.23	1.59	-5.76	0.41	0.00	73.63	41.0
Canada	5,310	6,724	4.55	3.23	5.59	3.97	7.89	0.16	1.10	14.42	36.7
Junior E&P<30kboed	**795**	**982**	**3.10**	**3.28**	**4.21**	**4.21**	**0.19**	**0.19**	**0.03**	**0.04**	**46.6**
Cardinal Energy Ltd (Alberta)	949	1,064	3.39	4.07	4.62	4.94	0.19	0.16	0.04	0.03	50.9
Surge Energy Inc	640	900	2.80	2.50	3.80	3.47	0.19	0.23	0.03	0.04	42.3
Intermediate E&P>30kboed	**1,646**	**1,966**	**2.83**	**2.74**	**3.33**	**3.31**	**0.18**	**0.20**	**0.01**	**0.11**	**33.3**
Baytex Energy Corp	2,743	3,746	2.86	2.45	4.08	3.69	0.20	0.24	0.00	0.05	44.6
Birchcliff Energy Ltd	2,069	2,451	3.29	3.99	3.91	4.58	0.22	0.15	0.01	0.04	31.1
Canacol Energy Ltd	351	725	2.92	2.56	3.52	3.09	-0.06	0.04	0.06	0.08	21.8
Crew Energy Inc	604	903	2.74	2.62	4.31	4.19	0.24	0.24	0.00	0.05	27.6
Enerplus Corp	2,968	3,540	3.14	2.92	3.61	3.54	0.21	0.21	0.01	0.05	35.7
Frontera Energy Corp	951	1,304	1.37	1.93	1.96	2.57	0.28	0.31	0.00	0.01	31.5
Kelt Exploration Ltd	945	944	3.33	3.11	3.75	3.49	0.09	0.10	0.00	0.21	30.3
Nuvista Energy Ltd	2,088	2,477	3.40	2.96	4.09	3.58	0.16	0.18	0.00	0.22	36.0
Obsidian Energy Ltd	601	891	1.76	1.84	2.16	2.66	0.35	0.32	0.00	0.07	28.6
Paramount Resources Ltd	3,585	3,826	3.98	3.54	4.38	3.97	0.12	0.14	0.03	0.15	41.0
Parex Resources Inc	2,275	1,919	2.36	2.25	1.91	1.92	0.16	0.18	0.03	0.12	34.9
Pipestone Energy Corp	707	912	3.04	2.79	2.83	2.45	0.19	0.25	0.00	0.26	28.2
Tamarack Valley Energy Ltd	1,517	1,928	2.56	2.69	2.82	3.25	0.22	0.25	0.02	0.10	41.8
Large E&P>100kboed	**17,176**	**20,283**	**3.41**	**3.36**	**4.26**	**4.16**	**0.19**	**0.19**	**0.03**	**0.03**	**39.1**
ARC Resources Ltd	8,833	10,708	3.21	3.03	4.59	3.93	0.15	0.15	0.03	0.03	31.1
Canadian Natural Resources Ltd	71,101	82,679	4.72	5.11	5.10	5.61	0.15	0.13	0.04	0.03	64.0
Crescent Point Energy Corp	4,077	5,597	2.28	2.13	3.16	3.06	0.25	0.26	0.02	0.02	41.5
Ovintiv Inc	11,675	16,305	2.61	2.07	3.52	2.92	0.22	0.26	0.02	0.01	32.3
Peyto Exploration & Development Corp	1,806	2,614	2.86	2.78	4.04	4.11	0.17	0.19	0.04	0.06	24.8
Tourmaline Oil Corp	17,856	18,341	5.25	5.38	5.95	5.53	0.12	0.13	0.05	0.02	36.3
Whitecap Resources Inc	4,883	5,734	2.95	3.02	3.45	3.95	0.24	0.21	0.03	0.03	43.6
US	**21,455**	**25,638**	**3.72**	**3.68**	**4.16**	**4.07**	**0.16**	**0.17**	**0.03**	**0.06**	**58.3**
RoW	**6,358**	**7,618**	**2.62**	**2.97**	**2.25**	**2.43**	**0.33**	**0.23**	**0.04**	**0.22**	**73.5**
Average	**12,409**	**14,808**	**3.16**	**3.18**	**3.57**	**3.55**	**0.20**	**0.19**	**0.03**	**0.10**	**50.5**

Source: Edison Investment Research, Refinitiv. Note: Prices at 16 May 2022.

Exhibit 16: Financial summary

US$m	2019	2020	2021	2022e	2023e
Year-end December	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	219.5	246.8	250.5	262.7	303.0
Cost of sales (opex)	(17.1)	(18.0)	(20.7)	(19.5)	(19.3)
Gross profit	202.4	228.8	229.8	243.2	283.7
General & admin and other recurring expenses	(36.4)	(41.3)	(35.4)	(43.1)	(44.2)
EBITDAX*	166.0	187.5	194.4	200.0	239.5
Share based payments	(7.9)	(5.9)	(4.6)	(4.7)	(4.8)
Exploration expense	(3.0)	-	(19.3)	-	-
Other non-recurring	(3.2)	(8.7)	(8.3)		
EBITDA	151.9	172.9	162.2	195.4	234.7
Depreciation	(54.3)	(64.5)	(67.7)	(77.1)	(87.5)
Operating Profit (before amort. and except.)**	103.8	117.1	122.1	118.3	147.2
Intangible amortisation	-	-	-	-	-
Exceptionals	(6.2)	(8.7)	(27.6)	-	-
Other	-	-	-	-	-
EBIT	97.6	108.4	94.5	118.3	147.2
Net interest	(32.9)	(31.0)	(34.4)	(35.1)	(35.1)
Profit Before Tax (norm)	70.9	86.1	87.7	83.3	112.1
Profit Before Tax (FRS 3)	64.7	77.4	60.1	83.3	112.1
Tax	(30.5)	(82.1)	(43.9)	(39.9)	(58.9)
Profit After Tax (norm)	40.4	3.9	43.8	43.4	53.3
Profit After Tax (FRS 3)	34.2	(4.7)	16.2	43.4	53.3
Average Number of Shares Outstanding (m)	178.3	180.6	178.1	171.3	170.9
EPS - normalised (c)	22.67	2.18	24.59	25.33	31.19
EPS - normalised fully diluted (c)	22.67	2.18	24.59	25.33	31.19
EPS - (IFRS) (US$)	0.19	(0.03)	0.09	0.25	0.31
Dividend per share (c)	0.05	0.21	0.21	0.21	0.22
Gross margin (%)	92.2	92.7	91.7	92.6	93.6
EBITDA margin (%)	92.2	92.7	91.7	92.6	93.6
Operating margin (before GW and except.) (%)	47.3	47.4	48.7	45.0	48.6
BALANCE SHEET					
Non-current assets	620.8	596.3	625.4	728.3	828.1
Intangible assets	53.9	62.8	70.0	169.0	277.3
Tangible assets	506.1	524.8	531.0	516.9	508.3
Investments	60.8	8.7	24.4	42.4	42.4
Current assets	133.3	153.5	218.4	103.7	71.2
Stocks	-	-	-	-	-
Debtors	69.6	70.7	71.4	71.4	71.4
Cash	41.2	68.3	138.5	23.9	(8.6)
Other/ restricted cash	22.4	14.5	8.5	8.5	8.5
Current liabilities	(97.8)	(92.6)	(77.1)	(77.1)	(77.1)
Creditors	(89.6)	(85.4)	(74.5)	(74.5)	(74.5)
Short-term borrowings	(8.2)	(7.2)	(2.5)	(2.5)	(2.5)
Long-term liabilities	(413.5)	(449.8)	(581.6)	(564.5)	(603.1)
Long-term borrowings	(333.4)	(359.9)	(492.0)	(474.9)	(513.5)
Other long-term liabilities (including decommissioning)	(80.1)	(89.9)	(89.6)	(89.6)	(89.6)
Net assets	242.7	207.4	185.1	190.5	219.1
CASH FLOW					
Operating cash flow	108.4	152.3	123.8	161.7	180.9
Capex including acquisitions	(84.3)	(89.0)	(101.5)	(180.0)	(187.2)
Financing expenses	(29.5)	(28.7)	(31.7)	(36.6)	(35.3)
Equity issued/(repurchased)	7.2	(2.3)	(8.8)	(13.2)	-
Dividends	(7.1)	(20.6)	(29.5)	(29.5)	(29.5)
Net cash flow	(5.3)	11.8	(47.6)	(97.5)	(71.1)
Opening net debt/(cash)	288.1	300.3	298.9	356.0	453.5
HP finance leases initiated	-	-	-	-	-
Other	(7.0)	(10.3)	(9.5)	-	(0.0)
Closing net debt/(cash)	300.3	298.9	356.0	453.5	524.6

Source: Company accounts, Edison Investment Research. Note: *EBITDA excluding pre-licence costs and exploration impairment, stock-based compensation and non-recurring items. **Operating profit excluding pre-licence costs and exploration impairment, and non-recurring items.

Contact details	Revenue by geography
2650, 585 8th Avenue South West Calgary, Alberta, Canada, T2P 1G1 +1 403 561 1648 www.canacolenergy.com	

Management team

President & CEO: Charle Gamba

Mr Gamba founded Canacol Energy in 2008. He has held a variety of technical and management roles with major and mid-sized international oil companies, with the majority of his professional career focused on E&P in South America. Prior to creating Canacol, Mr Gamba was vice president of exploration for Occidental Oil & Gas based in Bogota, Colombia. In his eight years with Occidental, he lived and worked in Ecuador, Qatar, Colombia and the United States, working in a variety of technical and management roles. He has also worked for Alberta Energy Company in Argentina and Ecuador, and for Canadian Occidental in Australia, Canada and Indonesia. He started his career as a geologist with Imperial Oil in Calgary, and holds an MSc and PhD in geology.

CFO: Jason Bednar

Mr Bednar is a chartered accountant with more than 18 years of direct professional experience in the financial and regulatory management of oil and gas companies listed on the Toronto Stock Exchange, TSX Venture Exchange and US Stock Exchange. He has been the CFO of several international oil and gas exploration companies, most notably the founding chief financial officer of Pan Orient Energy Corp, a South-East Asia exploration company, which during his tenure grew organically to operate 15,000bbld and reached a market cap of C$700m. He has previously sat on the board of directors of several internationally focused E&P companies, including as the past chairman of Gallic Energy. Mr Bednar began his career in the chartered accountancy firm Brown Smith Owen in 1993 before moving into financial controller roles at oil production companies. He holds a bachelor of commerce from the University of Saskatchewan.

COO: Ravi Sharma

Mr Sharma joined Canacol in October 2015. He is a reservoir engineer with 30 years of oil and natural gas experience in the Americas, Middle East, Russia, Australasia and Africa. He has held progressively senior management roles at major E&P companies worldwide, most recently head of production and operations with Afren where he was responsible for production, development and operations activities in West Africa. Prior to this, he was global petroleum engineering manager for BHP Billiton Petroleum. Mr Sharma also held the position of worldwide chief reservoir engineer for Occidental Oil and Gas. He holds a BSc and MSc in mechanical engineering from the University of Alberta.

SVP Exploration: Mark Teare

Mr Teare joined Canacol Energy in early 2009. Previously, he was at AEC International and EnCana where he held a series of senior management positions in Ecuador and Brazil. Over his 30-year career, he has had extensive experience with a number of senior international Canadian energy companies operating in North America, South America and Australasia. He holds an MSc degree in geology.

Principal shareholders	(%)
Fourth Sail Capital	20.5
Cavengas Holdings SRL	19.1
BlackRock Fund Advisors	6.3
Dimensional Fund Advisors RP	1.97
Fiera Capital (UK) Ltd.	0.87
Gregory D. Elliott	0.81
Charle A. Gamba	0.49

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