NG Energy International Corp. (GASX-V)

Colombia's Next Large Independent Natural Gas Producer

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We are initiating coverage of NG Energy with a BUY recommendation and a 12-month price target of $2.50. We believe GASX can outperform based on:

Initial activity has de-risked the story. The re-entry of the Aruchara-1 well provides a base NAV BTx of C$0.68/sh FD.

Clarity to first production with step changes on the horizon. That well is to begin production in March 2021 and will give GASX its first volumes of natural gas. With another re-entry on the Maria Conchita Block followed by four wells on the SN-9 Block, the company should see its production rise from zero currently to 12 mmcf/d in Q2/21, 20 mmcf'd by late Q3/21 and to 40 mmcf/d by YE'/21. Further exploration success at SN-9 could drive production to 100 mmcf/d by the end of 2022, making GASX one of Colombia's largest independent natural gas producers.

Location of assets is key. The three blocks that the company has assembled are in close proximity to natural gas fields that are either producing or soon will be. Of note is the SN-9 Block that borders Canacol Energy's (CNE-T; not rated) main producing blocks in Colombia where numerous wells have tested between 20-40 mmcf/d.

Premium natural gas market in Colombia. Demand is expected to continue an upward trend as it is the main transitional fuel for electrical generation and pollution concerns, whereas supply is heading in the other direction. These dynamics combine for a natural gas price that has been at a premium for many years and should stay that way…or head higher.

Valuation & Recommendation: We employ a combination of EV/DACF and Risked After-tax NAV10 valuation to generate our target price of $2.50. We rate NG Energy a Buy.

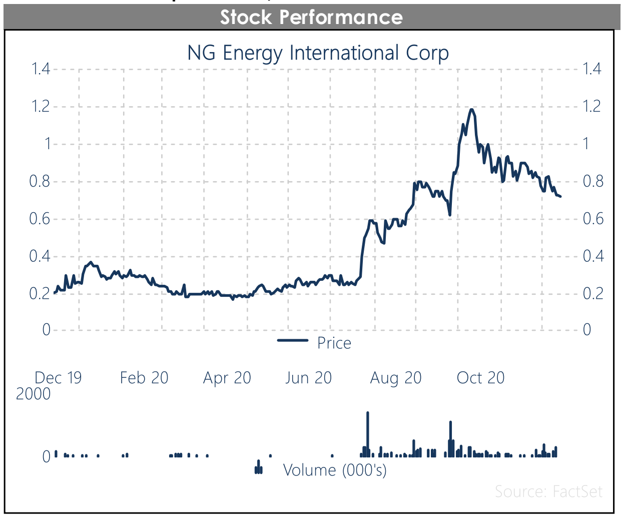
Initiating Coverage				
BUY	**$2.50**			
Recent price				$0.72
12-month Target Price				$2.50
Potential Return				247%
52 Week Price Range				$0.17 - $1.21
FYE				Dec 31
Assumptions	**2019A**	**2020E**	**2021E**	**2022E**
Brent (US$/bbl)	$64.45	$44.08	$57.00	$65.00
HHUB (US$/mcf)	$2.55	$2.12	$2.78	$2.75
US$/CDN$	$0.75	$0.75	$0.76	$0.76
Production				
Crude oil & Liquids (bbl/d)	31	-	-	-
Natural Gas (mmcf/d)	-	-	15.4	61.5
Total Production (boe/d)	31	-	2,560	10,244
Financial (US$MM, except Per Share item)				
FFO	($3.9)	($1.6)	$12.2	$57.6
CAPEX	$1.4	$2.2	$33.0	$60.0
YE Net Debt	$0.7	($0.7)	$20.2	$19.9
Net Debt/CF	-0.2x	0.4x	1.7x	0.3x
FFOPS - Fully Diluted	($0.32)	($0.03)	$0.13	$0.58
EPS - Fully Diluted	$0.09	($0.10)	$0.02	$0.16
Valuation				
P/CF		-23.0x	5.6x	1.3x
EV/DACF		-37.0x	4.8x	1.2x
EV/BOEPD			$31,640	$7,881
Stock Data				
Shares Outstanding, Basic (MM)				84.5
Shares Outstanding, Diluted (MM)				103.0
Insider Holdings, Basic				37.9%
Market Capitalization (MM)				$60.8
Enterprise value (MM)				$60.0

About the Company

NG Energy is engaged in natural gas acquisition, exploration and production in Colombia. Head office is in Bogota, Colombia.

All prices in C$ unless otherwise stated

Stock Performance



Investment Thesis…Beginning The Path To 200 mmcf/d

The Colombian natural gas market has typically taken a back seat to crude oil, but that relationship is tilting more in the favor of gas as the country pushes to natural gas as a replacement/transition fuel in its effort to meet in-country demand and to improve air quality. As a result, the price of natural gas in Colombia has been at a premium to North American markets for many years and is poised to stay that way (or more likely improve).

NG Energy has recognized these favorable dynamics and has positioned itself to take advantage. The company has assembled three blocks in gas-prone areas that should allow it to eventually build an asset base capable of 200 mmcf/d. If so, it would make NG Energy one of the largest independent natural gas producers in Colombia.

Over the next few quarters the company has many potential catalysts as it is on the cusp of first production to be followed by another well re-entry and up to four new wells. Step changes in production and cash flow should take place in both 2021 and 2022 and we believe its share price will move accordingly.

We are initiating coverage of NG Energy International Corp. (GASX, NG or the company) with a BUY rating and a 12-month target price of $2.50 per share.

8 Reasons We Like NG Energy

1. **Initial drilling success provides base value:** Re-entry of the Aruchara-1 well on the Maria Conchita Block in July 2020 has an estimated 26 bcf of 2P reserves with an NPV10 BTx of US$49 million. At a CAD/USD of $0.77 the NAV of the company is C$0.68/FD share.
2. **Asset location heightens probability of success**. NG's three blocks are located in close proximity to natural gas producing (or soon to be) fields. Details of the assets are later in the report but, suffice it to say GASX is operating in gas-prone areas.
3. **Production sight to 12, 40 and 100 mmcf/d**. First production by March from the Aruchara-1 well is firm. Additions from the 2021 capex program that includes another re-entry on the Maria Conchita Block and four new drills on the SN-9 Block gives GASX

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clarity to scale production 40 mmcf/d by YE'21 and to 100 mmcf/d by YE'22. Our model assumes a 75% success rate and an avg SN-9 well with 20 mmcf/d IP30.

4. **Self-sustaining cash flow model**. The annual cash flow that is generated from the aforementioned production levels is US$10MM, US$32MM and US$85MM, which should get NG to a self-funding level by the end of this forecast period.

5. **Impressive well-level economics on new drills:** Based on reported drill results from Canacol on is gas fields immediately east, GASX's wells on the SN-9 Block have potential for 20-40 mmcf/d of initial production. With a cost of US$6.8 million per well and an IP30 rate at the low end of the potential, these natural gas well should payout in only five months and generate an ATx IRR of 185%.

6. **Colombian macro background adds to the story**. Natural gas fundamentals in Colombia point to a premium (and likely rising) natural gas price. Supply is forecast to fall by half in 10 years while demand should continue to grow by 3%-5% per year as natural gas is the transition fuel to avoid electricity brown-outs and to address unacceptable air pollution.

7. **Management and board have plenty of in-country experience:** The team at GASX have worked together several times in the past in both mining and O&G, with Pacific Rubiales evidence that they can build a multi-billion dollar E&P company.

8. **Valuation points to a multi-bagger**. If the company delivers the results that we have modelled, GASX's share price should breach our target price, which would track to a 3.0x EV/DACF multiple of our 2022 forecasts with PDP reserves supporting much of that value.

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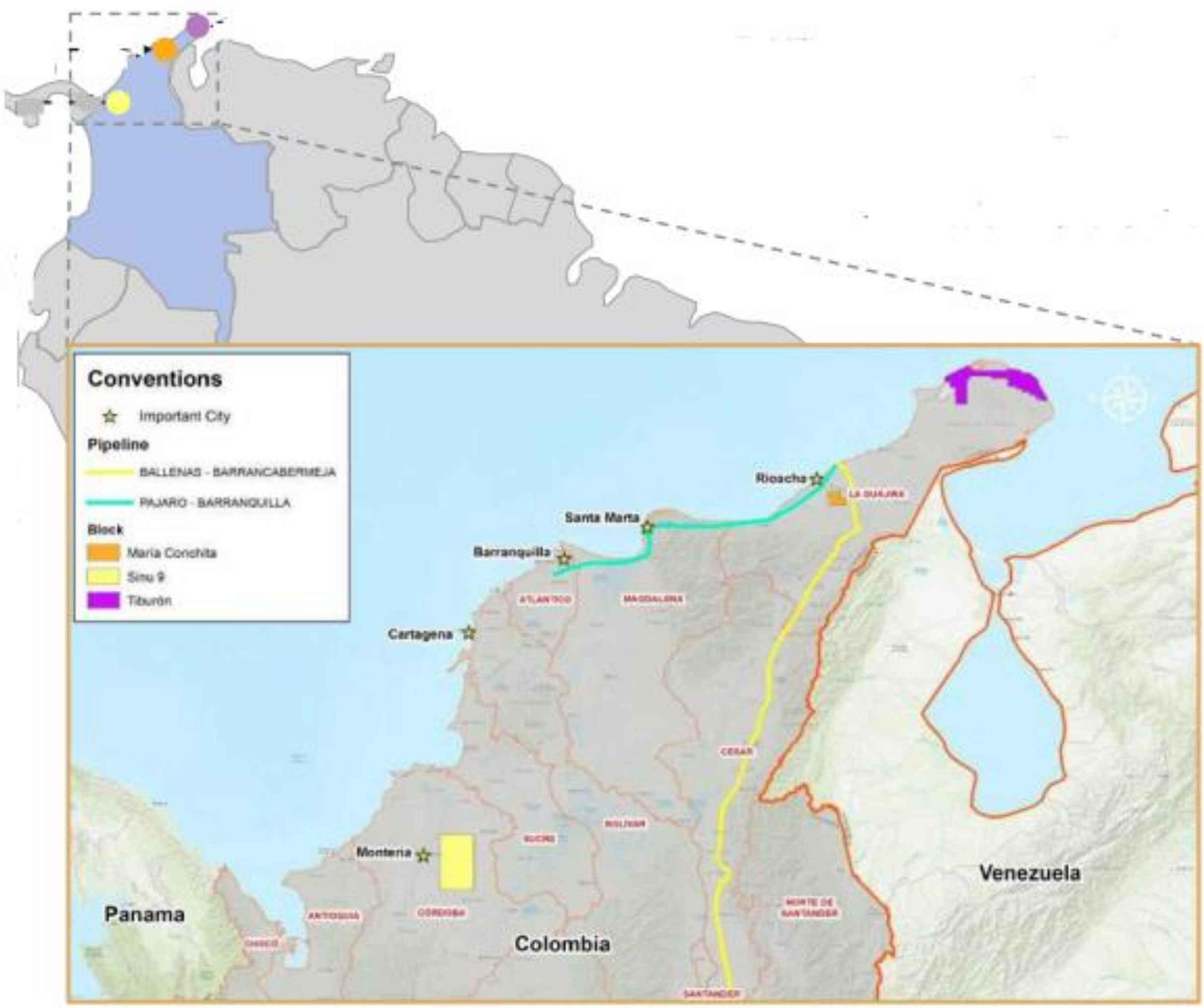
Finding Natural Gas Close To Others

After departing their last O&G venture in Colombia (Pacific Rubiales) several years ago, Ronald Pantin and Serafino Iacono have found another impressive opportunity to build a multi-billion dollar O&G company in that country.

NG Energy has put together three blocks in the northern part of Colombia (see Exhibit 1) where the company plans to exclusively target natural gas in close proximity to other gas fields that are either producing or soon will be.

Exhibit 1. Onshore Colombia Exploration Blocks

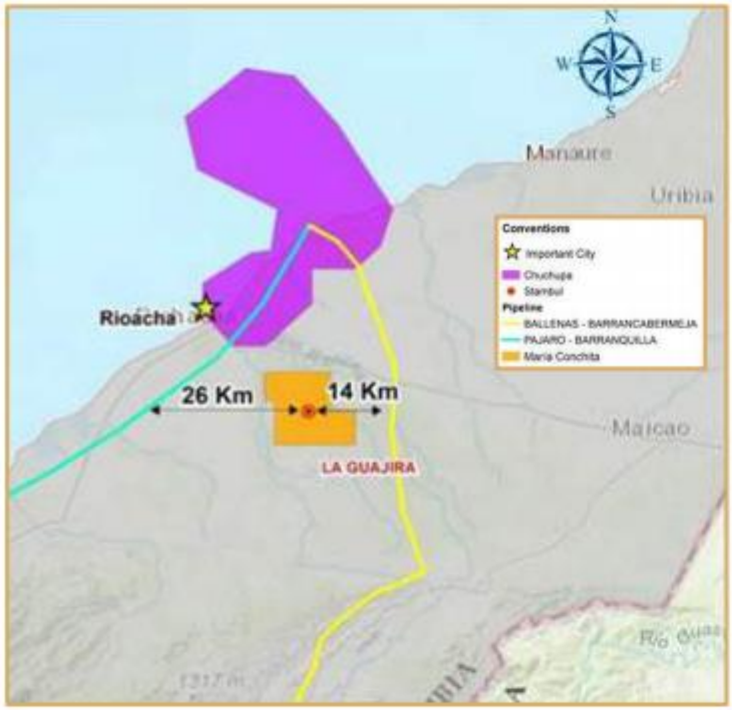


Source; Company presentation, Beacon Securities Limited

Maria Conchita Block (80% WI)

The Maria Conchita Block sits just south of one of the largest gas producing fields in Colombia, that being the Chuchupa field that has been producing for several decades. It holds more than 900 mmboe of reserves and accounts for 40% of Colombia's daily natural gas output. The Maria Conchita field is also in close proximity to major natural gas pipelines in the area (see Exhibit 2).

Exhibit 2: Maria Conchita Block



Source: Company presentation

To date, there has been a number of wells drilled on the Maria Conchita Block:

- Aruchara-1 drilled by Texaco in 1980 that tested between 3.4 and 9.8 mmcf/d from a 10 foot section below 8,111 feet
- Aruchara-2 drilled by Texaco in 1982
- Alimirante-1 drilled by Ecopetrol in 1988
- Tinka-1 drilled by Ecopetrol in 1988
- Istanbul-1 drilled by NG Energy in 2018
  - 8,740 TMD
  - 12 separate intervals covering 62.4 feet were perforated and although gas was present a steady state of flow was not achieved.

- However, logs confirmed that there were zones that were not contributing to the test rates.

Aruchara-1 Re-entry

Based on an in-depth re-evaluation of the 120 km^2 of 3D seismic for the aera and AVO anomalies, the company decided to re-enter the Aruchara-1 well in July 2020 to test the possibility that significant gas volumes could exist. Three drill stem tests (DSTs) were performed and results from the re-entry were positive:

- 1st DST: A maximum rate of 7.8 mmcf/d between 8,052 and 8,062 feet
- 2nd DST: A maximum rate of 11.0 mmcf/d between 8,111 and 8,121 feet
- 3rd DST: A maximum rate of 10.4 mmcf/d between 8,088 -8,094 and 8,111 – 8,121 feet
- an AOF of 19.0 mmcf/d
- **the well has been completed and is expected to begin production in March 2021 at 15 mmcf/d gross (12 mmcf/d net to GASX)**
- net reserves assignment of 11.7 bcf proved undeveloped with an NPV10 BTx of US$12.7 million and 2P undeveloped with an NPV10 BTx of US$48.5 million.

The next activity that is planned on the Maria Conchita Block is the re-entry of the Istanbul-1 well in Q2/21. Similar to the Aruchara-1 well, GASX believes the initial test on Istanbul-1 was performed poorly and that significant natural gas exists in this well. If successful, the production potential is on par with the Aruchara-1 well.

Looking into 2022, it is possible that the company will re-enter the Tinka-1 well along with the drilling of one or two new wells.

Price & Cost Certainty Should Drive Superior Netbacks

NG has signed contacts on a couple of fronts that should result in predictable operating netbacks of approximately US$3.25/mcf:

- NG has letters of intent for take-or-pay contracts with two of the largest utilities in Colombia for up to 20 mmcf/d at a price for NG's natural gas of US$5.08/mcf. Assuming this gets to a contract stage, the counter-party risk for the company is minimal.

- GASX has entered into an MOU with GTX International, which is a separate company that is controlled by some members of the management team and board of GASX, for GTX to build and operate compression facilities and a pipeline from the Maria Conchita field to the existing national infrastructure. The pipeline will have a capacity of 20 mmcf/d and is expected to be in service by the end of Q1/21. A take-or-pay agreement is also part of the MOU such that GASX will agree to pay US$0.90/mcf for 16 mmcf/d of capacity for six years. While the take-or-pay has a term of 18 years, GASX will only pay for capacity it uses after the six year mark.
- We have also modelled a lifting cost of US$0.10/mcf, giving a total cost to get the gas to market of US$1.00/mcf.
- The royalty rate on natural gas production from the Maria Conchita Block is estimated to be 16%, which includes a 2.5% ORR to the holders of the US$1.8 million loan. We note that an additional 2.5% ORR may be granted if the loan's principal and accrued interest is converted.

SINU-9 Block (72% WI)

The SINU-9 (or SN-9) Block is the farthest south of NG's assets and resides in the Lower Magdalena Valley where there is excellent access to a number of natural gas pipelines (see Exhibit 3).

The location of SN-9 is quite interesting as it sits between two proven natural gas blocks. To the east is Canacol Energy's (CNE-T, not rated) blocks that have reserves of 559 bcf and production of 200 mmcf/d. To the west is Hocol's block where a recent well tested up to 10 mmcf/d.

GASX is in the first phase of the exploration program on SN-9. The first stage of that phase includes:

- acquiring 125 km^2 of 3D seismic, which may be delayed due to Covid
- drilling two exploration wells (Magico and Mago)

The second stage of the first phase of the exploration program is to include:

- drilling two additional wells (Hechicero and Hechizo)
- acquiring additional 3D seismic

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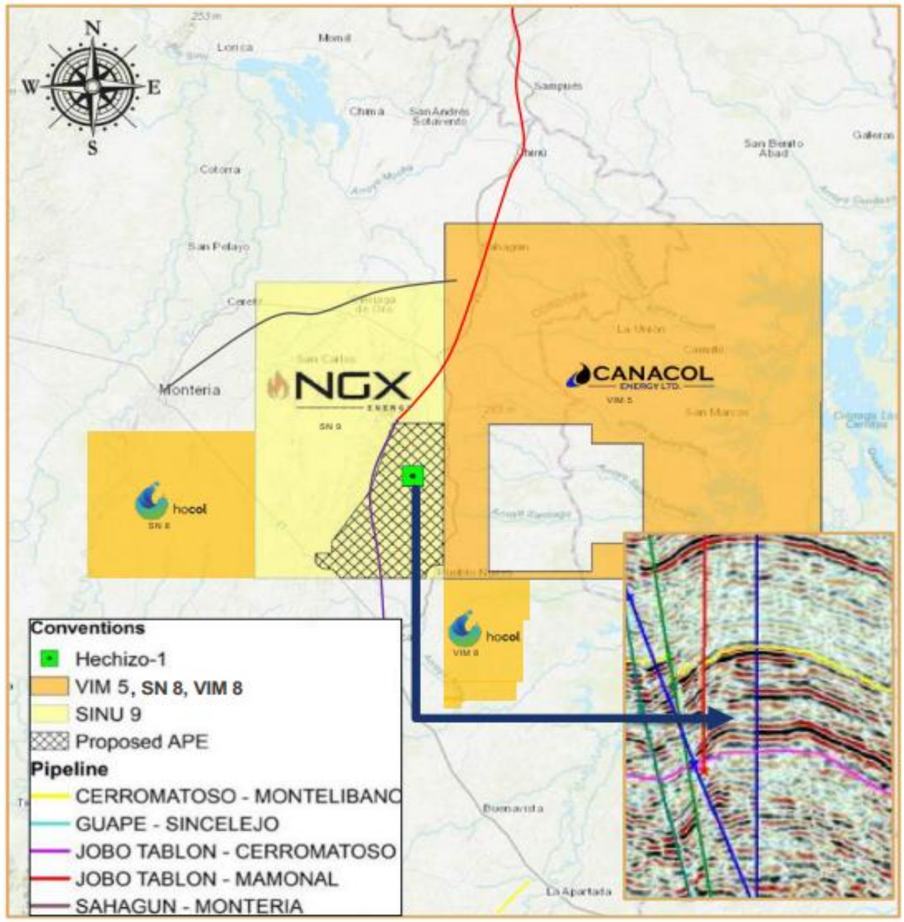
Exhibit 3: SINU-9 Block



Source: Company presentation

The company has made important strides in the process of drilling the Magico and Mago wells in Q2/21. A few weeks ago it secured a binding commercial offer from CPVEN for drilling and gas well services related to four gas wells for an aggregate cost of US$27.2 million (US$6.8 million per well). Further, the payment for these services are friendly to GASX:

- 25% down payment for each well (10% in advance of drilling and the remaining 15% within 90 days after drilling starts)
- The remaining 75% in monthly installments
- GASX must maintain a monthly balance of US$1 million as a guarantee

Based on the numerous wells drilled by Canacol over the past few years, the **production potential for GASX's wells on the SN-9 Block is 20-40 mmcf/d gross (14-29 mmcf/d net**, although we have assumed the low end of that range in our forecasts.

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Exhibit 4: Potential Netbacks and Economics for SN-9 Block

	Operating Netbacks US$/mcf	Operating Netbacks US$/boe
Revenue	$5.50	$33.00
Royalties	$0.88	$5.28
Operating expense	$1.00	$6.00
Operating netback	**$3.62**	**$21.72**

Summary Economics	
Capital cost per well (US$mm)	$6.8
Net IP30 rate (mmcf/d)	14.4
Payback period (months)	5
AT IRR	185%

Source: Company reports, Beacon Securities Limited

The economics for new wells on the SN-9 Block are impressive due to the premium natural gas price (recent gas prices in the area have been over US$6/mcf, but we will be conservative in our analysis) and manageable op costs that drive an operating netback of more than US$3.60/mcf. Using the full capital cost of each well and only the net IP rate, **the wells should payout in only five months and generate an after-tax IRR of 185%**.

Tiburon Block (10%-40% WI)

Referring back to the country map in Exhibit 1, Tiburon is located in the extreme northeast part of Colombia. We consider this block to be future exploration for the company as its current phase of exploration is suspended due to force majeure because of local community issues.

NG Energy has the ability to earn between 10% and 40% WI in the block based on the following:

- 10% WI by completing the current Phase 3 seismic commitment
- An additional 15% WI by drilling and testing one exploration well
- An additional 15% WI by drilling and testing a 2nd exploration well

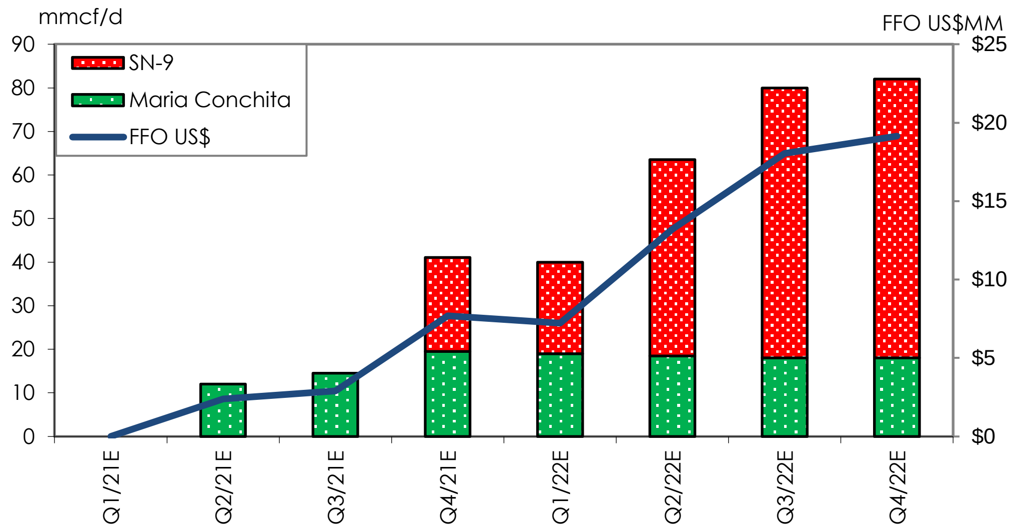
As for prospectivity of the block, it is located south of the recent Orca offshore field discovered by Ecopetrol and Petrobras, which is estimated to contain 18 tcf. Based on its geologic model, the company has identified structures, leads and geologic prospects of interest that lead to a possible recoverable resource of between 2 – 4 tcf. Even at a reduced working interest, a discovery on the Tiburon Block could be worth several hundred million dollars to GASX.

The Next Large Independent Natural Gas Producer in Colombia

Although GASX is pre-production currently, its first step change should come when initial natural gas volumes begin to flow by the end of March at a rate of 12 mmcf/d net (15 mmcf/d at 80% WI) from the Aruchara-1 well. To get there, the company is reliant on the construction of the compression facilities and 20 mmcf/d pipeline connecting its well to the existing national infrastructure, specifically the TGI Main Pipeline and the Promigas Main Pipeline. At that point, NG should be generating cash flow of nearly US$10 million (or US$0.12 per share) on an annualized basis, assuming a US$5.00/mcf gas price, 16% royalties and US$1/mcf of lifting and transportation costs.

The next activity that the company expects to undertake is the re-entry of the Istanbul-1, which we model to add 8 mmcf/d net (10 mmf/d at 80% WI) in September. Production from this well may begin sooner as the tie-in should be straight forward, but we are taking a conservative approach to timing. At close to 20 mmcf/d net from the Maria Conchita Block, GASX's annualized cash flow will be in the order of US$15 million (or US$0.18 per share).

Exhibit 5: Production and Funds Flow Profile



Source: Company reports, Beacon Securities Limited

The 2nd step change for the company is to come from the SN-9 Block. As shown in Exhibit 5, we model production to commence from the Magico and Mago wells in Q4/21 at a combined rate of 22 mmcf/d net (30 mmcf/d at 72% WI). As for cash flow, the annualized rate should rise to US$32 million (US$0.25/sh) and the company should be fairly close to a self-funding model.

The 3rd step change that is evident in Exhibit 5 is in Q2/22 when the Hechicero and Hechizo wells are expected to add natural gas volumes. Our expectations are similar to the first two wells on the SN-9 Block and should result in the company's production increasing to a range of 55-60 mmcf/d net and cash flow increasing to US$50-US$55 million annualized (US$0.59-US$0.65 per share on the current basic share count).

In H2/22 we expect additions from the company's 2022 drilling program will take production to somewhere between 75-100 mmcf/d net and make NG Energy one of Colombia's largest independent natural gas producers.

Exhibit 6. U.S. and Canadian Summary Statistics

	US$				C$			
	2019A	2020E	2021E	2022E	2019A	2020E	2021E	2022E
Production Profile								
Crude Oil & Liquids (b/d)	31	0	0	0	31	0	0	0
Natural Gas (mmcf/d)	0.0	0.0	15.4	61.5	0.0	0.0	15.4	61.5
Total boe/d	31	0	2,560	10,244	31	0	2,560	10,244
% Gas	0%	0%	100%	100%	0%	0%	100%	100%
Commodity Prices								
Brent ($/bbl)	$64.45	$44.08	$56.99	$65.00	$85.55	$58.96	$75.00	$85.53
HHUB ($/mcf)	$2.55	$2.12	$2.78	$2.75	$3.39	$2.84	$3.65	$3.62
USD/CAD	$0.754	$0.746	$0.760	$0.760	$0.754	$0.746	$0.760	$0.760
Financials ($mm)								
Revenue	$1.3	$0.5	$28.0	$112.2	$1.8	$0.7	$36.9	$147.6
Funds Flow	-$3.9	-$1.6	$12.2	$57.6	-$5.1	-$2.2	$16.0	$75.8
Earnings	$1.1	-$5.3	$1.8	$16.2	$1.5	-$7.1	$2.3	$21.4
Net Capital Spending	$1.4	$2.2	$33.0	$60.0	$1.9	$2.9	$43.4	$78.9
Net Debt	$0.7	-$0.7	$20.2	$19.9	$1.0	-$0.9	$26.5	$26.2
Unit Values (per boe)								
Revenue	$116.41	n.a.	$30.00	$30.00	$154.48	n.a.	$39.47	$39.47
Cash Costs	$393.45	n.a.	$12.07	$9.76	$522.13	n.a.	$15.88	$12.84
Opertaing Netback	$73.60	n.a.	$19.20	$19.20	$97.68	n.a.	$25.26	$25.26
Funds Flow Netback	($339.30)	n.a.	$13.00	$15.41	($450.27)	n.a.	$17.11	$20.28
Other Statistics								
Debt/FFO TTM	NA	0.4x	1.7x	0.3x	NA	0.4x	1.7x	0.3x
Capex/FFO	-37%	-133%	272%	104%	-37%	-133%	272%	104%
Per Share Amounts								
Production per share	3	0	30	109	3	0	30	109
Diluted FFOPS	($0.32)	($0.03)	$0.13	$0.58	($0.43)	($0.04)	$0.17	$0.76
Diluted EPS	$0.09	($0.10)	$0.02	$0.16	$0.12	($0.14)	$0.02	$0.21

Source: Company reports, Beacon Securities Limited

Capital Structure

- 84.5 million basic shares outstanding.
  - 3.9 million in-the-money options at an avg strike price of $0.38. The company also has 342k options with exercise prices ranging between $6.10-$8.00 that we do not include in our FD figure as they are too far out-of-the -money.
  - 14.6 million warrants that are in-the-money.
    - 2.0 million with an exercise price of $0.18 that expire March 2022.
    - 10.0 million with an exercise price of $0.23 that expire in May 2022.
    - 2.6 million with an exercise price of $0.15 that expire in May 2024.
    - 5.6 million warrants with a $10.50 exercise price are not included in our FD figure as they are too far out-of-the -money.
- 103.0 million fully diluted shares outstanding.
- Net debt of US$0.2 million at the end of Q3/20:
  - US$2.5 million secured (including accrued interest) loan bearing interest at 15%/annum. This loan also has a 3% royalty on the SN-9 Block with an option to convert the debt into another 3% ORR on the 72% WI. This loan matures in August 2022.
  - US$1.8 million secured loan (including accrued interest) bearing interest at 15% per annum. Lenders received a 2.5% ORR on the Maria Conchita production and can opt to receive an additional 2.5% ORR upon conversion of the loan principal and interest. Proceeds were used for the re-entry of the Aruchara-1 well. This loan matures on December 5, 2021.
  - US$361k loan (including accrued interest) bearing interest at 20% per annum. The loan mature in January 2021.
  - US$4.5 million of positive working capital.

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Valuation

A valuation calculation for NG Energy is a process that should include a consideration for both production / cash flow growth as well as the potential value in the company's asset base with upside that may augment reserves from exploration success.

Looking at traditional valuation metrics for GASX and its peer group in Exhibit 7, we see that these companies, most of which are more mature in their production/cash flow profiles, trade at average 2021 multiples of 4.5x (3.6x ex-TXP) on an EV/DACF basis and at $31,933 ($28,470 ex-TXP) for EV/boed. To account for uncertainty of timing and success for GASX, if we apply a 2.7x EV/DACF multiple to our 2022 forecasts, it generates a share price of C$2.00 per share.

Exhibit 7: Peer Group Valuation Comparison

	Symbol	Current Price ($/Sh)	Market Cap Current ($mm)	EV ($mm)	Forward D/CF 2020	EV/DACF 2020E	EV/DACF 2021E	EV/boed 2020E	EV/boed 2021E
Alvopetro Energy Ltd.	ALV	$0.76	$75	$87	0.4x	10.9x	3.1x	$83,703	$38,998
Canacol Energy Ltd.	CNE	$3.99	$718	$1,123	1.9x	4.3x	4.6x	$36,981	$30,727
International Petroleum Corp.	IPCO	$2.99	$464	$857	2.2x	5.8x	3.8x	$21,101	$16,982
Frontera Energy Corporation	FEC	$3.40	$331	$867	2.1x	3.2x	3.0x	$17,998	$19,853
Gran Tierra Energy Inc.	GTE	$0.51	$187	$1,157	6.0x	7.5x	4.9x	$51,065	$38,932
Parex Resources Inc.	PXT	$18.28	$2,462	$2,045	n.a.	6.0x	4.5x	$44,002	$40,977
PetroTal Corp.	TAL	$0.21	$138	$150	0.1x	4.8x	1.2x	$27,505	$10,655
Touchstone Exploration	TXP	$2.14	$447	$438	n.a.	n.a.	11.1x	n.a.	$58,338
Peer Group Average					**2.1x**	**6.1x**	**4.5x**	**$40,336**	**$31,933**
NG Energy International Corp	**GASX**	**$0.72**	**$61**	**$60**	**n.a.**	**n.a.**	**4.8x**	**n.a.**	**$31,640**

Source: Company reports, FactSet, Beacon Securities Limited

On a risked exploration NAV approach we first determine the company's net asset value based on reserves recognized by its independent evaluator (Petrotech Engineering Ltd.) on a NPV10 before-tax (BTx 10%) basis, which is **C$0.68 per FD share.**

The exploration potential for GASX is massive as shown in Exhibit 8. On an unrisked basis it is over US$13/sh and even after applying fairly punitive risking parameters considering the success/location of its properties (CoS ranging from 10% to 50%) the upside is nearly US$3.00/sh. Converting to C$ shows the potential on a risked basis is **C$4.27 per share** for 2P reserves (before tax).

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Exhibit 8: Risked Exploration Net Asset Value

Assets					BTx 10% NPV (US$mm)	BTx 10% Per FD Share
Reserves						
PDP	0.0	bcf			$0.0	$0.00
PNP	0.0	bcf			$0.0	$0.00
PUD	11.7	bcf			$12.7	$0.12
Total Proved (1P)	**11.7**	**bcf**			**$12.7**	**$0.12**
Probable	14.1	bcf			$35.8	$0.35
Proved & Probable (2P)	**25.9**	**bcf**			**$48.5**	**$0.47**
Other Assets / Liabilities						
Proceeds from options & warrants	18.5	mm			$4.6	$0.04
Q4/20E Net working capital					$0.7	$0.01
FD Shares Outstanding	103.0	mm				
NAV per share - PDP					$5.2	$0.05
NAV per share - 1P					$17.9	$0.17
NAV per share - 2P					$53.7	$0.52
Undiscovered Upside			**Btx 10% Unrisked**		**Btx 10% Risked**	
Maria Conchita	39	bcf	$42.0	$0.41	$21.0	$0.20
SN-9 Phase 1	285	bcf	$308.6	$3.00	$92.6	$0.90
SN-9 remainder	435	bcf	$470.6	$4.57	$117.7	$1.14
Tiburon	500	bcf	$541.1	$5.25	$54.1	$0.53
Total			$1,362.3	$13.22	$285.3	$2.77
NAV per share - PDP with exploration upside			$1,367.5	$13.28	$290.6	$2.82
NAV per share - 1P with exploration upside			$1,380.2	$13.40	$303.2	$2.94
NAV per share - 2P with exploration upside			$1,416.0	$13.75	$339.0	$3.29

C$ NAV at $0.77				
NAV per share - PDP			$6.8	$0.07
NAV per share - 1P			$23.3	$0.23
NAV per share - 2P			$69.7	$0.68
NAV per share - PDP with exploration upside	$1,776.0	$17.24	$377.3	$3.66
NAV per share - 1P with exploration upside	$1,792.5	$17.40	$393.8	$3.82
NAV per share - 2P with exploration upside	$1,838.9	$17.85	$440.3	$4.27

Source: Company reports, Beacon Securities Limited

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To determine our $2.50 per share 12-month target price, we employ a combination EV/DACF and Risked, After-tax Exploration NAV with equal weighting to each method. A key point is that we have applied a 25% tax-rate to the value of the potential before-tax reserves to give a more accurate estimation of the value of the company on an after-tax basis.

Exhibit 9: Target Price Calculation

	2022 DACF multiple	Risked Atx 10% NAV	Total
	2.7x		
Value	$2.00	$3.01	
Weighting	50%	50%	100%
Target Price	$1.00	$1.51	**$2.51**

Source; Company Reports, Beacon Securities Limited

Recommendation

We are initiating coverage of NG Energy International with a Buy rating as we believe the company offers exposure to a high growth, natural gas-focused company in a proven premium priced, gas producing jurisdiction.

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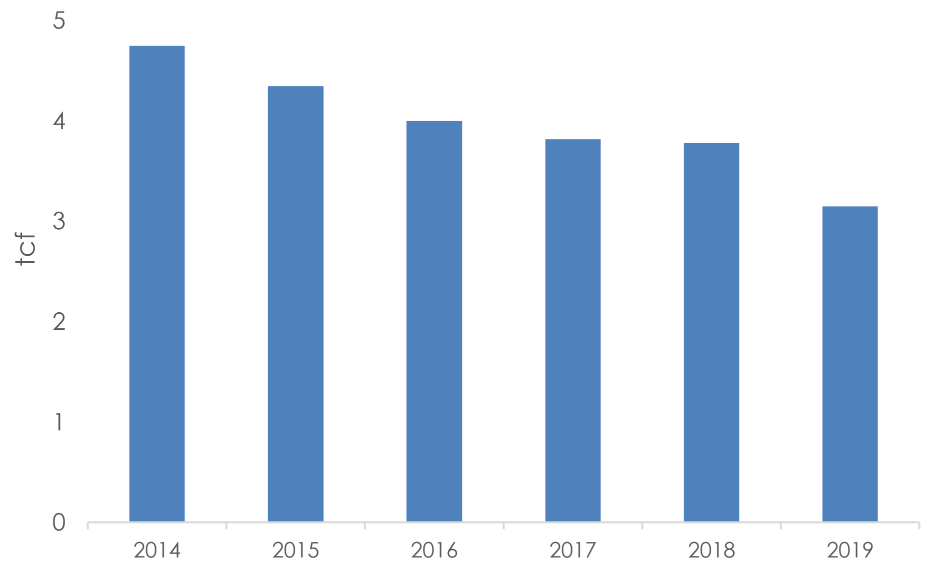
Appendix I: Colombian Natural Gas Market

Colombia has historically been know more as an oil producing nation rather than for its natural gas, even though natural gas has been produced there for many decades. However, after meeting its natural gas demand for a majority of that time, the country has recently started to import LNG thru the terminal at Cartagena to alleviate the concern that a shortage of natural gas would result in electrical power rationing as 30% of electricity generated in the country is from natural gas. That concern was partially founded in the well-defined trend in declining proved reserves, as shown in Exhibit 10. In April 2020, the country's ministry of mines and energy announced that Colombia's proven natural gas reserves at the end of 2019 fell 17% to 3.1 tcf, representing eight years of production at current output.

Exhibit 10. Colombian Proved Natural Gas Reserves



Source; Agencia Nacional de Hidrocarburos (ANH), Beacon Securities Limited

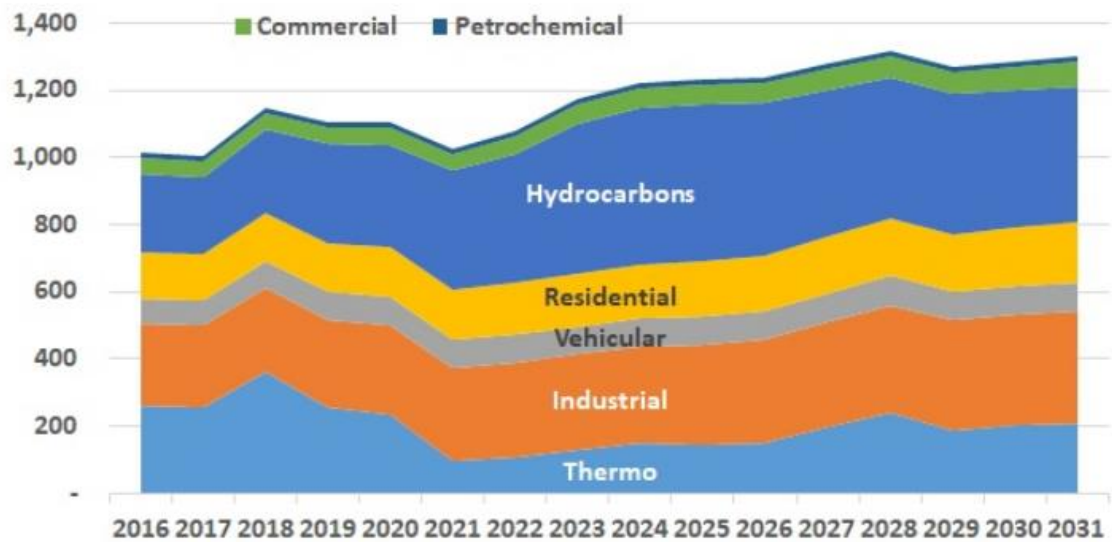
The issue of ensuring sufficient fuel to generate electrical power is only part of the story in the Colombian natural gas market. Air pollution is another major concern as 15,000 Colombians die each year due to particulates in the air. Health problems cost the Colombian economy nearly 2% of GDP annually.

In order to meet its targets from the Paris Agreement and to protect its population and economy, Colombia is on a path to phase out coal and diesel/crude oil use in electrical generation. Natural gas is considered the fuel of the energy transition, since it reduces the particulate matter that affects air quality by 96% and reduces carbon emissions by 40%.

Renewables will also be part of the solution as there is currently 2,800 MW of capacity under construction, but that is more than two years away. Hydro took a substantial hit when the 2,400 MW Ituango hydroelectric project suffered a collapse of its diversion tunnel system in 2018 that has rendered that facility un-operational for now. Ergo, there is heightened demand for natural gas to fill the void.

This all adds up to an expected continuation of the 3%-5% annual increase in natural gas demand (excluding 2020 due to Covid) for the next decade or more, according to UPME (Colombia's Mining and Energy Planning Unit).

Exhibit 11: Colombian Natural Gas Demand by Sector (mmcf/d)



Source: UPME, Hydrocarbons Colombia, Beacon Securities Limited

As for natural gas supply in Colombia, production had increased in 2019 to a little over 1 bcf/d (giving a reserve life index of only 8 years) before having some wells curtailed this year due to Covid (see Exhibit 12).

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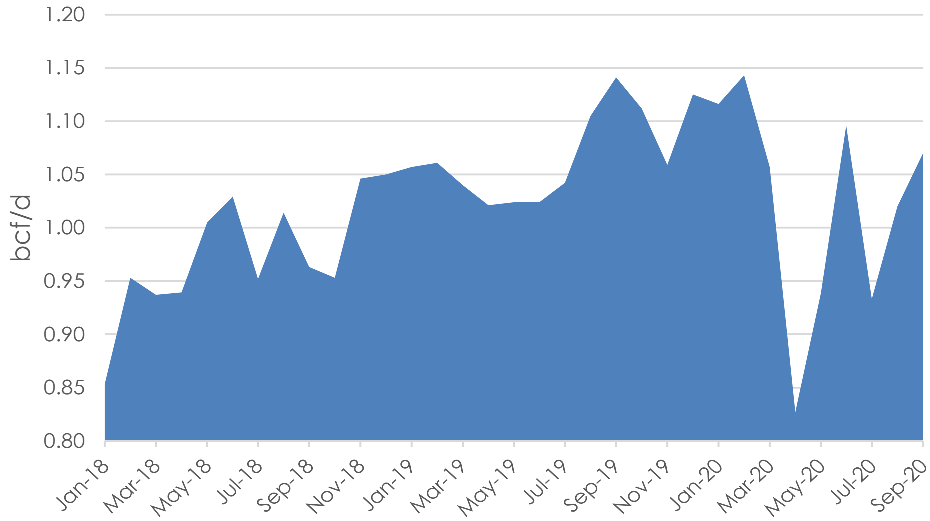
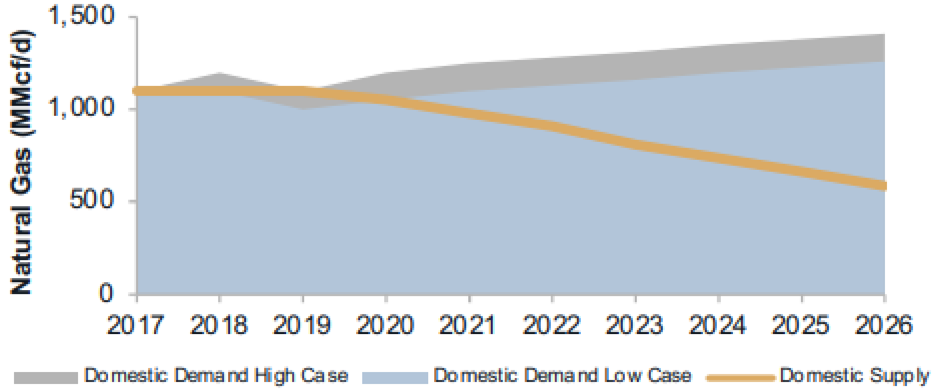
Exhibit 12: Colombian Monthly Natural Gas Production



Source: Colombia Ministry of Mines and Energy, Beacon Securities Limited

Without any major discoveries since 2009, and with Colombia's largest state-operated natural gas fields being over 40 years old and declining at rates up to 20% per year, including the Chuchupa field that was discovered in 1973, the country's domestic natural gas production is forecast to fall to the 600 mcf/d level in the next decade.

Exhibit 13: Natural Gas Supply & Demand in Colombia



Source: Company presentation

These dynamics combine to provide confidence that the natural gas price in Colombia is likely to trend upward to the price of landed LNG, which is in the US$7-US$8/mcf range when HHUB is around US$3/mcf.

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Appendix II: Operating & Financial Summary

NG ENERGY INTERNATIONAL CORP. **Recommendation:** **BUY** **Target price:** **$2.50**

SHARE INFORMATION	
Price	$0.72
Shares O/S – basic (mm)	84.5
Shares O/S – float (mm)	52.5
Shares O/S – f.d. (mm)	103.0
Market cap (C$mm)	$61
Enterprise value (C$mm)	$60
52-week range	$1.21 - $0.17
Total projected return	

COMMODITY PRICES	2019A	2020E	2021E	2022E
Brent (US$/bbl)	$64.45	$44.08	$57.00	$65.00
HHUB (US$/mcf)	$2.55	$2.12	$2.78	$2.75
Fx (C$/US$)	$0.75	$0.75	$0.76	$0.76

PRODUCTION	2019A	2020E	2021E	2022E
Oil & Liquids (bbl/d)	31	0	0	0
Natural Gas (mmcf/d)	0.0	0.0	15.4	61.5
boe/d (6:1)	**31**	**0**	**2,560**	**10,244**
% Liquids	0%	n.a.	100%	100%
Production Growth		-100%	n.a.	300%
Prod Growth Per Share	-88%	-100%	n.a.	260%

FINANCIAL (US$mm)	2019A	2020E	2021E	2022E
Revenue	1.3	0.5	28.0	112.2
Royalties	(0.1)	(0.0)	(4.5)	(17.9)
Operating & Trans	(0.4)	(0.1)	(5.6)	(22.4)
G&A	(4.0)	(2.1)	(2.4)	(3.0)
EBITDA	**(3.2)**	**(1.8)**	**15.5**	**68.8**
Interest	(0.1)	(0.5)	(2.3)	(4.5)
DD&A	(0.5)	(0.3)	(9.3)	(37.4)
Taxes	0.0	0.0	(1.4)	(9.9)
Other	4.9	(2.6)	(0.6)	(0.6)
Net Income	**$1.1**	**($5.3)**	**$1.8**	**$16.2**
FFO (mm)	($3.9)	($1.6)	$12.2	$57.6
FFOPS (basic)	($0.32)	($0.03)	$0.14	$0.61
FFOPS (diluted)	**($0.32)**	**($0.03)**	**$0.13**	**$0.58**
EPS Fully Diluted	**$0.09**	**($0.10)**	**$0.02**	**$0.16**
Net Debt	$0.7	($0.7)	$20.2	$19.9
D/CF - trailing	NA	0.4x	1.7x	0.3x
D/CF - forward	NA	NA	0.4x	
Debt capacity (mm)				

CAPITAL PROGRAM	2019A	2020E	2021E	2022E
Total Capex (US$mm)	$1	$2	$33	$60
% of cash flow	-37%	-133%	272%	104%

VALUATION	2019A	2020E	2021E	2022E
EV/DACF		-37.0x	4.8x	1.2x
P/CF (diluted)		-23.0x	5.6x	1.3x
P/E		neg	38.2x	4.4x
EV/production ($/boe/d)		n.a.	$34,128	$9,337
Price/ PDP NAV	n.a.			
Price/ 1P NAV	n.a.			
Price/ 2P NAV	n.a.			

NETBACKS (US$/boe)	2019A	2020E	2021E	2022E
Revenue (incl. hedging)	$116.41	-	$30.00	$30.00
Royalties	($8.99)	-	($4.80)	($4.80)
Operating & Trans	($33.81)	-	($6.00)	($6.00)
Operating Netback	$73.60	-	$19.20	$19.20
G&A	($353.37)	-	($2.57)	($0.80)
Interest	($6.27)	-	($2.41)	($1.20)
Other	($39.29)	-	($1.09)	($1.75)
Cash Flow Netback	**($325.32)**	**-**	**$13.13**	**$15.44**
DD&A	($45.18)	-	($10.00)	($10.00)
Stock based compensation	$8.80	-	($0.21)	($0.05)
Other non-cash	$465.42	-	($0.43)	($0.11)
Deferred tax	$0.00	-	($0.45)	($0.91)
Earnings Netback	**$93.13**	**-**	**$1.91**	**$4.34**

RESERVES (mmboe)	2018A	2019A	2020E
PDP	-	-	-
Proved (1P)	-	-	2.0
Proved + Probable (2P)	-	-	4.3
PDP NAV BT (US$/Share)	-	-	$0.05
1P NAV BT (US$/Share)	-	-	$0.17
2P NAV BT (US$/Share)	-	-	$0.52

CAPITAL EFFICIENCIES	2018A	2019A	2020E	3-yr WAvg
PDP FD&A (US$/boe)	-	-	n.a.	$1,486.99
PDP Op. Recycle Ratio	-	-	n.a.	0.0x
PDP CF Recycle Ratio	-	-	n.a.	0.0x
2P FD&A (US$/boe)	-	-	$0.91	$7.18
2P Op. Recycle Ratio	-	-	n.a.	2.8x
2P CF Recycle Ratio	-	-	n.a.	-0.9x

2021 QUARTERLY FORECASTS	Q1E	Q2E	Q3E	Q4E
Liquids (bbl/d)	0	0	0	0
Natural Gas (mmcf/d)	0.0	12.0	15.0	34.1
Total (boe/d)	0	2,000	2,500	5,680
EBITDA (US$MM)	-$0.6	$2.9	$3.8	$9.4
FD FFO	-$0.01	$0.02	$0.03	$0.08
FD EPS	-$0.01	$0.00	$0.00	$0.02

Source: Company reports, Beacon Securities Limited

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Appendix III: Management and Board

Executive Officers		
Name and Residence	**Position**	**Experience**
Ronald Pantin Cocle, Panama	Executive Chairman	Nearly 40 years of O&G experience, including 23 years at PDVSA. Former co-founder, CEO and Executive Director of Pacific Rubiales.
Serafino Iacono Bogota, Colombia	CEO	30+ years of capital markets experience related to natural resources in Colombia. Executive Chairman of Gran Colombia Gold and Executive Director of Puerto Bahia. Former co-Chairman of Pacific Rubiales.
Federico Restrepo-Solano Bogota, Colombia	President	20+ years of natural resource industry experience. Partner and Director at Qvartz Capital Partners. Previously was Senior VP, Corporate Affairs at Frontera Energy.
Marianella Bernal Parada Bogota, Colombia	CFO	13 years of experience in the public and private sectors. Former Private Advisor to the Minister of Information and Communication Technologies in Colombia.
Vincenzo Paglione Bogota, Colombia	VP, Planning	46+ years of O&G industry experience ranging from technical to managerial to exectutive and board positions

Board of Directors		
Name	**Position**	**Principal Occupation**
Ronald Pantin Cocle, Panama	Chairman	see above
Frank Giustra British Columbia, Canada	Director	President & CEO of Fiore Financial Corporation
Gordon Keep British Columbia, Canada	Director	CEO of Fiore Management and Advisory Corp.
Serafino Iacono Bogota, Colombia	Director	see above
Federico Restrepo-Solano Bogota, Colombia	Director	see above

Source; Company Reports, Beacon Securities Limited

Appendix IV: Risks

- **Commodity Price Fluctuations** – The company has direct exposure to Colombian natural gas prices. Downward movements in this commodity can adversely affect the financial performance of the company. To offset this risk, the company may enter into derivative risk management contracts to manage its exposure to commodity price fluctuations.
- **Financing** – Exploring and developing for hydrocarbons may require a combination of debt and equity capital. We do not forecast additional equity; however, our models incorporate fluctuations in net debt. There is no certainty that the company can raise equity capital or that its bank lines will remain static or increase.
- **Foreign exchange & Interest Rates** – Any movement in either of these rates has the potential to adversely affect the company's financial performance.
- **Cost Overruns** – Unexpected drilling, completion and/or operational cost overruns can mitigate the operational and financial performance of the company.
- **Country risk** – A change in government may lead to policies or laws that are detrimental to the industry or company, which may impact results. As Colombia is a democratically-elected government that ranks within the top-100 on the 2019 Corruption Perceptions Index, this risk is muted.
- **Weather and Seasonal Factors** – Extreme weather conditions may influence results.
- **Change in Fiscal Regime** – A change in the royalty or tax rates as they relate to oil and gas production may adversely affect cash flows.
- **Well Performance** – The company may have a higher than normal amount of risk associated with its wells or plays due to the early-stage nature of its asset base. Lower production volumes, higher decline rates and/or dry holes can adversely affect the results of the company, particularly from a potential negative reserve revision perspective. Past performance may not be indicative of future execution.

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Did the issuer pay for or reimburse the analyst for the travel expenses? ☐ Yes ☒ No

As at November 30th, 2020	#Stocks	Distribution
BUY	57	67.1%
Speculative Buy	18	21.2%
Hold	0	0.0%
Sell	0	0.0%
Under Review	9	10.6%
Tender	1	1.2%
Total	85	100%

BUY	Total 12-month return expected to be > 15%
Speculative Buy	Potential 12-month return is high (>15%) but given elevated risk, investment could result in a material loss
Hold	Total 12-month return is expected to be between 0% and 15%
Sell	Total 12-month return is expected to be negative
Under Review	
Tender	Clients are advised to tender their shares to a takeover bid or similar offer

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