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Zacks Small-Cap Research

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Alvopetro Energy Ltd (ALVOD-OTCQX)

Alvopetro Completes Share Consolidation & Split in preparation for declaration of dividend. Post-consolidation/split financials & target adjusted accordingly. Sales volumes for August increase 0.8% sequentially.

Utilizing valuation analysis of comparative oil & gas companies, a **target price** for Alvopetro Energy is **$4.17 per share**, which is based on an expected second quartile price-to-sales multiple.

Current Price (09/10/21)	$2.70
Valuation	**$4.17**

OUTLOOK

Operating in **Brazil**, Alvopetro Energy (OTCQX: ALVOD; TSXV: ALV) is an upstream **producer of natural gas** with **midstream assets** (pipeline and gas treatment facility). After several years of development, the company has been **producing increasing amounts of natural gas for over a year** under an attractive gas sales agreement. The cash flow is funding management's growth initiatives, debt repayment and future dividends.

The company's growth activities include drilling two **exploration gas prospects** in the **Gomo Deep Basin** and the **construction of a 9-km tie-in pipeline** that will connect the 183-1 well to the 11-km Caburé transfer pipeline.

SUMMARY DATA

52-Week High	**$8.00**
52-Week Low	**$1.22**
One-Year Return (%)	**90.14**
Beta	**0.94**
Average Daily Volume (shrs.)	**12,933**
Shares Outstanding (million)	**33.276**
Market Capitalization ($mil.)	**$89.85**
Short Interest Ratio (days)	**0.12**
Institutional Ownership (%)	**5.96**
Insider Ownership (%)	**9.4**
Annual Cash Dividend	**$0.00**
Dividend Yield (%)	**0.00**
5-Yr. Historical Growth Rates	
Sales (%)	**N/M**
Earnings Per Share (%)	**N/A**
Dividend (%)	**N/A**
P/E using TTM EPS	**8.1**
P/E using 2021 Estimate	**19.9**
P/E using 2022 Estimate	**10.2**

Risk Level	**Above Average**
Type of Stock	**Small - Growth**
Industry	**Oil & Gas Extraction & Exploration**

ZACKS ESTIMATES

Revenue
(in millions of $)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2019	0.13 A	0.09 A	0.10 A	0.30 A	0.62 A
2020	0.08 A	0.06 A	4.88 A	5.63 A	10.64 A
2021	6.30 A	7.58 A	8.42 E	9.34 E	31.64 E
2022					36.44 E

Earnings per share
(EPS is operating earnings before non-recurring items)

	Q1 (Mar)	Q2 (Jun)	Q3 (Sep)	Q4 (Dec)	Year (Dec)
2019	-$0.03 A	-$0.03 A	-$0.06 A	-$0.03 A	-$0.15 A
2020	-$0.07 A	-$0.04 A	$0.18 A	$0.08 A	$0.16 A
2021	-$0.03 A	$0.10 A	$0.03 E	$0.03 E	$0.14 E
2022					$0.26 E

Quarterly revenues may not equal annual revenues due to rounding.

Quarterly EPS may not equal annual EPS due to rounding or dilution.

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SYNOPSIS

Alvopetro Energy Ltd (OTCQX: ALVOF; TSXV: ALV) is an upstream natural gas **producer** (natural gas production with P-2 reserves) and **midstream operator** (pipeline and gas processing facility) with operations that serve the **industrial area of Camaçari**, which is just north of Salvador, Brazil's fourth largest city. In addition to the company's conventional **Caburé natural gas field, Alvopetro** has tight gas **exploration** prospects in the Gomo Field.

Impressively, Alvopetro has developed Caburé natural gas field, including the construction of midstream assets, and achieved a **one-year anniversary of production** that includes increasing levels of quarterly gas & condensate production, along with a long-term **Gas Sales Agreement** with attractive floor and ceiling prices.

Under management's strategic plan, a portion of the positive cash flows from natural gas and condensate sales has been utilized to reduce the company's by over 50%. About 50% of the current operating cash flow is being used to develop the Gomo Field in order to expand the company's reserves. Part of the remainder is slated to fund a shareholder dividend, which is expected to be initiated in 2022.

RECENT NEWS

On September 7, 2021, Alvopetro Energy announced that the previous announced **share consolidation** and split have been completed. In order to reduce the costs associated with many shareholders holding small amounts of shares, the company effected a 2,100 to 1 share consolidation, which was followed immediately by a 1 to 700 share split. The **net effect** was a **1 for 3 reverse split** while reducing number of shareholders by those who were holding small positions of less than 2,100 shares. The move will reduce the administrative costs associated with the expected declaration of a dividend. Those shareholders who held less than 2,100 common shares as of September 3, 2021 are able to receive a cash payment of CDN$1.12 per pre-consolidation/split common share held. Temporarily, the company's ticker is ALVOD.

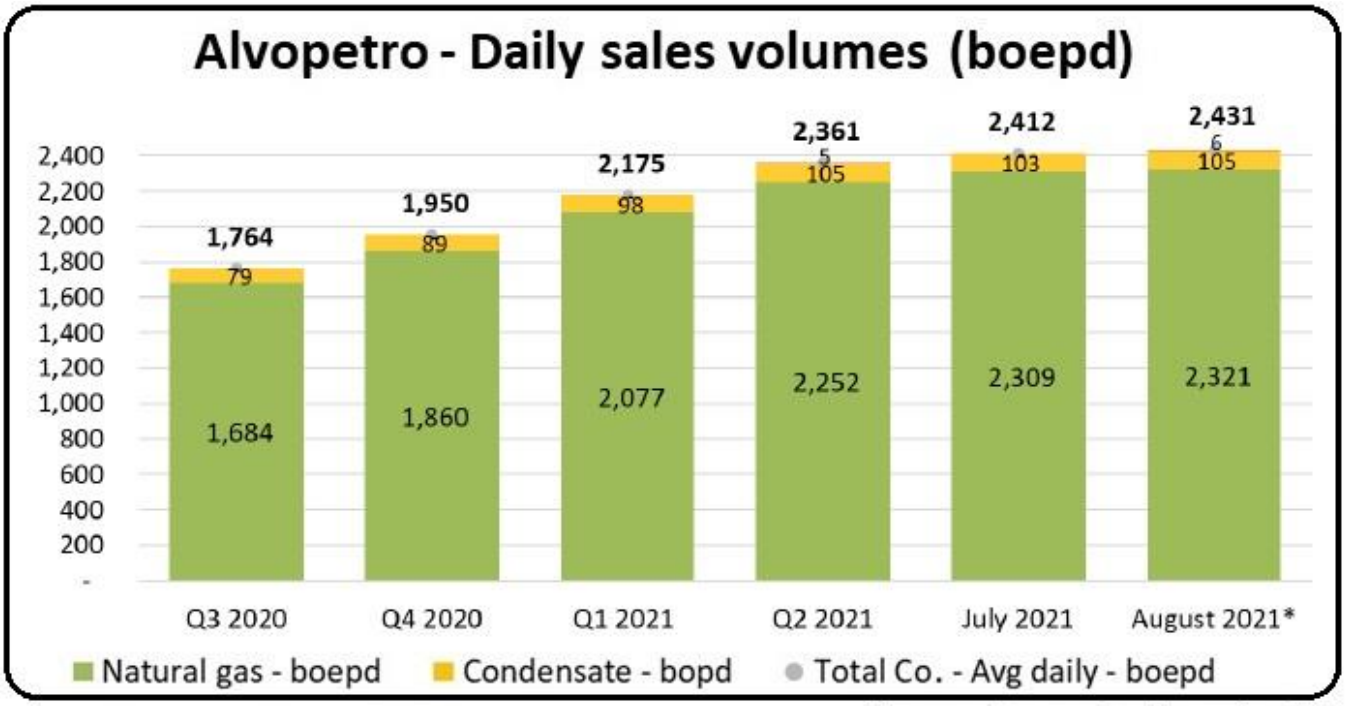
The share consolidation**/**split created an **inefficient market** for two days when the stock (ALVOD) traded up to $8.00 and then down to $1.36. In an efficient market, the post-consolidation**/**split stock would most likely be trading within 5% of its adjusted pre-split price or between $2.59 and $2.85, though probably on the higher end since the corporate action further increases the probability a declaration of a dividend.

Floor Price Increase

Under the **long-term** Gas Sales Agreement (GSA) with Bahiagás, the floor and ceiling prices for natural gas are re-set on a local currency basis as of February 1st and August 1st. On August 4th, Alvopetro Energy announced that effective August 1, 2021 the **new contracted natural gas price floor** is BRL1.31/m3, up 23.6% from the February 1, 2021 price floor of BRL1.06/m3. The floor price equates to BRL37.03/ MMBtu or BRL36.13 Mcf.

Recent Monthly Production Announcement

On September 10, 2021, Alvopetro Energy announced **sales volumes for August**. Based on field estimates, **total sales volumes** averaged **2,431 boepd**, a 0.8% increase over July's average sales volumes of 2,412 boepd. Natural gas sales **averaged 2,321 boepd (13.9 MMCFPD)** while **condensate sales averaged 105 bopd**.



Alvopetro Presentation September 2021

Early Debt Repayment

Funded by the company's successful ramp up of production, management was able to deliver on its debt reduction plan. Utilizing a portion of the positive cash flows from natural gas and condensate sales, Alvopetro has thus far repaid $8.0 million. As of August 2021, the outstanding balance of the credit facility has been reduced by over 50% to approximately $7.5 million.

In 2019, Alvopetro entered into a Senior Secured Credit Facility with Cordiant Capital with a cash interest rate of 9.5% per annum and a 3% PIK interest rate. The facility had an original maturity of October 8, 2022. The outstanding balance had risen to $15.4 million by the end of 2020.

During the first quarter of 2021, Alvopetro repaid $2.5 million of the Credit Facility, **which reduced the balance to $13.0 million** as of March 31, 2021. Then, on May 3, 2021, Alvopetro Energy restructured this debt through an amendment that **extended the maturity date by one year to October 8, 2023**. In addition, the amendment **eliminated the facility's 3% PIK interest** as of April 15, 2021. The 9.5% cash interest rate was not altered.

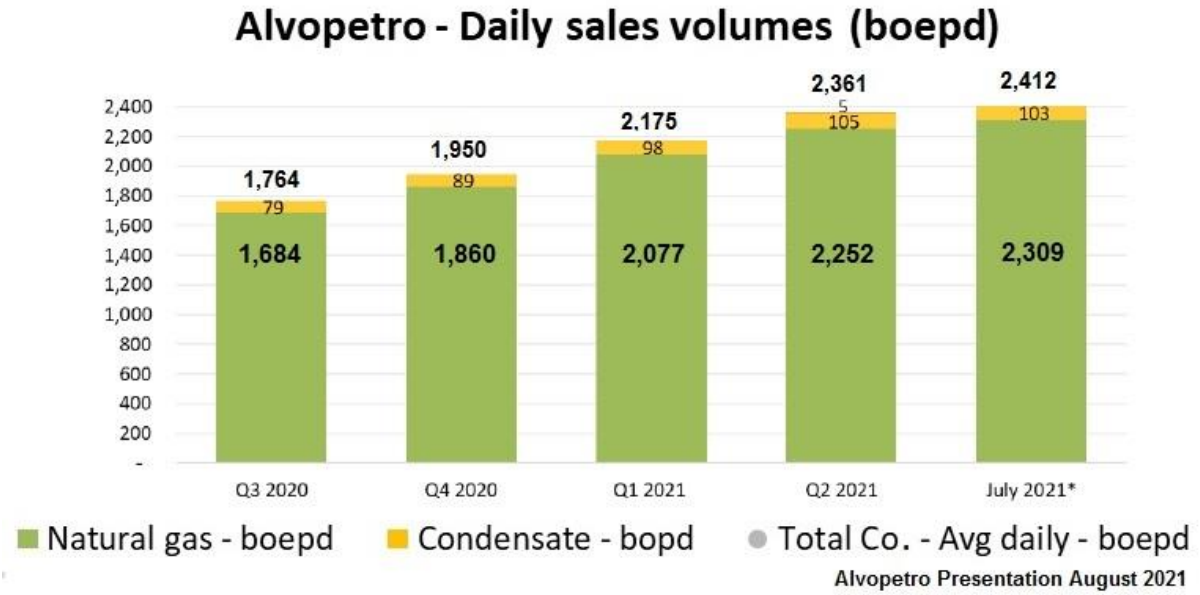
Subsequently, on June 4, 2021, an **additional $3.5 million was repaid** since the capital spending on drilling 182-C1 and 183-B1 has been deferred to later in 2021. At the end of June, an **additional $2.0 million was repaid**. The **balance of Credit Facility** is **now approximately $7.5 million**

Second Quarter Results

On August 12, 2021, Alvopetro Energy reported results for the second quarter ending June 30, 2021. **Natural gas and condensate sales were $8.18 million**, a record for the company since just initiated deliveries of high pressure sales volume through its controlled midstream infrastructure. Year-over year (YOY) comparisons are meaningless since prior sales volumes from the Mãe-da-lua field during the second quarter of 2020 were *de minimis* (averaging averaged 6 bopd).

Sequentially, natural gas, oil and condensate sales increased 17.9% to $8.18 million compared to $6.94 million in the first quarter of 2021, driven by a sequential 8.55% increase of overall sales volumes to 2,361 boepd. **Natural gas sales averaged 2,252 boepd** (13.06 MMCFPD) while

condensate sales averaged 105 bopd. Natural gas price realization was $6.06 per MCF, a 6.7% sequential increase from $5.68 per MCF in the first quarter. The realized condensate price was $74.47 per bbl.



Royalties and production taxes were 7.4% of natural gas and condensate sales. The Caburé natural gas field is subject to a 10% government royalty and a 1% landowner royalty while the Bom Lugar field is subject to a 5% government royalty and a 0.5% landowner royalty. The Mãe-da-lua field and Block 182 have an additional 2.5% gross-overriding royalty. However, royalties are determined at an inherent reference price attributable to production of raw natural gas produced , which is lower than the GSA contracted sales price, which results in a lower effective royalty rate. The reference price is also tied to current Henry Hub prices.

Sequentially, **production expenses increased 11.4%**, primarily due to higher fees associated with increased sales volumes. Most of Alvopetro's production expenses are related to fees paid to Enerflex for the operation of the transfer pipeline and gas processing facility, along with unit operating costs on the Caburé upstream assets.

G&A expenses increased 21.7% sequentially, mainly due to increased professional fees and higher personnel costs.

Interest expense declined 16.2% sequentially to approximately $833,000, primarily due to the balance of the Credit Facility being reduced from $15.5 million to $7.545 million by the end of the second quarter. The other major component of interest expense is related to interest on the capital lease with Enerflex. The 3% interest-in-kind (PIK) on the Credit Facility was eliminated as of April 15, 2021.

The company's tax expense of $1.76 million in the second quarter is an anomaly since it reflects both Brazil's statutory corporate tax rate of 34% (15% corporate tax, 10% surtax and a 9% social contribution tax) and the deferred tax expense that relates to tax deductions recognized in 2021 in excess of accounting deductions. In the future, a SUDENE (SUperintendência do DEsenvolvimento do NordEste or Development Superintendency of the Northeast) tax incentive is expected to lower the company's effective tax rate to 15.25% once the company has received formal approval for the regional incentive.

The **reported quarterly profit was $3.637 million** (or $0.0347 per diluted share) versus a loss of $1.168 million (or $0.0119 per diluted share) in the comparable quarter last year. The second quarter's earnings were positively impacted by an unrealized foreign exchange gain of $2.811 million. **Without the recognition of the unrealized foreign exchange gain**, earnings for the first

quarter would have been $0.826 million (or $0.0079 per diluted share). As of June 30, 2021, working capital was $4.50 million.

Q1 2021 Operating Netback	
Average realized prices[3]	
Natural gas ($/mcf)	5.68
NGL – condensate ($/bbl)	64.41
Total ($/boe)	**35.45**
Operating netback ($/boe) [3]	
Realized sales price	35.45
Royalties	(3.30)
Production expenses	(3.63)
Operating netback	**28.52**
Funds flow netback[3]	**24.30**

Alvopetro Presentation May 2021

Q2 2021 Operating Netback	
Average realized prices[3]	
Natural gas ($/mcf)	6.06
NGL – condensate ($/bbl)	74.47
Oil ($/bbl)	59.63
Total ($/boe)	**38.08**
Operating netback ($/boe) [3]	
Realized sales price	38.08
Royalties	(2.82)
Production expenses	(3.68)
Operating netback	**31.58**
Funds flow netback[3]	**25.46**

Alvopetro Presentation July 2021

With the realized sales price at $38.08 per BOE, royalties at $2.82 per BOE and production expenses at $3.68 per BOE, the **operating netback** improved to **$31.58 per** BOE versus $28.52 in the prior quarter.

Guidance

Management anticipates that production from the Caburé natural gas field will continue at rates between 10.6 and 13.8 MMCFPD. Overall sales volumes (natural gas and associated condensate sales) are expected to average between 1,850 and 2,400 boepd for the remainder of 2021.

Due to the company's improving operational performance, along with a strong pricing outlook, in early June, management **raised 2021 EBITDA guidance to over $20 million**, up from initial guidance of $17 million. Sales volumes continue to rise month by month, but also the benchmark prices have contributed to a higher semi-annual price redetermination.

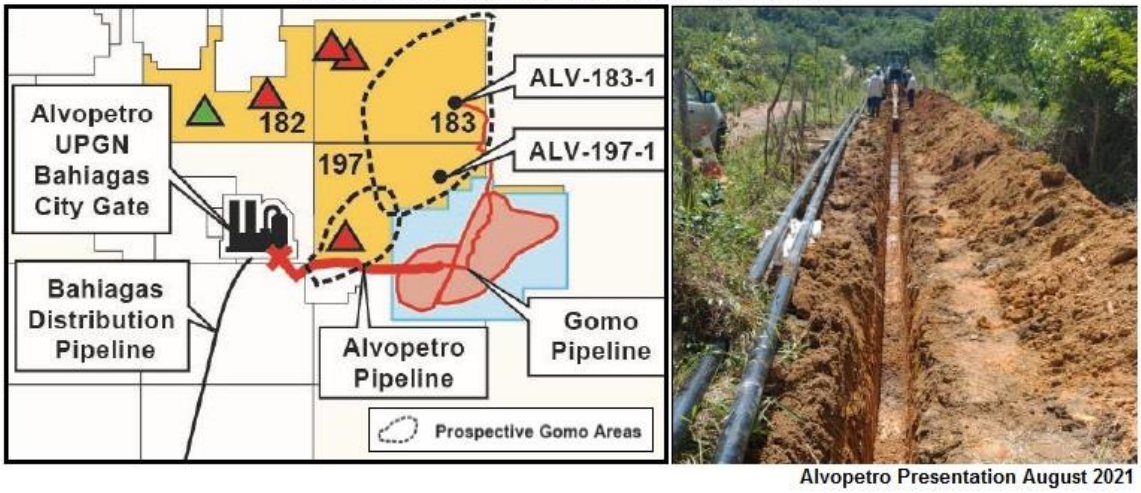
Operational Update

Operationally, management focused on **producing natural gas** and condensate **from the Caburé natural gas field** and **advancing the company's Gomo natural gas project** to production.

During the second half of 2021, management plans to drill two natural gas exploration prospects: 182-C1 and 183-B1. Following a maintenance program, the contracted drilling rig is expected to be accepted by the end of the third quarter. Total drilling costs are anticipated to total $6.8 million for the two wells.

The **9-km flow line** (dubbed the **Gomo/Murucututu pipeline extension**) will connect the 183-1 well to Alvopetro's existing 11-km Caburé gas field transfer pipeline. In July, field construction commenced. Welding of the pipe has begun and ditches are being opened in preparation of installation. Management anticipates flow line will be completed and the 183-1 well tied-in by the end of 2021.

Gomo/Murucututu Pipeline Extension



Alvopetro Presentation August 2021

During the first quarter of 2021, civil construction was completed at a cost of $0.3 million and long-lead items were purchased at a cost of $0.4 million. The pipe for construction of the pipeline was purchased at a cost of approximately $0.5 million and delivered in the field during the second quarter of 2021. The estimated cost, including field production facilities, is $2.1 million.

Dividend Policy

The Board of Directors formally adopted a **dividend policy** and strategy, which includes the expectation of initiating the payment of dividends (denominated in US$) as soon as the first quarter of 2022. The dividend will be determined after the 2021 exploration drilling campaign is completed and the 2022 capital budget is finalized.

To facilitate the payment of dividends, the company plans to conduct a **one-time, small-lot common share repurchase program**, which may be implemented through a buyback or by a share consolidation, which was approved by shareholders on August 12, 2021. The cost is expected to be less than $1.0 million.

ANNUAL EVALUATION OF RESERVES

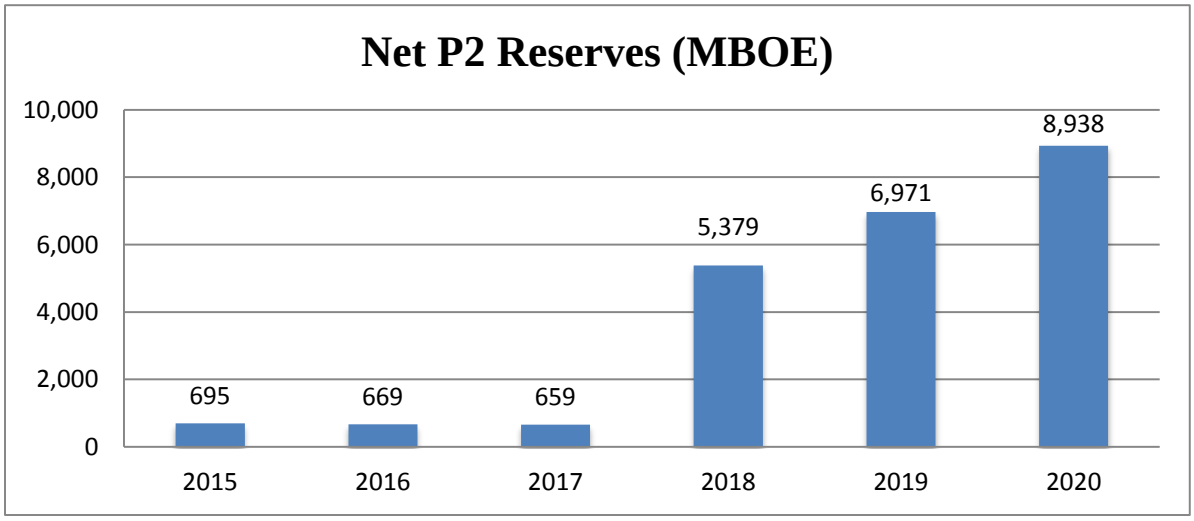
Annually, generally in early March, Alvopetro provides an independent **Reserve Report** (prepared in accordance with NI 51-101. The report assesses and evaluates the reserves of Alvopetro's Caburé conventional natural gas pool (located on Blocks 197 and 198), the Gomo Natural Gas Project (area around the 183-1 and 197-1 wells in Blocks 183 and 197, respectively) and two mature oil fields: the 2,238-acre Bom Lugar and 432-acre Mae-da-lua. The latest report, which was last prepared by GLJ Petroleum Consultants, is dated March 8, 2021 with an effective date of **December 31, 2020**.

Summary of Oil and Gas Reserves - By Field

Effective Dec. 31, 2020	Caburé Natural Gas Field		Gomo Gas Field		Bom Lugar Oil Field		Mãe-da-lua Oil Field		Total	
	Company Gross	Company Net	Company Gross	Company Net	Company Gross	Company Net	Company Gross	Company Net	Company Gross	Company Net
	(Mboe)	(Mboe)	(Mboe)	(Mboe)	(Mboe)	(Mboe)	(Mboe)	(Mboe)	(Mboe)	(Mboe)
Proved										
Producing	4,098	3,842	-	-	-	-	-	-	4,098	3,842
Developed Non-Producing	-	-	403	371	-	-	22	19	425	390
Undeveloped	-	-	441	406	145	136	-	-	586	542
Total Proved	4,098	3,842	843	777	145	136	22	19	5,108	4,774
Probable	1,920	1,804	2,433	2,237	121	113	12	10	4,485	4,164
Total Proved plus Probable	6,018	5,646	3,276	3,014	266	249	34	29	9,593	8,938
Possible	1,650	1,552	2,675	2,452	272	256	17	14	4,615	4,273
Total Proved plus Probable plus Possible	7,668	7,198	5,951	5,466	538	505	51	43	14,209	13,211

Alvopetro Energy 2020 Annual Report

Total net 2P (proved and probable) **reserves increased 28.3% YOY** (year over year) to **8.94 MMBOE** from 6.97 MMBOE in 2019. In the prior year (2019) net P2 reserves increased 29.6%. Accordingly, the net present value before tax (discounted at 10%) is $195.2 million.



Analyzing the increase in reserves on the **field level**, the company's **net P2 reserves** in the unitized **Caburé** natural gas field **increased 2.9%** to 4.06 MMBOE, while the net P2 reserves in the **Gomo** natural gas field **increased 151%** to 3.01 MMBOE.

The 2020 Reserve Report does not include the risked contingent and prospective resources of the Gomo Project (see Gomo Project section below).

OVERVIEW

Alvopetro Energy Ltd (OTCQX: ALVOF; TSXV: ALV) is an upstream natural gas **producer** (natural gas production with P-2 reserves), **midstream operator** (pipeline and gas processing facility) and **exploration company** (prospects). The company's natural gas operations are **in Brazil**.

In July 2020, Alvopetro began producing a significant amount of natural gas when production commenced from the company's **Caburé natural gas field** located in northeast Brazil. This onshore natural gas field is situated in the state of Bahia, north of the city of Salvador, Brazil's fourth largest city. The company also has a developing natural gas project in the **Gomo Deep Basin**, in the concession Blocks immediately north of the Caburé field. Management has been adept in creating business partnerships to advance its Caburé assets to commercial production.

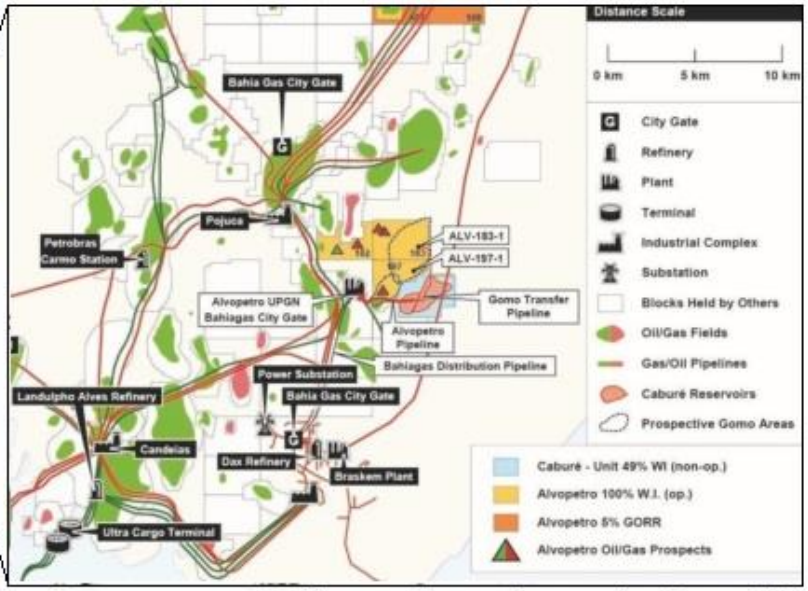
Currently, the **Brazilian Government is promoting investments into the natural gas market** in hopes of lowering gas prices by increasing competition and opening the market to other operators. Part of process includes:

1) breaking the monopoly held by Petrobras (aka Petróleo Brasileiro S.A, Brazil's state-controlled oil company; NYSE: PBR), primarily through divestments and
2) setting guidelines and incentives for a Novo Mercado de Gás (new natural gas market) program so that natural gas can be more attractively priced and thereby stimulate local industrial activity

Through these actions, the Ministry of Economy expects gas production in Brazil to double over the next 10 years.



Alvopetro Energy Presentation November 2020



Alvopetro Energy Presentation August 2021

Management is focused on creating a platform to develop the natural gas potential of the Recôncavo Basin located in the Brazilian state of Bahia. Through multiple agreements, strategic infrastructure assets have been constructed, which have enabled Alvopetro to **commence commercial natural gas sales from the Caburé Project** and to further develop the company's **Gomo natural gas project**.

Company Milestones in the Commercialization of Caburé Natural Gas Field

Dec. 2014	**Discovered Caburé natural gas field**
April 2018	**Unitized** Caburé natural gas field

May 2018	**Secured gas sales agreement** with Bahiagás
Sept. 2018	Contracted Enerflex to construct and operate the natural gas treatment facility
Nov. 2018	Contracted Tecmaster Engenharia e Construções to construct 11-km transfer pipeline
Jan. 2020	**Completed** construction of 500,000 m^3 (17.657 MMCF) per day **11-km transfer pipeline**
May 2020	Amended gas sales agreement with Bahiagás doubling firm contracted deliveries
June 2020	**Commissioned** 500,000 m^3 (17.657 MMCF) per day **gas treatment facility**
July 2020	**Commenced commercial gas sales** from Caburé natural gas field
Sept. 2020	**Achieved profitability**
Feb. 2021	Paid down $15.5 million credit facility to $11.0 million
June 2021	**Paid down credit facility to $7.5 million**

In order to ensure the sale of future gas production at attractive prices, Alvopetro Energy entered into a **gas sales agreement** with Bahiagás, a major gas distributor in Brazil with a local distribution network servicing the environs of the city of Salvador and 12 surrounding municipalities. Signed in May 2018, the gas sales agreement **set an attractive floor price** in the contract, along with a **firm and flexible delivery volume levels**. Through this well-negotiated agreement, Alvopetro's Caburé natural gas field is now directly connected to Bahiagás' gas distribution network of Bahiagás a City Gate via a gas treatment facility, both of which Bahiagás constructed for the project.

During the first half of 2020, Alvopetro **completed the construction** of an **11-kilometer transfer pipeline** and a **17.6 MMCFPD gas processing plant**. The high-pressure pipeline was completed in January 2020 by Tecmaster, and the gas treatment facility was commissioned in May 2020 under the gas treatment agreement with Enerflex. Alvopetro controls 100% of its midstream business (gas hubs, pipeline and processing facility) and will own the gas treatment facility outright in 10 years for a small payment when the contract expires.



Alvopetro Energy Presentations March & December 2020

Consequently, by having this **midstream infrastructure** constructed, the company **commenced commercial, high-pressure gas production on July 5, 2020** from the unitized Caburé natural gas field, in which the company has a **49.1% working interest.** The gas is delivered (via a City Gate and distribution pipeline owned by Bahiagás) to the **industrial area of Camaçari**, a major area of natural gas consumption in the environs of the city of Salvador in northeast Brazil.

In July 2020, Alvopetro Energy **commenced commercial, high-pressure gas production from the unitized Caburé gas field** (which includes portions of Alvopetro's Blocks 197 and 198) in the Recôncavo Basin and is pursuing natural gas exploration projects 1) on Blocks 182 and 183, just north of the company's gas processing facility and 2) at a deep tight basin natural gas resource in the Gomo Formation (Blocks 197 and 183), just north of the company's existing Caburé wells.

Alvopetro has **seven existing wells** in the Caburé natural gas field, six of which are currently tied-in (2.95 wells net) with one additional development well in the planning stages.

A stable production profile is expected through 2028 with increasing EBITDA based on the **gas sales agreement** with Bahiagás at an attractive price point. Despite the contracted gas price being over twice that currently realized in North America, Alvopetro's gas is being sold to the end customer at a lower price than what is available from other producers (primarily Petrobras) in Bahia.

Management projects that the company will **generate EBITDA** of over **US$20 million in 2021.** The cash flow from the Caburé Field will help fund management's initiatives for future growth and a dividend stream for shareholders.

Gomo Gas Project (Blocks 183 and 197)

Alvopetro is in the process of developing a tight-gas play in the Gomo Deep Basin, which underlies the company's Blocks 183 and 197. **Two wells** (**183-1** and **197-1**) were drilled in 2014. A successful production test of 183-1 well was completed in March 2021. Management is proceeding with plans to **construct a 9-km flow-pipeline** that will connect well 183-1 to the 11-km Caburé transfer pipeline. The environmental approval has been already received for this pipeline. The estimated cost is $2.4 million.

Additional Exploration Potential

Management has identified oil & gas prospects across the company's Brazilian concessions, which comprise 23,527 acres of land. **Management plans to drill two of these exploration prospects (183-B1 and 182-C1) during 2021** at an estimated total cost of $7.7 million. Both of these wells are natural gas prospects in close proximity to Alvopetro's natural gas processing unit (Unidade de Processamento de Gás Natural or UPGN).

Blue Sky Potential – Additional Natural Gas Exploration Prospects

Management is dedicating a portion of the company's operational cash flows for the investment in additional upstream opportunities in Brazil. With the intermediate-term goal of increasing daily gas volumes at its UPGN, management is focusing its initial efforts on natural gas prospects in close proximity to that facility.

Management

In the small cap, junior exploration and production company segment of the oil & gas sector, investors look for assurance that management can effectively execute its strategy. In order to be successful, the **management team** of a junior oil & gas company **needs the technical, development, regulatory, operational** and **financing experience** to navigate the necessary steps of exploring a prospective field (seismic interpretation, regulatory approvals, environmental permitting etc.), conducting production tests (to determine gas reservoir performance), effecting production planning, arranging supporting infrastructure and implementing operational procedures.

Alvopetro Energy has a **leadership team with a proven track record** that has delivered in the past. Several members of Alvopetro's management team (COB, CEO, CFO, VP of Asset Management and Exploration Manager) was also part of management of **Petrominerales** (TSE: PMG), which was developed into a 40,000 bopd producer in Colombia[i] and which was **acquired for CDN$1.6 billion** (US$1.55 billion)[ii] by Colombia's largest private oil producer, Pacific Rubiales Energy Corp. (TSE: PRE) in 2013. While operating Petrominerales, management acquired a 5% stake in a pipeline, signaling management's insight into the importance of equity ownership in midstream assets. In addition, John Wright, COB of Alvopetro, was the CEO of **Pacalta Resources**, which was developed to a 40,000 bopd producer in Ecuador and subsequently **sold** to Alberta Energy **for CDN$973 million** in 1999.[iii] To be sure, Alvopetro has the natural gas assets and management experience to walk the same path again.

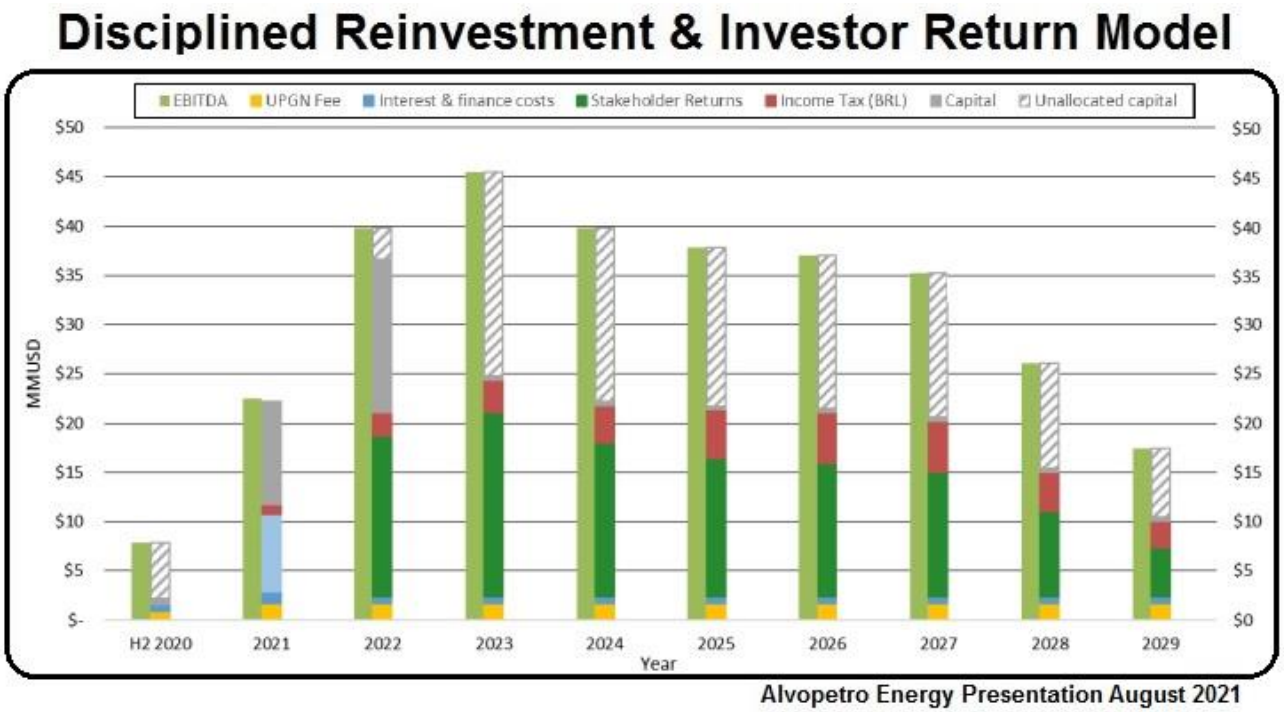
Equity Milestones

On January 15, 2019, the company's shares were **uplisted to the OTCQX Best Market**. Now, ALVOF is Depository Trust Company (DTC) eligible. The OTCQX listing should expand awareness of the company among US investors, both retail and institutional. The company's primary listing continues to be the TSX Venture Exchange (TSXV) under the symbol ALV.

In February, the TSX Venture Exchange announces the Venture 50, a list of 50 companies that ranked the highest in five sectors: Clean Technology and Life Sciences, Diversified Industries, Energy, Mining and Technology. The ranking is based on three equally-weighted, quantitative criteria: year-over-year (YOY) performance in market capitalization growth, share price appreciation and trading volume during the prior calendar year. The objective is to highlight early-stage companies that have performed well. For 2019, **Alvopetro Energy was one of the 10 highest ranked energy companies**.

MANAGEMENT'S STRATEGY

Management's vision is to make Alvopetro Energy a leading independent upstream and midstream gas company in Brazil. **Phase 1** consisted of becoming **commercial producer** of on-shore natural gas producer in the state of Bahia in Brazil, which was **achieved in July 2020**. The cash flow from the production is expected to help fund additional developmental initiatives and return a healthy **dividend** to shareholders.



Based on the development of the company's Caburé's P2 reserves, management has forecasted an EBITDA profile at the floor price in the sales agreement with Bahiagás (light green bars in the above chart). In 2020, the company generated EBITDA of US$6.22 million, most of which has been either utilized to reduced debt or added to working capital. **For 2021, projected EBITDA is over US$20 million**, including the impact of forecasted G&A expenses. In 2021, almost all of the projected EBITDA is anticipated to be consumed by capital expenditures (grey bar), debt principal repayment and interest costs on debt (blue bar), a UPGN fee to Enerflex for the gas facility (yellow bar) and taxes (red bar).

In mid-2021, the Disciplined Model above was amended to incorporate the recent increase in the price floor in the gas sales agreement. Over the 10-year planning period, now approximately US$111 million would be available for investment in upstream projects over and above the current plans for the Gomo Deep Basin Project. At the discretion of the Board, other uses of cash flow are the acquisition of some of the expected divestitures by Petrobras in the Recôncavo Basin, additional dividends to shareholders, share buybacks etc. Management renegotiated the company's existing credit facility (in order to lower interest costs) and extended the maturity of the company's debt, which permits more funds generated from operations to be allocated to acquisitions, exploration and dividends.

Management's **medium-term objective** (or **Phase 2**) is to **maximize the capacity** of both the **transfer pipeline** and **gas treatment facility** up to full capacity (500,000 m³ or 17.657 MMCF per day), which **would increase** the company's **EBITDA** to **US$31 million**.

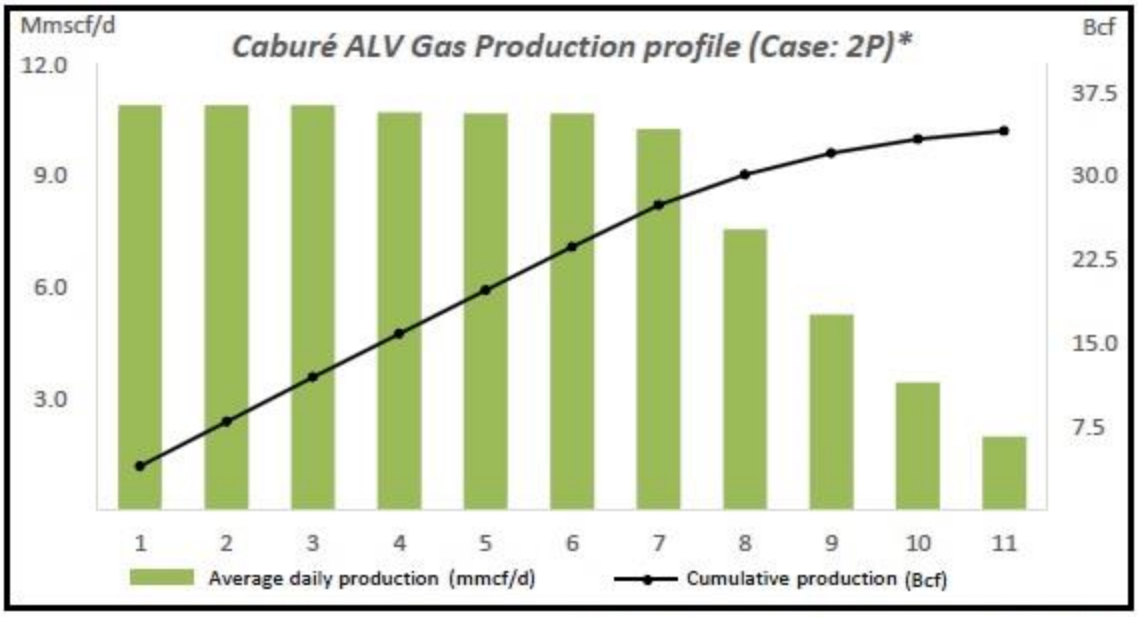
The capacity of Bahiagás' City Gate is 2.00 million m³ (70.6 MMCF) per day, and management would like to capture as much as a 50% share over the long term. Toward that end, **Phase 3** consists of increasing reserves to support that higher level of production through 1) exploration drilling in 2021 and 2) the additional development of the **Gomo natural gas project**.

- Immediately north of Caburé, the Gomo Natural Gas Project has gross P2 reserves of 3.276 MMBOE (or 17.23 BCF) as of the last evaluation (December 31, 2020). These existing reserves have only been assigned to the drainage areas around the two existing wells (183-1 and 197-1).
- Management is proceeding with the construction of the project's 9-km tie-in pipeline and associated field production facilities, which will connect the 183-1 well to the Caburé transfer pipeline.
- In 2021, management plans to drill natural gas prospects (183-B1 and 182-C1 on Blocks 183 and 182, respectively) in order to prove up the reserves in the Gomo Deep Basin. If successful, the drilling program could potentially double the company's reserves.

PRODUCTION

Commercial production from the Caburé natural gas field began on July 5, 2020. Alvopetro's interest in daily sales volume, including condensate, quickly rose to a level of over 1,856 BOE and has increased slightly almost every month thereafter reaching 2,412 boepd in July 2021.

Due to the nature of the Caburé natural gas field, each well is expected to exhibit **a flat production profile** with little maintenance capital being required on this conventional gas reservoir. Current production is being derived from three wells of the existing seven wells with all remaining wells expected to be in production in 2021. Typically, the production profile of a natural gas well declines steadily after the initial month of production, particularly in unconventional tight gas plays that have short transient flow periods. Management's projected production profile (below) portends a relatively flat trajectory over the first eight years of operation since the productive capacity of these conventional gas wells is in excess of the company's designed production plateau.



Alvopetro Energy Presentation March 2021

GAS SALES AGREEMENT

On May 7, 2018, Alvopetro Energy entered into a **long-term gas sales agreement** with Bahiagás (Companhia de Gás da Bahia), the largest natural gas distribution company in northeastern Brazil. Founded in 1991, **Bahiagás** (Companhia de Gás da Bahia) is owned by the state of Bahia, Mitsui Gás e Energia do Brasil Ltda. (a wholly-owned subsidiary of **Mitsui & Co.,** Ltd. Japan; TYO: 80310; OTCMKTS: MITSF) **and Petrobras**.

The gas sales agreement has several components:

- a **gas delivery contract** with terms for both volume and pricing
  - a firm delivery contract and an interruptible (non-firm) part
- the construction of **midstream infrastructure**
  - a new **gas receiving station** (aka City Gate)
    - constructed and owned by Bahiagás
  - a **15-kilometer pipeline** connecting the City Gate to Bahiagás' 569-km gas distribution network servicing Salvador and 12 surrounding towns
    - constructed and owned by Bahiagás
  - an **11-kilometer transfer pipeline** to connect Alvopetro's unitized Caburé natural gas field to the gas treatment facility
    - constructed and owned by Alvopetro
      - construction subcontracted to Tecmaster Engenharia e Construções Ltda
  - **natural gas treatment facility**
    - financed, engineered, constructed and initially owned & operated by Enerflex
    - under a 10-year Gas Treatment Agreement (aka BOOM contract)

Gas Delivery and Sales Contract

Though the initial gas sales agreement was signed in May 2018, subsequently, it was **amended effective May 1, 2020**, just prior to the completion of the three midstream infrastructure projects. Under the amended contract, the volume of the **firm delivery portion** of the contract doubled from 150,000 m^3 (or 5.297 MMcf) per day to **300,000 m^3** (or 10.59 MMcf) **per day** until the end of 2021. Take or pay guarantees are applicable to the firm delivery provision of the sales agreement. The **interruptible volume portion** was reduced from as much as 350,000 m^3 (or 12.360 MMcf) per day

to as much as **200,000m^3** (or 7.063 MMcf) **per day**. **In total**, the gas sales agreement provides for deliveries of up to **500,000m^3** (or 17.657 MMcf) **per day**.

The **gas pricing mechanism** is based on a long-term blended average of three pricing benchmarks: Brent crude oil (natural gas equivalent), Henry Hub natural gas and UK NBP natural gas. The price is also bound by **floor and ceiling prices**. The floor and ceiling prices are also indexed to the U.S. CPI (Consumer Price Index). The natural gas price received is re-set semi-annually on the first of February and August.

NATURAL GAS PROCESSING PLANT

Gas Treatment Agreement

On September 20, 2018, **Alvopetro** and **Enerflex Ltd** entered into a **Gas Treatment Agreement** under which the terms of the construction and operation of a **natural gas treatment facility** are specified. Under the Agreement, **Enerflex constructed** a natural gas processing plant with a **nameplate capacity of 500,000 m^3 of gas per day** (17.657 MMCF per day). Enerflex is also the owner and operator of the processing facility, which includes all responsibilities for contracted gas deliveries and plant maintenance. In exchange, Alvopetro is financially obligated to lease/**rent the equipment** (right-of-use assets) required to operate the facility and pay a monthly integrated **service fee** (equivalent to $2.9 million annually) for the operation and maintenance of the natural gas treatment facility (which includes operational services and maintenance for Alvopetro's 11-kilometer transfer pipeline). The **term of the service fee is 10 years** beginning when the facility became operational (namely, July 5, 2020). The associated lease liability of the right-of-use assets is $8.3 million over the 10-year term. Even though the facility is currently owned and operated by Enerflex, Alvopetro maintains full control of the gas processed within the processing plant. When the Gas Treatment Agreement terminates after 10 years, ownership of the facility transfers to Alvopetro for a small payment related to the compression equipment.



Alvopetro Energy Presentation May 2021

Construction of the Gas Treatment Facility

Under the Gas Treatment Agreement (aka Build-Own-Operate-Maintain or BOOM contract), Enerflex financed, engineered, designed and constructed the processing plant project. The plant is located about 2.2km (or 1.4 miles) NNE of the municipality of Mata de São João or about 58 kilometers (or 36 miles) north of Salvador.

The treatment facility consists of a control room building, pig receiver, mechanical refrigeration plant, three large compressors, suction filters, fuel gas scrubber, S&T (shell & tube) exchanger, line tubes and tanks for condensate storage. Much of the equipment was fabricated in Houston and shipped to Brazil between May and August 2019.

A **natural gas treatment facility removes impurities** from raw, natural gas in order to produce pipeline quality, dry natural gas. The process involves removing contaminants, such as solids, water, higher molecular mass hydrocarbons (oil) and condensates, among others (e.g. carbon dioxide, hydrogen sulfide, mercury, etc.). A critical component is the Mechanical Refrigeration Unit (MRU), which cools the natural gas (reducing the hydrocarbon dew point) in order to condense natural gas liquids (NGLs) and maximize their recovery and hence, maximize the value of the gas stream.

The Alvopetro-Enerflex processing plant delivers **pipeline-quality natural gas** (sales specification standards set by ANP) to Bahiagás' City Gate (a natural gas receiving station to Bahiagás' Salvador distribution network. The Metropolitan Region of Salvador (*Região Metropolitana de Salvador*) is composed of three districts, one of which is **the industrial area of Camaçari**, **a major area of natural gas consumption**. Camaçari is situated between the city of Salvador and Alvopetro's gas production facility. The population of Salvador is over 3,000,000.

Mechanical Refrigeration Unit



Alvopetro Energy Presentation November 2018

The natural gas processing unit (Unidade de Processamento de Gás Natural or UPGN) was **fully commissioned in May 2020**, and **commercial gas deliveries** to the City Gate **commenced on July 5, 2020** for use by the local market. **Production quickly ramped up** to slightly above 300,000 m^3 (or 10.59 MMcf) per day, the firm delivery rate of the gas delivery contract with Bahiagás. Current production is being derived from three of the six producing wells on the Caburé Unit. At the rate of volume, the UPGN is operating at only 60% of its nameplate capacity.



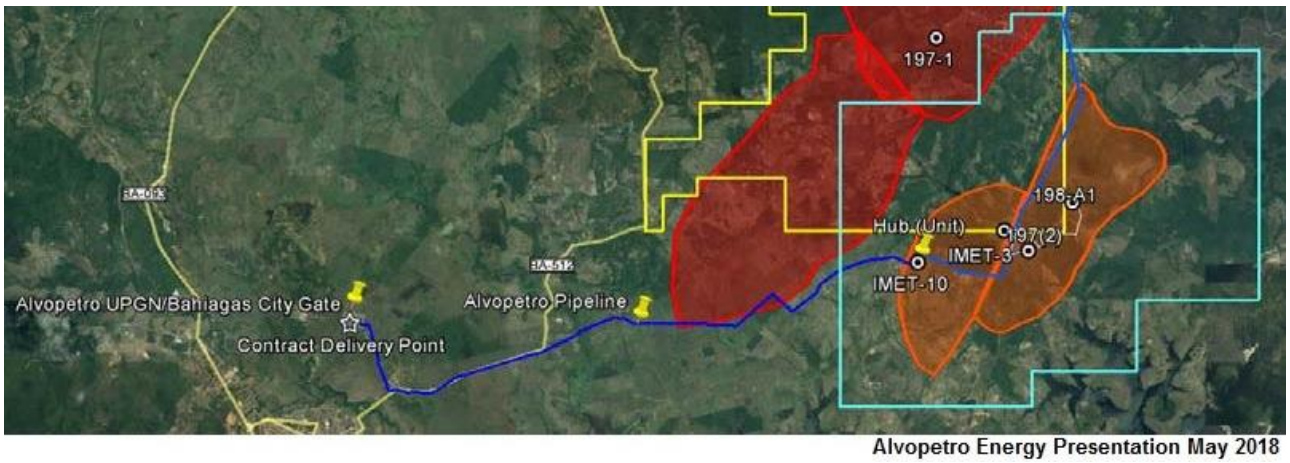
Map data: Google, CNES / Airbus, Maxar Technologies, January 2021

Alvopetro is currently the only company in Brazil, other than Petrobras, that is able to **deliver sales-specified gas** to a gas distribution company.

NATURAL GAS PIPELINE

11-km Transfer Pipeline

Alvopetro owns an 11 km tie-in pipeline that is capable of transporting 500,000 m³ (17.657 MMCF) per day of raw, natural gas from the field production facilities (HUB) to the recently commissioned gas treatment facility, which thereby connects the existing wells in the unitized Caburé natural gas field to the gas processing plant. In November 2018, Alvopetro contracted Tecmaster Engenharia e Construções Ltda to construct this transfer pipeline, which was completed in January 2020. The pipeline's operator is Enerflex Ltd under a 10-year service contract that began on July 5, 2020.



Alvopetro Energy Presentation May 2018

Construction of the 11-km Transfer Pipeline (dark blue line in image above)

On November 16, 2018, Alvopetro **awarded the contract** for the construction of its 10.93-km transfer pipeline **to Tecmaster Engenharia e Construções Ltda**. Founded in December 2000 and headquartered in city of Maceió (about 420 kilometers from the Caburé natural gas field), Tecmaster is an engineering and construction (E&C) company specializing in the construction and maintenance of on-shore oil & gas pipelines with clients throughout Brazil, including Petrobras and Bahiagás.

Transfer Pipeline Project

Pipeline Delivered to Staging Area


Alvopetro Energy Presentation June 2019

Right-of-Way Preparation


Alvopetro Energy Presentation August 2019

Alvopetro directly ordered 11 kilometers of **8-inch ANSI Class 300 pipe** for the project **from Vallourec** (OTCMARKETS: VLOUF; FR: VK), a global provider of tubular solutions. The pipes were delivered to a field staging area during the first quarter of 2019. After the **environmental license was received on May 10th** and the National Agency of Petroleum, Natural Gas and Biofuels (ANP) authorized the construction of the pipeline on June 12th, construction of the pipeline commenced immediately thereafter. By August 2019, the majority of the right-of-way had been cleared, after which the pipeline began to be installed, welded and buried. **The transfer pipeline was completed in January 2020**, and subsequently it was inertized in February 2020. The total **cost** of the pipeline project was **US$3.7 million**.

Transfer Pipeline Project

Line Pipe Placed Along Right-of-Way



Alvopetro Energy Presentation August 2019

High Pressure Unit Facility Tie-in



Alvopetro Energy Presentation Feb. 2020

CABURÉ GAS FIELD (49.1% working interest)

Situated in the sedimentary Recôncavo Basin, the Caburé natural gas field was **unitized on April 20, 2018** after several wells defined this natural gas reservoir that straddled multiple license areas. Through an arbitration process conducted by the National Agency of Petroleum, Natural Gas and Biofuels of Brazil (or *Agência Nacional do Petróleo, Gás Natural e Biocombustíveis* aka ANP), the reservoir's reserves were allocated into working interest shares of 50.9% to Imetame Energia and **49.1% to Alvopetro Energy**. With the majority ownership, Imetame is the operator of the unitized field; however, periodically, production allocations against each company's share of 2P reserves are revisited, which may allow for operator responsibilities to be re-determined. The first redetermination is effective on December 31, 2021.

The **Caburé natural gas field** underlies portions of Alvopetro's **Block 197** (2,323 of 5,807 gross acres) and **Block 198** (2,503[iv] of the original 7,739 gross acres),[v] along with parts of Imetame's Blocks 211 and 212. Together, Alvopetro's portions of Blocks 197 and 198 that comprised part of the Caburé natural gas field encompass **4,826 acres**. Currently, the Caburé natural gas field has **six producing wells tied-in to the 11-km transfer pipeline** and another existing well.

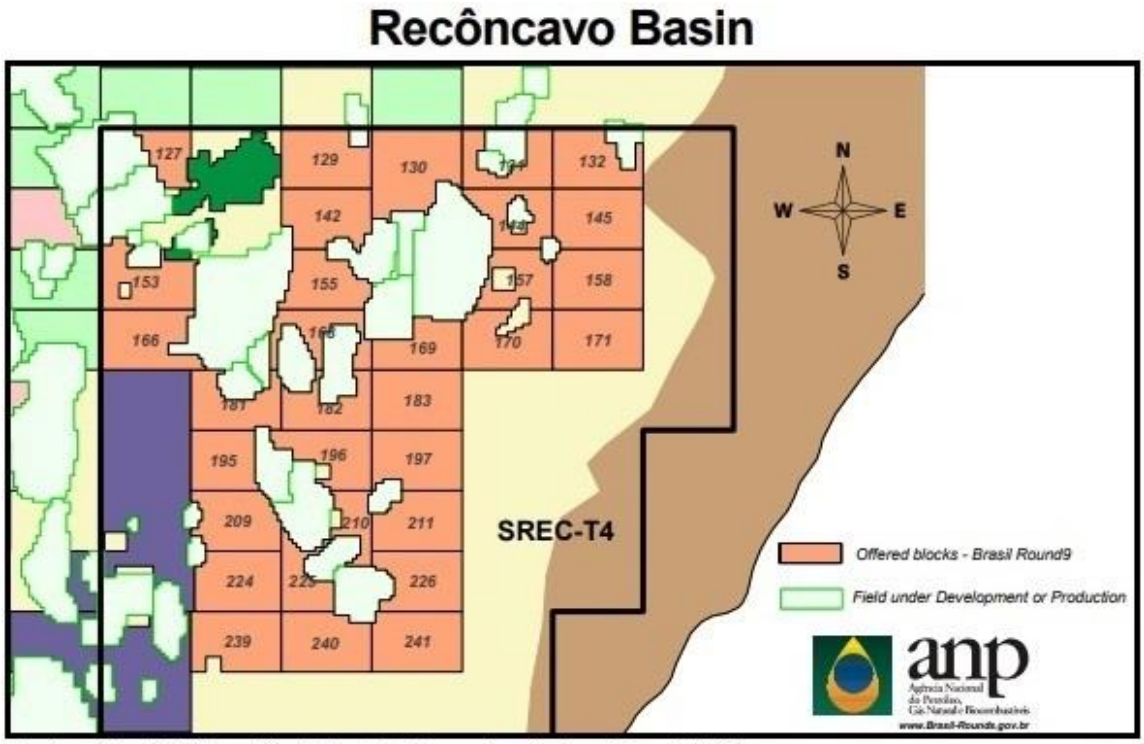
Block 197 (2,323 acres)

Alvopetro was awarded **Block 197** during Brazil's 9th Oil & Gas Exploration License Bidding Round in November 2007. The company drilled its first well (197-1) in that block in April 2014. **In December 2014, the Caburé natural gas field was discovered** with the drilling of a second well **(197-2)** in Block197. After successfully encountering three separate intervals of Caruaçu Member of the Maracangalha Formation in 2015, a declaration of commerciality was approved by the ANP in

January 2017, which separated the gas discovery from the remainder of the block and resulted in the discovery officially being named the Caburé gas field.

Block 198 (2,503 acres)

Block 198 (7,739 acres) was awarded to Alvopetro during the 12th Oil & Gas Exploration License Bidding Round in November 2013. Block 198 is immediately east of Block 197. In January 2017, the company drilled the 1,480-meter **198-A1 well**, tested it in February and March 2017, and in May, declared the well's commerciality with that portion of the field being named Caburé Leste. The net pay interval is in the Caruaçu Formation with potential in the up-hole Pojuca sands. In May 2017, Alvopetro relinquished 5,236 acres of Block 198 to the ANP, retaining **2,503**[vi] **acres**.



Nacional do Petróleo, Gás Natural e Biocombustíveis of Brazil (ANP)
National Agency of Petroleum, Natural Gas and Biofuels Agencia
rodadas.anp.gov.br/arquivos/Round9/mapas/Reconcavo.pdf ; accessed January 18, 2021

Unitization

In Brazil, as in many other jurisdictions, when a hydrocarbon reservoir extends across concessions (in the case of Brazil, Blocks), it is **mandatory that the discovery be unitized** or pooled (in order to facilitate a fair and orderly exploration and development process) and that the appropriate government agency approve the unitization agreement.

In 2017, through the drilling and testing of four wells (197-2, 198-A1, IMET-3 and IMET-10), it was determined that **the Caburé natural gas field extends across four blocks in the Recôncavo Basin**: Blocks 197 and 198 held by Alvopetro Energy and Blocks 211 and 212 held by Imetame Energia. Imetame was awarded Blocks 210 and 211 during Brazil's 9th Oil & Gas Exploration License Bidding Round in November 2007. From the start of the unitization process, the ANP (National Agency of Petroleum, Natural Gas and Biofuels of Brazil) was involved to help arbitrate the terms of the arrangement.

On April 20, 2018, Alvopetro and Imetame Energia finalized the terms of a unitization agreement, along with a development plan and other related agreements**.** Initially, Imetame would be the

operator with a 50.9% working interest and Alvopetro would hold 49.1%. **Each company had a different objective**: Imetame's management wanted to build a thermoelectric plant and Alvopetro planned on building a UPGN (gas process plant) to sell gas into the local distribution network. **Both companies achieved their goals**.

Initial low-pressure production supplied Imetame Energia's well-to-wire 28MW thermoelectric plant (Prosperidade 1), which began operating in 2018. Located in Camaçari, the plant produces electricity and is connected to through transmission lines and substations to the Brazilian National Interconnected System (SIN). According to Imetame's August 2016 presentation, Prosperidade 1 is strategically located close to Imetame's **IMET-3** and **IMET-10** wells. Imetame's share of gas is transported directly from the field to the thermal power project. Starting in September 2018, this early field production totaled 1,447 MMCF of natural gas through March 18, 2020 (or 70,890 cubic meters per day), which was allocated against Imetame's share of 2P reserves.

In the meantime, Alvopetro Energy negotiated a gas sales agreement with Bahiagás, constructed a high-pressure gas treatment facility (through an agreement with Enerflex Ltd.) and an 11-km transfer pipeline to transport the raw gas from the field to the gas processing plant. The treatment facility began commercially selling sales-specified gas into the local gas distribution network on July 5, 2020.

Today, the Alvopetro's **Caburé** & **Caburé Leste** fields are collectively known as the **Caburé natural gas field**. The unitized field (which includes Imetame's **Cardeal do Nordeste** and **Cardeal do Nordeste Leste** fields) has **seven existing wells**, six of which are producing wells tied-in to the 11-km transfer pipeline.

Alvopetro Energy Ltd

Unitized Caburé Oil Field

Existing Wells	Block	Field	When Spudded	Depth	Comment
197-2	197	Caburé (CBE)	Dec. 2014	1,669	discovery well
IMET-3	211	Cardeal do Nordeste (CARN)	2015	2,344	commercialized April 2015
IMET-10D	211	Cardeal do Nordeste (CARN)	2015	2,576	PIG launcher site
198-A1 aka ALV-11	198	Caburé do Leste (CBEL)	Jan. 2017	1,480	commercialized May 2017
IMET-26A	212	Cardeal do Nordeste Leste	Sept.2019	1,549	commercialized March 2020
CARN-1D	211	Cardeal do Nordeste (CARN)	2019	1,739	development well
CBE-1D	197	Caburé (CBE)	2019	1,759	development well

GOMO NATURAL GAS PROJECT (100% Working Interest)

With management's first priority of commencing production of natural gas having been achieved, the company's initiative to further develop the company's resources in the Gomo Deep Basin can be accomplished, being funded with internally generated cash flow.

The Gomo natural gas project calls for the development of a tight gas play in the Gomo Deep Basin, which underlies the company's Block 183 and portion of Block 197. Block 183 encompasses 7,740 acres. The first **two wells** (**183-1** and **197-1**) were drilled in 2014.

Ownership

Alvopetro was awarded **Block 197** during Brazil's 9th Oil & Gas Exploration License Bidding Round in November 2007.

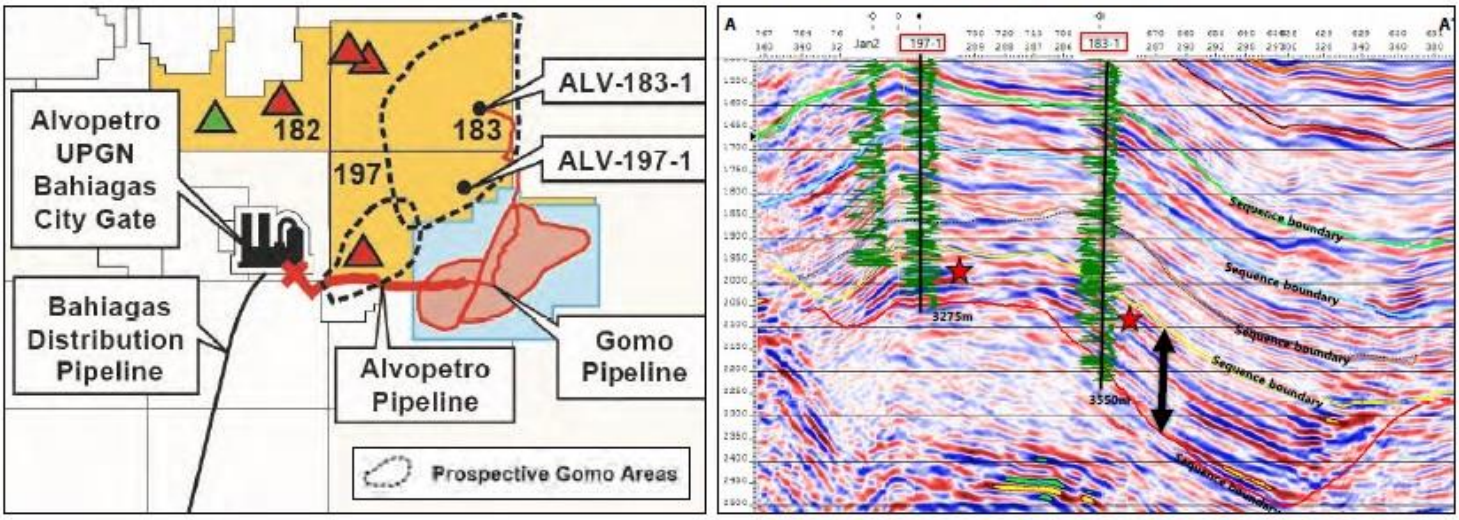
Block 183 was also awarded in Brazil's 9th Oil & Gas Exploration License Bidding Round but to another party. Subsequently, in May 2013, Alvopetro acquired Block 183 through a farm-in agreement.

Well – 183-1 (Gomo Deep Basin)

In October 2014, Alvopetro drilled the **ALV-183-1** exploratory well in the Gomo Deep Basin. ALV-183-1 was drilled to a depth of 3,550 meters. The test well **encountered 168 meters with hydrocarbon shows** over several separate intervals, including 46 meters of net pay in the Upper Gomo and 93 meters in the Lower Gomo.

Subsequently, in February 2018, the company successfully tested the intervals in the **Gomo Member** of the Lower Cretaceous Candeias (Shale) Formation and the **Caruaçu Member** of the Maracangalha Formation. According to ANP, the Gomo Member is a prospective source for unconventional shale oil or gas plays while the Caruaçu Member has potential for the development of deep tight gas sands resources.[vii] Using the Barnett shale analogy, ANP estimated that the recoverable shale gas resources in the Recôncavo Basin are 20 TCF.[viii]

ALV-183-1 & ALV-197-1 in Gomo Deep Basin



Alvopetro Energy Presentation December 2020

In the fourth quarter of 2019, a **fracture stimulation test** of well 183-1 targeted an 18-meter zone in the Gomo Member. During the flowback period, the well produced 5.82 MMCF of natural gas and 249 BBL of 56 degree API condensate, which correlates to an average rate of production of 0.734 MMCF/d of natural gas and 31 BBL/d of condensate. A subsequent 6-hour production period during the same test produced at an average rate of 0.919 MMCF/d of natural gas and 27 BBL/d of condensate. However, some difficulties were encountered that hampered the validation of the pressure transient analysis. A plunger lift system was installed to recover fluids from the 183-1 well and in March 2021, a **follow-on production test was completed** in order to determine an indication of potential well productivity through studies of formation permeability and long-term deliverability (gas flow rate).

Well – 197-1 (Gomo Deep Basin)

In April 2014, Alvopetro completed drilling the ALV-197-1 exploratory well in Block 197. The well targeted the Gomo Formation and tested gas at 3,200 meters and 3,600 meters.

9-kilometer Tie-in Pipeline

The construction of a **9-km flow line**, which will connect the 183-1 well to Alvopetro's existing 11-km Caburé gas field transfer pipeline. Construction commenced in July 2021.

Reserves

In the annual independent reserve assessment and evaluation effective December 31, 2020, the drainage areas around **183-1** and **197-1** have been assigned **Gross 2P reserves** (**3.276 MMBOE**)

The Gomo project's potential is highlighted by the recently completed annual reserve and resource evaluation. The **Gomo** Project's **net 2P reserves** increased 150% from 1.202 to 3.014 MMBOE.

Summary of Oil and Gas Reserves - Gomo Field

Effective Dec. 31, 2019	Gomo Gas Field Company Gross (Mboe)	Company Net (Mboe)	Effective Dec. 31, 2020	Gomo Gas Field Company Gross (Mboe)	Company Net (Mboe)
Proved			Proved		
Producing	-	-	Producing	-	-
Developed Non-Producing	-	-	Developed Non-Producing	403	371
Undeveloped	412	367	Undeveloped	441	406
Total Proved	412	367	Total Proved	843	777
Probable	946	835	Probable	2,433	2,237
Total Proved plus Probable	1,358	1,202	Total Proved plus Probable	3,276	3,014
Possible	1,566	1,378	Possible	2,675	2,452
Total Proved plus Probable plus Possible	2,924	2,580	Total Proved plus Probable plus Possible	5,951	5,466

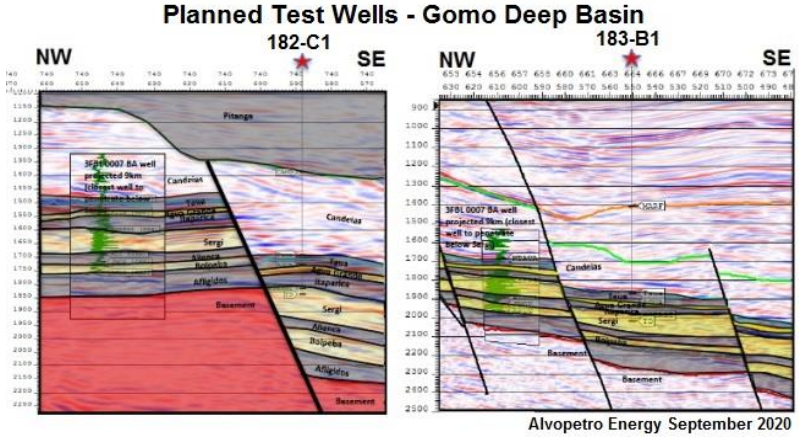
Alvopetro Energy 2019 Annual Report | Alvopetro Energy 2020 Annual Report

The Gomo Project's reserves are classified as undeveloped since expenditures are required to construct a 9-km pipeline extension and to develop a field facility prior to the commencement of production.

Planned Exploration Wells – 183-B1 & 182-C1 (Gomo Deep Basin)

During 2021, management plans to drill two multi-zone prospects: **ALV-183-B1** (3,100 meters) and **ALV-182-C1** (2,900 meters). Both of these exploration wells are licensed. The company the civil construction (preparations of the pad site) for these two exploration wells. A capital expenditure budget of $7.7 million is currently allocated to this exploration project.

Planned Test Wells - Gomo Deep Basin



Alvopetro Energy September 2020

GLJ Petroleum Consultants has completed independent evaluations of the UPIIP (Undiscovered Petroleum Initially in Place) for the prospective resources of both wells. For those unfamiliar with prospective resource terminology, prospective resources are "those quantities of oil and gas estimated on a given date to be potentially recoverable from undiscovered accumulations" by application of future development projects. "Prospective resources have both an associated chance of discovery and a chance of development," The key elements of prospective resources are that they are undiscovered, yet deemed potentially recoverable since they are considered to be "technically viable and economic to recover" under existing economic conditions, operating methods and government regulations.

Nevertheless, for the **1,300-acre ALV-183-B1 prospect**, GLJ's "best estimate" evaluation of **UPIIP** Prospective Resource is 43.7 BCF (**5.9 MMBOE**) with a 44% chance of discovery. For the **780-acre ALV-182-C1 prospect**, and 4.6 MMBOE GLJ's "best estimate" is 33.5 BCF (**4.6 MMBOE**) with a 47% chance of success.

VALUATION

The valuation process for small and mid-cap oil & gas companies can be based upon various valuation methodologies, including comparative analysis, a discounted cash flow (DCF) model and/or a calculation of Net Asset Value (NAV). Usually, the applicable methodology is determined by the company's position within its corporate life cycle: **comparative analysis for producing companies**, a DCF model for unprofitable producing companies and a calculation of NAV for exploration companies that are still in the developmental stage with only prospective resources. Since Alvopetro Energy has achieved commercial production and is profitable on an operational basis, we believe that comparative analysis is the appropriate valuation method.

We use a comparative valuation methodology based on **Price-to-Sales** (P/S) for oil and gas companies due to the cyclical nature of the industry, predominately influenced by the changes in the price of oil over time due to fundamental changes in the supply of and demand for the commodity.

After analyzing a segment of oil & gas companies generating revenues of up to $30 million annually, we identified several **comparable companies**, namely Epsilon Energy (EPSN), Mexco Energy (MXC), PEDEVCO (PED), PHX Minerals (PHX) and U.S. Energy (USEG). Companies not considered comparable to Alvopetro were those structured as Unit Trust Funds, those with significant oil service operations and those whose stocks are trading below $0.10.

The current P/S valuation range for this group of comparable companies is between 2.84 and 7.57 times TTM revenues with a mean P/S valuation of 4.64 times.

Industry Comparables	**Pr Chg YTD**	**P/E CFY**	**Price/ Book**	**Price/ Sales**	**Market Cap.**
ALVOPETRO ENERGY LTD	54.2	19.9	1.52	3.95	89.8
Industry Mean	20.5	N/A	1.46	4.64	66.2
Industry Median	19.1	N/A	1.35	4.35	80.9
S&P 500	18.3	22.2	4.75	3.20	N/A
EPSILON ENERGY LTD	40.2	N/A	1.65	4.35	116.7
MEXCO ENERGY CORP	48.6	N/A	2.12	5.29	19.6
PEDEVCO CORP	-20.5	N/A	1.10	7.57	94.6
PHX MINERALS INC	19.1	N/A	1.07	2.84	80.9
U.S. ENERGY CORP	14.9	N/A	1.35	3.16	19.1

Alvopetro Energy is entering the emerging growth phase of its corporate history with an increasing revenue stream, which was enabled by the recently constructed gas processing facility and transfer pipeline. Due the character of the company's enterprise, namely a small-capitalization company with a growing revenue profile, we expect Alvopetro to attain at least a second quartile P/S ratio of the comparable companies listed above. Moreover, a common attribute of first and second quartile companies is a stable-to-growing revenue growth profile, which is consistent to Alvopetro's. Also, due the company's recent initiation of commercial sales, we utilized the current run rate of revenues of the last six months of production to project annual revenues.

With the expectation that Alvopetro's stock will trade at a second quartile P/S ratio, our **comparable analysis valuation target** is **$4.17**.

RISKS

- Alvopetro operates in Brazil, a country marked by a history of hyperinflation (1980's through 1995) and currency devaluations (1994 – 2002, 2012 – 2015 and starting again in 2018). The country has also experienced volatile political and economic climates. Then again, oil & gas are commodities, and as such, are influenced by global factors rather than local economic conditions.
- The Brazilian Government, at some time, could restrict the repatriation of capital and/or earnings from Brazil or could alter the regulatory regime, which in extreme and rare circumstances would include the risk of the expropriation of properties without fair compensation.
- Under the gas sales agreement with Bahiagás, there are penalties if Alvopetro fails to supply the firm volumes specified in the contract. Management anticipates that the company's production can fulfill the firm sales commitments; however, if not, the company could purchase third-party gas supplies to meet its commitments or pay the failure penalties.
- Lower gas price and/or reduced demand due to a recession could cause Bahiagás to default on the take-or-pay provision in the gas sales agreement.
- Operationally, all natural resource companies, including oil & gas companies, are at risk from labor disputes.

BALANCE SHEETS

ALVOPETRO ENERGY LIMITED

(in '000 $US except share data)	2017	2018	2019	2020	2Q 2021
Period ending	12/31/2017	12/31/2018	12/31/2019	12/31/2020	6/30/2021
ASSETS					
Cash and cash equivalents	9,189	7,070	1,215	5,159	4,249
Restricted cash	106	135	270	125	151
Trade and other receivables	153	284	265	2,802	3,662
Prepaid expenditures	208	330	370	273	351
Assets held for sale	236	202	332	128	0
Total Current Assets	**9,892**	**8,021**	**2,452**	**8,487**	**8,413**
Exploration and evaluation assets	54,585	35,340	35,971	32,262	3,498
Property, plant and equipment	4,238	22,011	30,984	25,843	54,257
Right-of-use assets	-	-	219	8,092	8,466
Deferred tax asset	-	-	-	4,576	3,874
Other assets	-	-	1,790	1,128	814
TOTAL ASSETS	**68,715**	**65,372**	**71,416**	**80,388**	**79,322**
Accounts payable & accrued liabilities	1,111	1,221	3,244	2,390	3,259
Lease liabilities	-	-	101	483	486
Decommissioning liabilities	19	71	80	63	60
Other liabilities	-	-	5,728	12	109
Total Current Liabilities	**1,130**	**1,292**	**9,153**	**2,948**	**3,914**
Lease liabilities	-	-	62	7,827	7,724
Credit facility	-	-	5,027	15,423	7,545
Other liabilities	-	2,348	-	-	-
Decommissioning liabilities	1,445	1,160	1,300	1,080	887
Non-Current Liabilities	**1,445**	**3,508**	**6,389**	**24,330**	**16,156**
TOTAL LIABILITIES	**2,575**	**4,800**	**15,542**	**27,278**	**20,070**
SHAREHOLDERS' EQUITY					
Share capital	151,937	155,731	156,355	156,755	156,841
Contributed surplus	1,662	1,813	2,790	2,821	2,974
Deficit	(67,507)	(71,847)	(76,878)	(71,172)	(68,623)
Accumulated other comprehensive loss	(19,952)	(25,125)	(26,393)	(35,294)	(31,940)
Total Stockholders' Equity	**66,140**	**60,572**	**55,874**	**53,110**	**59,252**
TOTAL LIAB. & STOCKHOLDERS' EQUITY	**68,715**	**65,372**	**71,416**	**80,388**	**79,322**
Shares outstanding	28,388,957	32,223,624	32,616,596	33,153,800	33,276,098

PROJECTED ANNUAL INCOME STATEMENTS

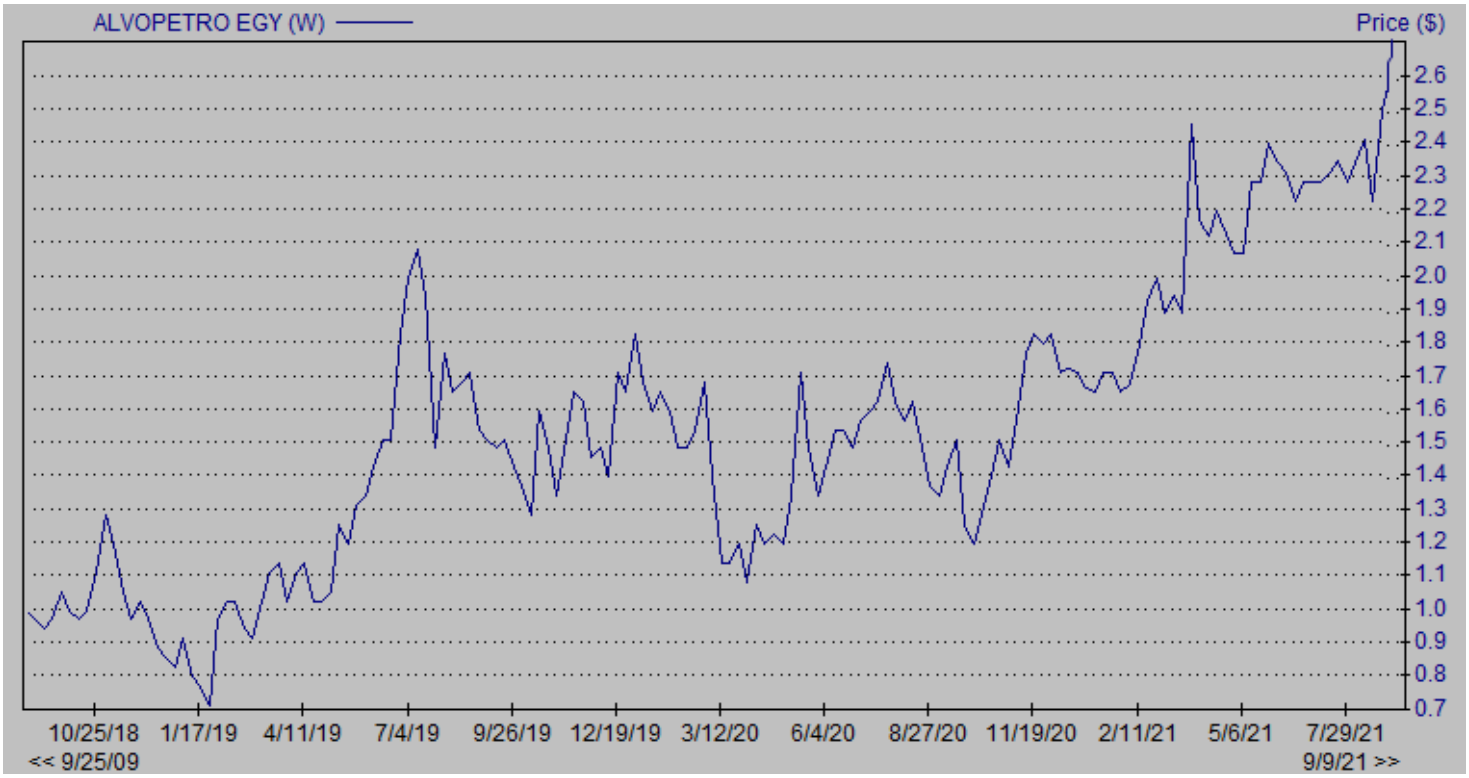
ALVOPETRO ENERGY LIMITED

Income Statement (in '000 $US, except share out. data)	2016 12/31/2016	2017 12/31/2017	2018 12/31/2018	2019 12/31/2019	2020 12/31/2020	2021 E 12/31/2021
Natural gas, oil & condensate sales	561	462	519	240	11,308	34,284
Royalties and production taxes	(59)	(51)	(55)	(34)	(740)	(2,674)
Net natural gas, oil & condensate rev.	**502**	**411**	**464**	**206**	**10,568**	**31,610**
Other income	109	144	152	194	75	29
Total revenues & other income	**611**	**555**	**616**	**400**	**10,643**	**31,639**
Production	1,153	824	840	276	1,336	3,324
Transportation	33	23	13	-	0	0
General and administrative	3,523	2,607	2,762	2,793	3,070	4,347
Depletion and depreciation	416	205	144	234	2,070	8,666
Impairment	7,823	3,661	765	1,645	1,455	0
Accretion of decommissioning liabilities	28	37	0	0	0	0
Exploration and evaluation expenses	434	212	209	95	0	0
Finance expenses	-	-	41	259	2,337	3,360
Share-based compensation	80	85	95	141	242	362
Risk management losses	-	-	-	-	12	108
Foreign exchange (gain) loss	(12)	2	32	6	(1,840)	(746)
Loss (gain) on disposition of assets	41	16	55	(38)	0	(16)
Total expenses	**13,519**	**7,672**	**4,956**	**5,411**	**8,682**	**19,405**
Income (loss) before taxes	**(12,908)**	**(7,117)**	**(4,340)**	**(5,011)**	**1,961**	**12,234**
Deferred tax recovery (income tax)	330	0	0	0	3,745	(7,494)
Net income (loss)	**(12,578)**	**(7,117)**	**(4,340)**	**(5,011)**	**5,706**	**4,740**
Other comprehensive income						
Fgn. curr. translation gain (loss)	5,507	(622)	(5,173)	(1,269)	(8,901)	(6,264)
Comprehensive income (loss)	**(7,071)**	**(7,739)**	**(9,513)**	**(6,280)**	**(3,195)**	**(1,524)**
Diluted income (loss) per diluted share	**(0.4431)**	**(0.2209)**	**(0.1487)**	**(0.1554)**	**0.1628**	**0.1358**
Wgted. average shares out. - diluted	28,388,957	32,223,624	29,187,408	32,236,306	35,042,942	34,900,498

QUARTERLY INCOME STATEMENTS

ALVOPETRO ENERGY LIMITED						
Income Statement (in '000 $US, except share out. data)	2020 12/31/2020	1Q 2021 3/31/2021	2Q 2021 6/30/2021	3Q E 2021 9/30/2021	4Q E 2021 12/31/2021	Estimate 2021 12/31/2021
Natural gas, oil & condensate sales	11,308	6,939	8,182	9,082	10,081	34,284
Royalties and production taxes	(740)	(645)	(607)	(674)	(748)	(2,674)
Net natural gas, oil & condensate rev.	**10,568**	**6,294**	**7,575**	**8,408**	**9,333**	**31,610**
Other income	75	8	7	7	7	29
Total revenues & other income	**10,643**	**6,302**	**7,582**	**8,415**	**9,340**	**31,639**
Production	1,336	710	791	869	954	3,324
Transportation	0	0	0	0	0	0
General and administrative	3,070	851	1,036	1,160	1,300	4,347
Depletion and depreciation	2,070	1,674	2,092	2,322	2,578	8,666
Impairment	1,455	0	0	0	0	0
Accretion of decommissioning liab.	0	-	-	-	-	0
Exploration and evaluation expenses	0	-	-	-	-	0
Finance expenses	2,337	994	833	814	719	3,360
Share-based compensation	242	89	92	91	91	362
Risk management losses	12	(58)	166	0	0	108
Foreign exchange (gain) loss	(1,840)	2,065	(2,811)	0	0	(746)
Loss (gain) on disposition of assets	0	(3)	(13)	0	0	(16)
Total expenses	**8,682**	**6,322**	**2,186**	**5,256**	**5,641**	**19,405**
Income (loss) before taxes	**1,961**	**(20)**	**5,396**	**3,159**	**3,699**	**12,234**
Deferred tax recovery (income tax)	3,745	(1,068)	(1,759)	(2,150)	(2,517)	(7,494)
Net income (loss)	**5,706**	**(1,088)**	**3,637**	**1,010**	**1,182**	**4,740**
Other comprehensive income						
Fgn. curr. translation gain (loss)	(8,901)	(987)	(1,759)	(1,759)	(1,759)	(6,264)
Comprehensive income (loss)	**(3,195)**	**(2,075)**	**1,878**	**(749)**	**(577)**	**(1,524)**
Diluted income (loss) per diluted share	**0.1628**	**(0.0327)**	**0.1042**	**0.0289**	**0.0339**	**0.1358**
Wgted. average shares out. - diluted	35,042,942	33,235,163	34,900,498	34,900,498	34,900,498	34,900,498
Funds flow from operations (EBITDA)	6,221	4,756	5,556	6,340	7,040	23,692

HISTORICAL STOCK PRICE



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