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INDEPENDENT INVESTMENT RESEARCH

Calima Energy Limited (ASX:CE1)

Update - July 2018

INDEPENDENT
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MOVING TO 100% PROJECT OWNERSHIP

Subsequent to our September 2017 Initiation Report, Calima Energy ("Calima" or "the Company") has made significant progress on its Montney Project ("the Project") in the Calima Lands acreage of the world class unconventional liquids-rich Montney Formation of eastern British Columbia, Canada. We are seeing increasing interest in the Montney, largely confirmed by increasing prices being paid for acreage, which provides significant upside for Calima.

The key event has been the successful all scrip takeover of the two unlisted JV partners, TSV-Montney ("TSV-M") and TMK-Montney ("TMK-M"), which, following the completion of the compulsory acquisition of remaining shares, will give Calima 100% ownership of the Project, with this resulting in the expected advantages of a single project owner.

The Company is well funded, following an oversubscribed A$3.5 million placement to key stake holders; funds will be used to finalise planning and preparation of the planned 2018/2019 winter three hole drilling programme (for which essential regulatory permits have been granted and the pad constructed). This programme will include one vertical and two horizontal wells, with drilling expected to commence in December 2018.

Other key advances over recent months have included the release of an Independent Resource Report by McDaniel & Associates, with a best estimate of gross, un-risked Prospective Resources of 475,797 Mboe, which includes 24% liquids by energy content. The quality of the acreage and potential value has been highlighted by offset activity over recent months. This includes a buyer (possibly ConocoPhillips) paying over C$9,000/acre for undeveloped liquids-rich Montney acreage, some 100km along strike to the SSE of the Calima Lands, and Painted Pony Limited (TSX:PONY) reporting test flows of +2,000boe/d from a horizontal well in their Beg Block, located within 40km of Calima on the western margin of the liquids-rich corridor. In addition, activities on the adjacent Saguaro acreage continue to return positive results, with these forming the basis for the estimation of the Calima Resources.

KEY POINTS

Ownership consolidation: In our view this a critical transaction, as it will streamline administration, decision making and overheads, and remove the time and programme constraints in the original Farm-in agreement; in addition the all scrip nature will allow the original TSV-M and TMK-M holders to benefit from the potential upside in the Project.

Upcoming drilling: A three hole drilling programme (one vertical and two horizontal) is planned for the 2019/2019 winter which if successful will lead to the construction of a pipeline and a second three hole horizontal drilling campaign during 2019. All the horizontal wells would be brought on production resulting in cash flow from the sales of gas and condensate.

First reserves expected to be booked: Positive results from the upcoming drilling programme should lead to the booking of first reserves for the Calima Lands in 2019, and confirm the quality of the acreage - these should result in a significant re-rating of the Company.

World class liquids play: Despite only having been developed over recent years, the over-pressured liquids rich window of the Montney has been transformed into a world-class unconventional liquids producer, and is now a key supplier of high value condensate and other natural gas liquids ("NGLs") to the North American market - current production is ~7 Bcf/d, and 247 Mbbl/d of condensate and other liquids.

Thick, stacked, shallow reservoirs: With a combined pay thickness of 200m to 300m and depths of between 1,200m and 1,650m within the Calima Lands, the liquids-rich Montney provides an excellent opportunity to develop multi-layer completions from single surface sites - this leads to relatively low development costs, with current break even costs amongst the lowest in North America; this is reinforced by the primary lithology being a siltstone rather than a true shale, resulting in higher porosity and permeability, better fracture stimulation properties and hence enhanced recoveries when compared to other unconventional plays.

Leverage off well-developed IP: Although still a relatively young producer, work in the liquids-rich Montney has led to steady improvements in drilling and completion techniques and hence falls in costs for which Calima is in an excellent position to take advantage of.

Improving West Coast gas prices: Although the benchmark Alberta Energy Company ("AECO") gas price has been depressed for a few years due largely to full pipelines, it is expected to significantly improve over the next few years with the completion of new pipeline infrastructure and planned LNG terminals, with the latter opening up the Montney to international markets for the first time - It has been estimated that the Montney could hold ~50% of the reserves of Qatar, and hence has the potential to be a major global gas and LNG producer.

Calima ideally placed to benefit: Although Calima is primarily a liquids-rich play gas provides significant potential additional revenue and hence upside in company value.

Target price: We have a six month base case price target of $0.16, which is partly contingent on a successful drilling programme, however there is significant pre-drilling upside in Calima's current price. Should the first drilling programme be successful, and based on more recent prices paid for acreage in the Montney, we see upside potential in value to A$0.25/share.

Note: This report is based on information provided by the company as at 11 July 2018

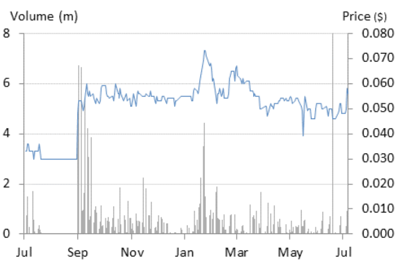
Investment Profile - Post Takeover*	
Share Price - 11 July 2018	A$0.057
6 Month Price Target	A$0.16
Issued Capital:	
Ordinary Shares	927.9m
Escrow Shares	51.8m
Escrow Options (Unlisted)	30.0m
Performance/Management Rights and Shares	39.5m
Fully Diluted	1,045m
Market Capitalisation	$55.6m
12 month L/H (adjusted for consolidation)	$0.021/$0.076
Cash and Liquid Investments	$4.68 million

*It is expected that the issue of takeover consideration shares will be completed by mid-August

Board and Management
Mr Glen Whiddon: Executive Chairman
Dr Alan Stein: Managing Director
Mr Jonathan Taylor: Technical Director
Mr Neil Hackett: Non-Executive Director

Major Shareholder Groups	
Board and Management	29.37%
Euroz Principals and Clients	8.27%
Small Cap Institutions	4.79%
Pacific World Energy Limited	3.42%

Price Chart



Senior Analyst – Mark Gordon

The investment opinion in this report is current as at the date of publication. Investors and advisers should be aware that over time the circumstances of the issuer and/or product may change which may affect our investment opinion.

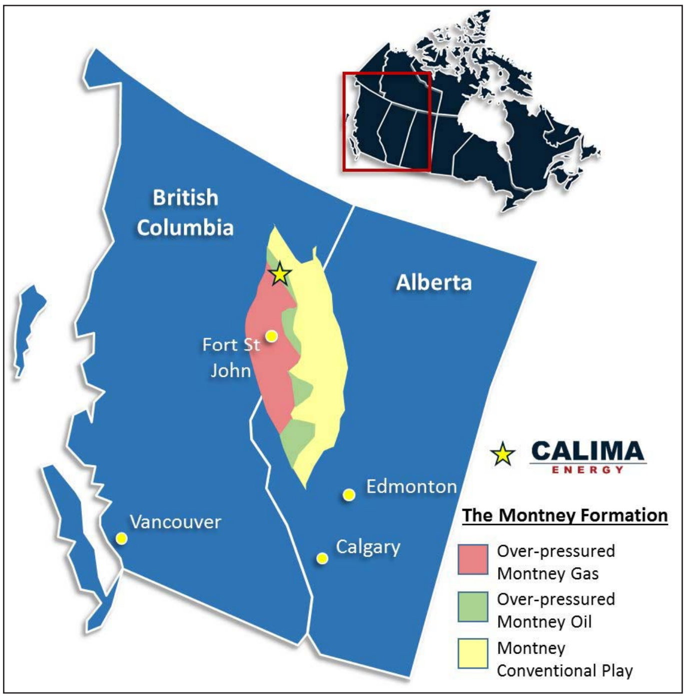
ACTIVITIES UPDATE

STRATEGY AND PROJECT OVERVIEW

Montney Project

- Calima's focus is on undeveloped unconventional gas/liquids acreage in the highly productive Montney Formation of the Western Canada Sedimentary Basin ("WCSB") of British Columbia, Western Canada (Figure 1).
- The Company, through the successful takeover bid for JV partners TMK-Montney (a public unlisted company demerged in 2015 from Tamaska Oil and Gas, ASX: TMK) and TSV-Montney (a public unlisted company demerged in 2015 from Transerv Energy Limited; ASX: TSV) is now close to 100% ownership of the Calima Lands.
- This takeover follows on from an original Farm-in agreement to earn up to 55% of 72,014 gross acres which comprise the Calima Lands of which a large proportion were originally held 40% by TMX-M and 60% by TSV-M. This original agreement required Calima to expend C$25m in three tranches by February 28, 2020 - at the time of the takeover Calima had met the first hurdle of C$5 million expenditure to earn 20% - the first tranche included costs involved in increasing the acreage.
- Activities are targeting the higher value, over-pressured unconventional liquid rich gas areas of the Montney Formation – these provide significant value add through the presence of high value NGLs, both occurring as wellhead condensate and as extracted through processing in a gas plant.

Figure 1: Montney location map



Source: Calima

- Calima has a strategy to define Resources which will then be tested by drilling to allow for Reserves to be booked - after this the Company will look at an exit strategy to return value to shareholders.

African Portfolio Assets

- Calima has interests in three African portfolio assets which offer optionality over projects that will not require significant capital in the short term.
- These include a 50% holding in four offshore Production Sharing Contracts ("PSCs") awarded by the Sahwari Arab Democratic Republic ("SADR"), more commonly known as Western Sahara.
- These rights are held through Assurance Agreements executed by the SADR Government (these have recently been renewed until 2022), and will convert automatically to PSCs once the SADR is recognised by the UN, at which time Calima will be able to commence exploration activities.

- A significant part of the SADR, including offshore areas, is occupied by Morocco, however rulings by both the International Court of Justice and the High Court of South Africa support the sovereignty of the SADR.
- Calima also has a 10% passive holding in Bahari Holding Company Ltd ("Bahari"), which is the Operator of petroleum exploration agreements covering Blocks 35, 36 and 37 in the offshore territory of the Union of Comoros in the Indian Ocean.
- These licences, which are adjacent to giant gas discoveries made by ENI and Anadarko have recently had approval by the Government of Comoros to enter the second exploration period, which has led to the commencement of a farm-out process.
- These portfolio holdings are complemented by the recently awarded 56% Operatorship of a 5,433km^2 block over the deepwater oil play in the Orange River Basin of southern Namibia.
- This is in an area that has seen a recent upsurge in interest from major companies, with interests being acquired in the area by Exon, Total and ONGC amongst others - this has been driven by the intersection of oil prone source rocks in recent drilling.

TSV-M AND TMK-M TAKEOVER

- As released to the market on March 7, 2018, Calima launched takeover bids for TSV-M and TMK-M to consolidate 100% of the Montney Project into Calima - the transaction was approved and recommended by the Boards of the two target companies.
- As of July 10, 2018 Calima had acquired over 90% of the shares in both TMK-M and TSV-M, with compulsory acquisition of all remaining shares in TMK-M being commenced and all defeating conditions in TSV-M being satisfied, with compulsory acquisition expected to commence shortly.
- Details of the bid, the post deal capital structure and a valuation of the target companies and valuation per acre are given in Table 1 - valuations are based on the Calima share price of A$0.053/share as of 30 April, 2018.
- The consideration for TMK-M did not include the 8 million shares (~11.2% of the issued capital) held by Calima at the time of the takeover bid.
- Other details of the bid include:
  - TSV-M will have the right to appoint one nominee director to the Board of Calima, with the nominee to be agreed to by both Calima and TSV-M: and,
  - A number of shareholders of TSV-M and TMK-M, with a combined holding of 137.03 million consideration shares (14% of the pro-forma capital of Calima post takeover) have agreed to enter into voluntary escrow agreements, with the escrow period ending on April 30, 2019.

Table 1: Takeover bid details and pro-forma capital structure post takeover

Takeover bid details and pro-forma capital structure post takeover							
	CE1 Bid Shares	**Target Shares on Issue**	**Total Implied Value**	**Co Project Equity**	**Equity ex CE1 Interest[1]**	**Net Acres ex CE1**	**Value/ Acre**
TMK-M Shares	133,139,979	63,399,990	$7.06 m	32%	28.4%	20,462	$386.81
TMK-M Options	16,200,000	18,000,000	$0.86 m				
TSV-M Shares	268,670,164	80,681,731	$14.24 m	48%	48%	34,567	$416.24
TSV- Bid Options	2,800,000	2,800,000	$0.15 m				
Total Consideration Shares	**420,810,143**		**$22.30 m**	**80.0%**	**76.4%**	**55,029**	**$405.29**
Advisor Shares	4,500,000						
Shares on Issue Pre Bid	554,397,476	Includes ~51.8 million escrow shares					
Pro-forma Ordinary Shares	**979,707,619**						
Performance Shares	20,029,226	Convert one for one into ordinary shares subject to meetinjg milestones by 31 December 2020					
Performance Rights	19,450,000	Management performance rights with various vesting conditions					
Options	30,000,000	20 million A$0.12 and 10 million A$0.09 options, expiring on 30/8/22					
Fully Diluted	**1,049,186,845**						

Source: Calima, IIR analysis, 1: Interest not including 8 million shares (11.2%) already held by Calima

- The effective acquisition price for 55,209 net acres is C$405/acre, a significant discount to the average acquisition price of C$2,400/acre ($2,800/acre if Calima's acquisition is not included in the average) for liquids-rich Montney acreage over recent years, highlighting the potential for a significant uplift in value; this is also at a discount to the pre-drilling average of ~C$1,000/acre paid by Saguaro for their offsetting acreage immediately to the SE of the Calima Lands.
- This compares to the effective acquisition price of C$373/acre for the initial C$5 million expenditure required to acquire 20% (19.1% ex Calima's original interest in TMK-M) of the Project.
- The takeover has a number of positive points:
  - The simpler ownership structure should lead to a better understanding in both the Australian and Canadian markets, and, should result in a case where the consolidated value is greater than the sum of the previous three parts,
  - This will allow for more flexibility in programme planning and execution, with the current JV time and expenditure constraints being removed; and,
  - There will be the usual synergies in having 100% control of the Project, including amongst others simplified decision making and removal of the duplication of administration costs.

ACREAGE BUILD COMPLETED

- The JV completed the acquisition of core acreage in December 2017, with this including the Calima funded successful bid for an additional 2,738 acres (1,108ha) of Montney drilling rights (at C$202/ha) in the December 2017 land auction, with the total position now being 72,014 acres.

DRILL PERMITTING COMPLETE

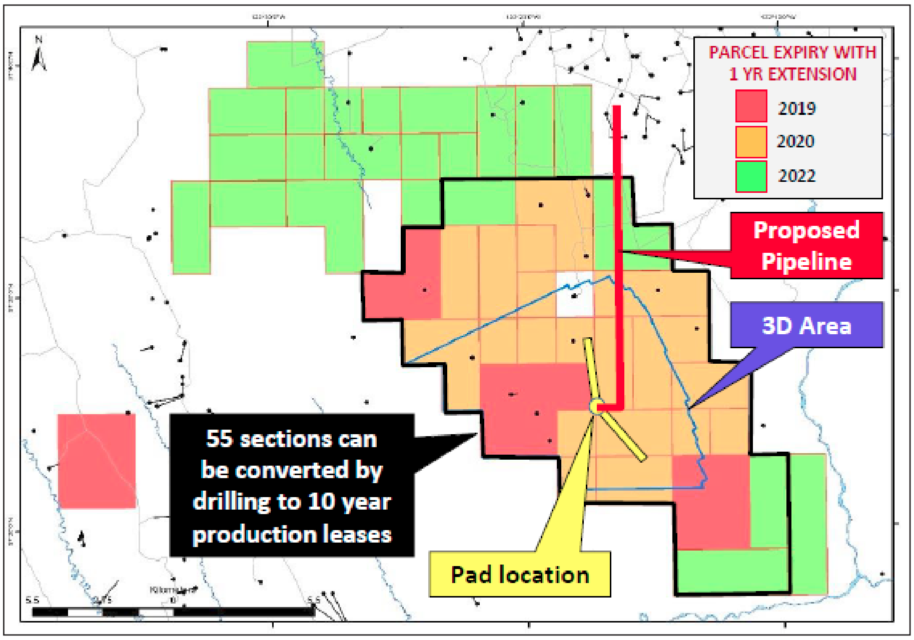
- During the March, 2018 Quarter the Montney JV acquired key regulatory and permitting approvals from the British Columbia Oil and Gas Commission to drill, test and operate up to three wells, with these approvals including:
  - Authorisation to drill and test up to three wells (two horizontal and one vertical);
  - Authorisation to construct, maintain, and operate an oil and gas road into the Calima Lands; and,
  - Authorisation to access water from local sources and store water on the Calima Lands.
- The third authorisation above is critical, in that it will preclude having to truck in water (including the large amounts required for fracture stimulation), thus substantially reducing costs and road usage.
- The authorisations also allow for extended well testing (in excess of that generally permitted) - this will enable calibration against results of offset activity and thus confirm (or otherwise) the value of the acreage.
- The approvals have allowed for site construction and clearing, which was completed in February 2018.

PLANNED DRILLING

- With the change of ownership and removal of the Farm-in conditions, Calima has now expanded planned operations to include a two stage plan to drill up to six wells from a single pad.
- The first phase is estimated to cost C$22 million while phase two which includes pipeline and transportation infrastructure costs C$39 million. (Figures 2 and 3).
- The first stage comprises a three hole million pilot production programme, including:
  - One vertical and two horizontal wells; and,
  - Winter access roads and extended production test.
- The second early development stage will be contingent upon results of the first stage, and is planned to include three horizontal wells, pipeline and an all weather road; there is a contingency to include the pipeline in the first phase subject to satisfactory completion of survey and engineering work.
- Successful completion of the drilling and booking of reserves will allow 55 sections to be converted to 10 year production leases - the majority of the current drilling rights in this 55 section area have 2019 and 2020 expiry dates (Figure 2).

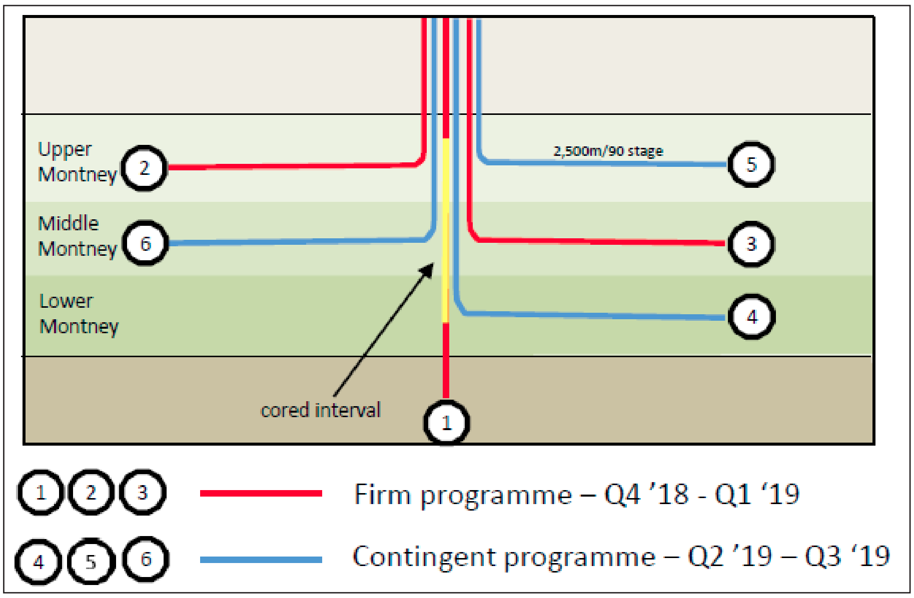
- Hooking into the existing pipeline infrastructure and accessing gas treatment facilities will allow gas and condensate from the five horizontal wells to be sold, thus providing cash flow.

Figure 2: Planned pad and well location



Source: Calima

Figure 3: Planned drilling section



Source: Calima

IN-COUNTRY MANAGEMENT TEAM IN PLACE

- The Company has appointed experienced senior executives Mr Michael Dobovich as Canadian Country Manager and Mr Aaron Bauer as Operations Manager - both have significant experience in their relevant fields in the Oil and Gas industry.
- Calima has appointed CWL Energy Limited ("CWL") to provide overall localised and regional project management services.
- CWL has extensive regional knowledge, experience and relationships which will be applied to the Calima Lands' operation leading up to the Winter drilling programme.

DRILLING ENGINEERS APPOINTED

- As announced to the market on July 5, 2018, the Company has appointed Ramdar Resources Management to manage drilling and completion activities, and Trialta Projects to provide design, engineering and construction management for facilities and pipeline infrastructure.
- Both firms have had extensive experience in the Montney, working with a number of the major operators.

KEY STAKE HOLDER CAPITAL RAISING

- In May 2018 the Company raised A$3.518 million through an oversubscribed placement of 63,956,820 shares at A$0.055/share to key stake holders.
- This brought the available cash as of March 31, 2018 to A$4.68 million, sufficient to fund activities through to commencement of drilling.

INDEPENDENT RESOURCE REPORT COMPLETED

- A key milestone has been the completion of the Independent Resource Report by leading independent consultants McDaniel & Associates as released to the market on March 13, 2018.
- Un-risked best estimate prospective resources are presented in Table 2.
- Well properties and product yields have been largely based on those for Saguaro's adjoining acreage, for which there is significant data - properties are shown in Table 3.
- Wellhead condensate yields for the Calima Lands have been estimated at 23bbl/MMcf of raw gas, with other non-gas liquids estimated at 25bbl/MMcf, for a total liquids yield of 48bbl/MMcf - this is line with well data from similar liquid rich areas of the Montney, and should be considered as realistic.
- Liquid yields from Saguaro's adjoining property are in the order of 52bbl/MMcf sales gas, of which 60% by volume (and ~85% by value) is the high value condensate.
- Liquids comprise ~60% of the total revenue from the Saguaro wells.

Table 2: Calima Lands best estimate un-risked prospective resources

Calima Lands best estimate unrisked prospective resources		
Constituent	**Basis**	**100% W.I.**
Natural Gas (MMcf)	Gross	2,168,188
	Net After Royalties	1,689,323
Condensate (Mbbl)	Gross	54,205
	Net After Royalties	45,327
Natural Gas Liquids (Mbbl)	Gross	60,227
	Net After Royalties	48,879
Total Liquids Mbbl)	Gross	114,432
	Net After Royalties	95,206
Total Mmboe	Gross	475,797
	Net After Royalties	376,760

Source: Calima

- Table 3 presents the oil and gas in place ("OGIP") and reservoir parameters.

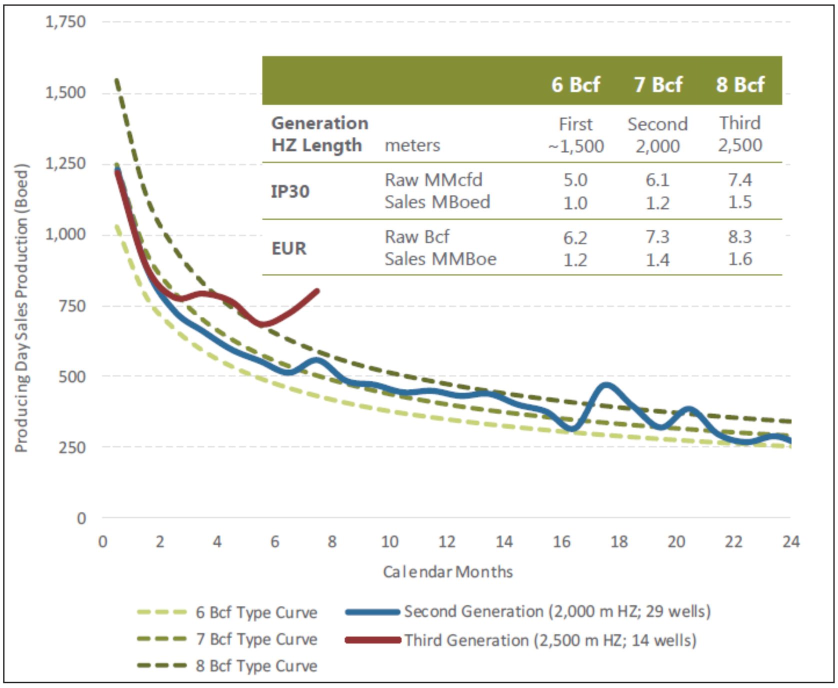
Table 3: Combined OGIP and reservoir parameters

Zone	Area (acres)	OGIP (MMcf)	Areal Exploitation Factor	Drainage Area (acres)	Locs.	Rec. Factor	RGIP (MMcf)	EUR per well (Bcf)
Mont U	71,990	4,198,148	70%	250	201	47%	1,381,191	6.8
Mont L	71,987	3,220,386	70%	250	201	50%	1,127,135	5.6
Total	71,990	7,418,534	70%	250	402	48%	2,508,326	6.2

Source: Calima

- There may be upside in this, as Saguaro is now reporting expected ultimate recoveries ("EURs") trending towards 8Bcf/location, as opposed to the Calima Montney Upper and Lower average of 6.2Bcf/location as used in the McDaniel report for the same 2,500m lateral length - this has been as a result of increasing lateral lengths and improved completion techniques over the three main Saguaro generations of drilling (Figure 4).

Figure 4: Saguaro Laprise drilling improvements



		6 Bcf	7 Bcf	8 Bcf
Generation		First	Second	Third
HZ Length	meters	~1,500	2,000	2,500
IP30	Raw MMcfd	5.0	6.1	7.4
	Sales MBoed	1.0	1.2	1.5
EUR	Raw Bcf	6.2	7.3	8.3
	Sales MMBoe	1.2	1.4	1.6

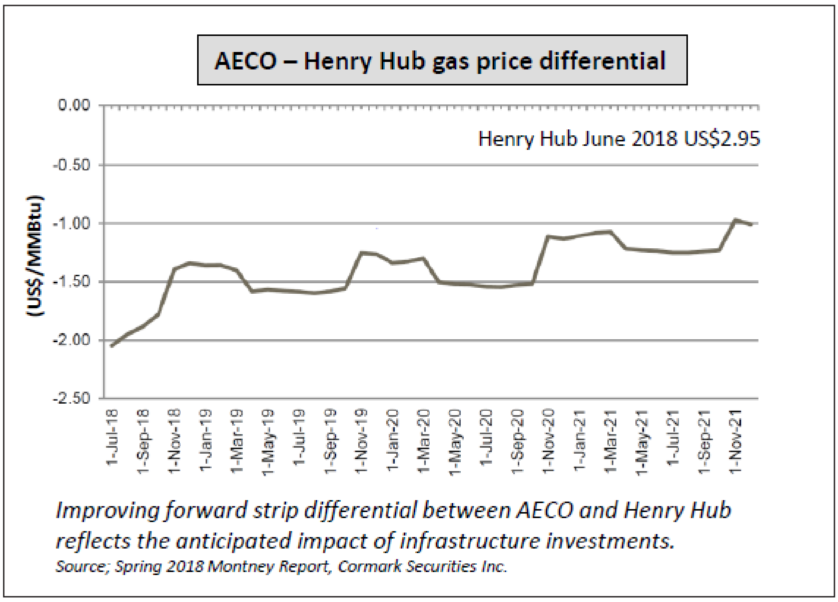
Source: Saguaro March 2018 presentation

MONTNEY REGIONAL AND OFFSET ACTIVITY

Planned New Pipeline Infrastructure to Increase Capacity

- We are seeing increased interest in the Montney, with some facets described below.
- Drivers of this include the planned or current construction of new pipeline infrastructure and LNG plants, which will result in the addition of ~8.4Bcf/day pipeline and export capacity, with estimated capital costs of C$70 billion.
- Gas production, which has increased at 24%pa over recent years has outstripped the current pipeline capacity which moves some 7Bcf of gas per day.
- The current situation results in producers having to compete for access to the eastern Canadian and US gas markets, thus depressing prices - the AECO is currently trading at a US$2.00/MMbtu discount to the Henry Hub price (which is currently at ~US$3.00/MMbtu); this is forecast, with the completion of the new pipelines, to decrease to ~US$1.00/MMbtu by the end of 2021 (Figure 5), resulting in an expected doubling in AECO gas prices over the period.
- On the LNG front, Shell (and partners) is expected to reach an FID by October on the C$40 billion "LNG Canada" project, the first of the planned west coast LNG plants - this will open up the Montney gas to international markets for the first time and will result in different (possibly oil linked) pricing mechanisms, and further increase demand for land.
- LNG Canada, which is located near the town of Kitimat, was put on hold for a period due to depressed global LNG demand, however burgeoning markets, largely driven by demand from Asia have led to a resurgence in LNG demand and prices.
- Another factor driving interest is the planned upgrading of the Trans-Mountain pipeline from , which transports heavy oil from the Athabascan oil sand fields to the west coast.
- The planned expansion almost triples the current capacity of 300,000bbl/d to 890,000bbl/d, and will increase demand for condensate (which is used as a diluent for transporting the oil) and gas, which is used to generate heat as part of the oil recovery process.
- This should see the premium being paid for condensate over the WTI price being maintained into the foreseeable future.

Figure 5: Henry Hub-AECO price differential

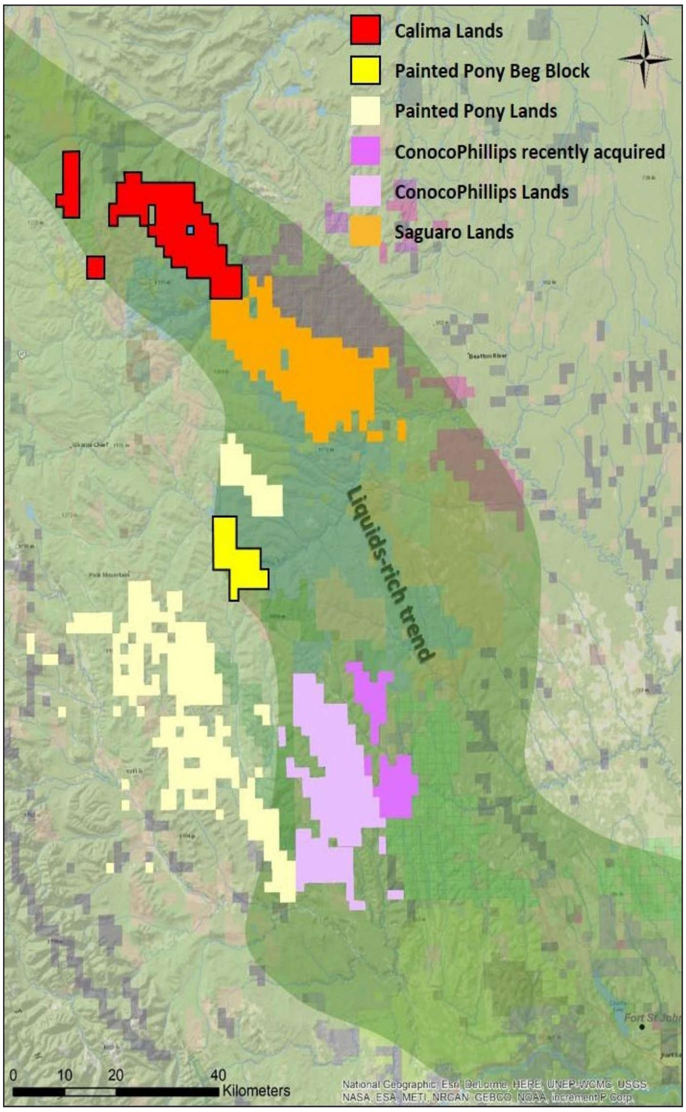


Source: Spring 2018 Montney Report, Cormack Securities Inc.

Offset Activity

- Locations of properties referred to in this section are shown in Figure 6.
- This updates offset activities referred to in our initiation note, and includes activities by Saguaro Resources (private), Painted Pony (TSX:PONY) and ConocoPhillips (NYSE:COP).

Figure 6: Offset activity



Source: Calima

Saguaro Resources Reserves and Production Update

- Saguaro has continued to develop its Laprise lands, with this including a reserve update since our Calima initiation report (Table 4).

Table 4: Saguaro reserves, January 2018

Saguaro reserves, January 2018	Proved, Developed, Producing (PDP)	Total Proved (1P)	Total Proved Plus Probable (2P)
Total Reserves (MMboe)	31.22	150	392
NPV10 (BT $MM)	C$330	C$1,065	C$2,619
NPV10 (BT $boe)	C$10.59	C$7.11	C$6.68
F&D (Inc FDC) ($/boe)	C$9.05	C$6.04	C$3.79
FD&A (Inc FDC) ($/boe)	C$9.09	C$6.05	C$3.79
Locations	53	182	353

Source: Saguaro

- The first pilot drilling was completed an the Laprise acreage in 2013, with commercial development commencing in 2015 - this acreage is considered as the best analogue for the Calima Lands, and on which production modelling and resources have been based.
- Saguaro, which has an average pre-drilling land acquisition cost of ~C$1,000/acre for its 164 contiguous sections (113,000 acres) has invested over C$500 million in the drilling of 62 wells and building facilities including a 100MMcfpd wellhead treatment facility - 97% of this land base has been de-risked through drilling and competitor activity.
- Saguaro plans to drill an additional 36 wells in 2018 to increase production from the 2017 exit production of 16,600Boepd to over 25,000boepd, with ultimate production of 170,000boepd (24% NGL) targeted for 2026 onwards.
- Saguaro has published a full project development ("FPD") plan which includes 1,200 locations covering ~80% of the acreage, with an estimated capital cost of C$7.4 billion, and pre-tax NPV_{10} of C$2.4 billion, or C$2 million per location.
- There is the potential to increase the treatment facility to 1,000MMcfpd to handle planned production from the FPD.
- Current liquid yields are 51bbl/MMcf of sales gas, with condensate consistently exceeding 70% of liquid volumes - this has seen high net backs, with C$17.65/boe achieved in Q4, 2018 from revenues of ~C$27/bbl.
- Development capital has been sourced from access to C$445 million in equity lines, and with current access to debt facilities totalling C$215 million.

Painted Pony Well Test Flows

- Recent drilling by Painted Pony on their Beg Block (Figure 6) has returned excellent results from an Upper Montney test well, that had a vertical depth of 1,800m and a lateral length of 2,267m.
- The last eight hours of the test period returned >2,000boepd, including 10MMcfpd gas and 360bblpd liquids with only trace amounts of H_2S detected.
- This indicates a total liquids yield of 36bbl/MMcf, with 60% of this being condensate and with the balance being other NGLs.
- These results are comparable to production results at Saguaro, and in our view further validates the Prospective Resource estimation and highlights the potential of the Calima Lands.

Land Transactions

- Table 5 lists various land transactions in the Montney since the beginning of 2014 - this has been updated from the table presented in our initiation note.
- One of the most recent transactions as the acquisition of seven sections (4,480 acres) for C$42 million, or C$9,375/acre in the Inga area, some 120km SSW along strike of the liquids rich fairway from the Calima Lands, offsetting acreage held by Kelt and Arc; this confirms a trend of increasing interest and hence prices in the Montney. Although the money behind the acquisition was not disclosed, some believe it to be ConocoPhillips.
- The average acquisition price for undeveloped land (not including the Calima transactions) is in the order of C$2,800/acre, 7x the deemed C$400/acre acquisition price for Calima's total acreage, confirming the value proposition in Calima.

- In addition to the transaction mentioned above, ConocoPhillips has taken an aggressive approach to expanding its interest in the Montney, previously reportedly paying C$154 million for an additional 34,580 acres (C$4,453/acre), taking its net holding in the liquids rich Montney to 140,000 acres (Figure 6).

Table 5: Montney land transactions

Montney land transactions								
Date	**Acquirer**	**Vendor**	**Description**	**Strike Name**	**Value (C$ mm)**	**Land (acres)**	**Land Value ($/acre)**	**Status***
Jan-14	SRX	YO	Asset deal	Nig	$88	20,445	$3,771	P
Apr-14	CR	DVN	Asset deal	Monias/ Septimus	$105	48,100	$1,310	P
May-14	CKE	BC Land Sale	May 21 BC land sale	Umbach	$14	13,680	$1,016	U
Jun-14	Todd Energy	POU	JV deal	Birch/ Umbach	$90	23,400	$3,569	P
Aug-14	NVA	TAQA	Asset deal	Elmworth	$35	7,680	$4,557	U
Nov-14	PGF	BC Land Sale	Nov 5 BC land sale	Bernadet	$124	20,875	$5,940	U
Nov-14	PPY	BC Land Sale	Nov 5 BC land sale	Townsend	$67	9,280	$7,198	U
Dec-14	ARX	BC Land Sale	Dec 10 BC land sale	Dawson/ Parkland	$9	4,900	$1,755	U
Dec-14	LXE	BC Land Sale	Dec 10 BC land sale	Dawson/ Parkland	$7	6,400	$1,031	U
Feb-15	KEL	RTK	Corporate acquisition	Inga/ Fireweed	$307	53,120	$1,866	P
May-15	TOU	LXE	Asset deal	Doe	$80			P
May-15	ARX	RDS	Asset deal	Attachie	$32	62,300	$517	U
Jun-15	Black Swan	Carmel Bay	Corporate acquisition	Nig/Jedney	$195	45,440	$3,753	P
Dec-15	RMP	AB Land Sale	Land Sale	Gold Creek	$8	29,440	$280	U
Jan-16	MUR	ATH	Duvernay/ Montney JV	Kaybob/ Placid/Other	$475	n/a	n/a	P
May-16	RMP	CKE/AIMCo	Asset deal	Gold Creek	$10	12,800	$688	P
Jun-16	BIR	ECA	Asset deal	Gordondale	$625	40,920	$15,274	P
Jul-16	PPY	PETRONAS	Swap	Daiber/Blair/ Townsend	?	10,780	?	P
Jul-16	VII	POU	Asset deal	Kakwa	$1,897	99,200	$10,045	P
Aug-16	KEL	BTE	Asset deal	Inga/ Fireweed	?	12,600	?	U
Aug-16	AAV	AB Land Sale	Land Sale	Glacier/ Valhalla/ Wembley	$6	7,040	$852	U
Sep-16	BNP	COP	Swap	Blueberry	?	36,400	?	P
Mar-17	PONY		Sale	Beg Block	$228	69,000	$3,300	U
Mar-17	Conoco Phillips	PGF	Land Sale	Bernadet	$92	23,424	$3,928	U
Apr-17	Leucrotta	Various	Land Sale	Doe/Mica Core	$36	11,520	$3,125	U
May-17	CE1	TSV-M	Farm-in	Caribou	$5	13,757	$363	U
May-17	Not disclosed	CE	Land Sale	Goose	$49	18,441	$2,657	U
Jul-17	Scott	BC Land Sale	July BC Land Sale	?	$77	14,000	$5,500	U
Mar-18	Conoco Phillips	?	Acquisition	?	$154	34,580	$4,453	U
May-18	CE1	JV Partners	Takeover	Caribou	$22	55,029	$405	U
Jun-18	?Conoco Phillips	BC Land Sale	June BC Land Sale	?	$42	4,480	$9,375	U
Jul-18	Para-mount	Strath	Acquisition	Resthaven/ Jayar	$235	50,000	$4,700	P

Source: Various, * - P = producing, U = undeveloped, ** Paramount Montney sale metrics estimated

VALUATION

- Given the current stage of the Montney Project, the most appropriate valuation method is on a "per acre" valuation as used in our initiation note, with the value per acre derived from that of peers and from transactions.
- Although Prospective Resources have been estimated, given that these are as yet undiscovered, any potential cash flow valuation will be indicative at best and can not be used as a primary valuation method, however there would be some comfort in that results from the offsetting Laprise acreage of Saguaro may be able to give a guide to the potential ultimate value of the Calima Lands as a production asset.

Comparative Transactions

- Our valuation based on recent transactions is presented in Table 6 below, with the assumption that the Australian and Canadian dollars are at parity, and that the Montney Project valuation is partially contingent upon success in the upcoming drilling, however we believe that there is upside in the current price pre-drilling based on transaction prices of undeveloped acreage.
- As discussed earlier, the average transaction price for liquids rich Montney acreage is ~C$2,800/acre (excluding the Calima and Saguaro acquisitions from the calculations). The bulk of these have been in the proven producing areas of the Montney, thus validating the prices.
- Calima is operating in the as yet unproven area of the liquids rich fairway, and thus trading at a discount may be expected, although the results of Saguaro's work highlight the upside potential for the Calima Lands.
- Therefore we have valued Calima at a transaction price of C$2,500/acre (10% lower than the average price paid for undeveloped lands), resulting in 100% of the Project being currently valued at C$180 million, with a nominal value of A$5 million given to the African interests.
- We have also included an upside value (contingent upon drilling success) using a C$4,000/acre transaction price given the recent growth in interest in the Montney and the very strong prices paid for acreage in 2018 - this increases the Montney Project value to C$288 million, and total Company value to C$296 million.
- We have included administration expenditure of A$1.5 million to cover the period to the end of the first drilling programme.
- We have presented the value per share under two scenarios:
  - The current undiluted share structure of ~978 million shares; and,
  - An undiluted share base of ~1,198 million shares, which includes an allowance for a A$22 million equity raising at A$0.10/share to cover the costs of the first well drilling programme.
- We have not included the value of any cash raised, as our base case valuation/price target is partially contingent on drilling success, which will involve the expenditure of the cash.
- It also needs to be noted that other funding strategies (rather than straight equity) for the initial drilling may be available, and hence our funding scenario should be considered as conceptual only.

Table 6: Calima valuation - AUD

Calima valuation - AUD					
Project	**Acres**	**Value/acre**	**Value**	**Value/share - current structure**	**Value/share - post conceptual raising**
Montney	72,014	$2,500	$180.04 m	$0.184	$0.150
Africa	Nominal		$5.00 m	$0.005	$0.004
Cash	As of March 31, 2018		$4.68 m	$0.005	$0.004
Overheads	Est to completion of 1st programme		-$1.50 m	-$0.002	-$0.001
Total			$188.22 m	$0.192	$0.157
Upside Total	72,014	$4,000	$296.24 m	$0.303	$0.247

Source: IIR Analysis

- As a comparison, Table 7 presents details of current listed developers and producers operating in the Montney.

- The weighted average EV/acre is C$3,360, and in part reflects that these are largely still ramping up to full production, and therefore the values will not represent the full ultimate value of the respective projects.
- This provides a current upper limit for potential land values for listed companies still in development, however premiums have been paid for off market land transactions (as is seen in the case of recent transactions as presented in Table 5).

Table 7: Listed Montney producers

Listed Montney producers								
Company	**Net Acreage**	**Completed Wells**	**2P Reserves (mmboe)**	**Production (boe/d)**	**Liquids Yield (bbl/mmscf)**	**EV (C$ M)**	**EV/Acre (C$)**	**EV/2P boe**
Blackbird	72,640	16	54.4	~1,000/well	~300	$287	$3,953	$5.28
Crew	282,240	150	370	25,939	20 - >200	$613	$2,171	$1.66
Delphi	71,232	52	48.5	9,598	70	$397	$5,571	$8.18
Leucrotta	112,000	11	-	3,700	35	$344	$3,071	N/A
Painted Pony	201,009	+100	1148	60,703	14	$742	$3,693	$0.65
Storm	111,000	56	104	19,670	39	$473	$4,262	$4.55

Source: Company presentations - data largely sourced from latest quarterly results as of July 7, 2018

- It needs to be noted however that these companies have fallen in value by between 25% and 50% since the beginning of 2017 with falls in gas prices, and thus the value per acre should be considerably higher with improvements in the Station 2 and AECO prices (these are currently at close to historical lows).
- This highlights potential significant upside in value with successful completion of the drilling as well as the current relative undervaluation of Calima; in addition there is upside in forecast improvements in AECO gas prices which are currently near historical lows.

RISKS

- **Drilling:** The key risk now will be drilling and completion risk, and whether the wells will prove productive - although interpreted as having similar characteristics to the Laprise acreage, the production performance (including the liquids content) won't be known until the drilling has been completed. This may largely depend upon the pressure gradient, which, due to the expected shallower depth, is interpreted as being lower than that at Laprise. This risk is somewhat mitigated by the performance of the Laprise wells (and the recent Painted Pony test) and the knowledge now built around Montney drilling which Calima is in a position to leverage off.
- **Markets:** This applies to both the Australian equity markets and the North American oil and gas markets, and will affect the share price and the ability to raise capital. This is somewhat mitigated by positive forecasts for the condensate market.
- **Station 2 gas prices**: This carries on from the above, with Station 2 (and AECO) gas prices being depressed over recent years. This has partly been due to a glut of gas from the gas rich western areas of the basin, and bottlenecks due to delays in the completion of additional distribution networks; it is expected that these issues will be solved in the next few years, with estimated AECO to Henry Hub discounts reducing from the current ~US$2.00/MMbtu to US$1.00/MMbtu by late 2021.
- **Funding:** Calima will need to raise an estimated C$22 million over the coming few months to meet the requirements for the proposed Stage 1 drilling - the ability to raise funds will depend upon the state of the markets and the share price, and if fully or partially equity funded will lead to dilution. There are however other alternatives, which may include amongst others various forms of debt funding and funding in return for royalties from the funded wells.

NOTE - USE OF HYDROCARBON EQUIVALENTS

- The use of "boe" and other hydrocarbon equivalents is based on energy equivalence and in company reports can be confusing or misleading when quoting a mixed product, as a boe of natural gas (6 Mcf), although having the same energy as a barrel of crude oil, has a significantly lower price - care needs to be taken when analysing such information.
- As an example, 1boe of AECO gas has a current value of ~C$6.00, compared to a bbl of condensate, with a value of ~C$86.92, similar to that of WTI crude.
- We however have used the energy equivalence when quoting "boe" and "cfe" equivalence factors - if a price equivalence is used these will vary depending upon the different prices of the various constituents.

GLOSSARY

Table 8: Glossary

Glossary	
Volumes	
boe	Barrel of oil equivalent - based on energy content, and not monetary value
bbl	Barrel (= 158.987 litres)
cf	Cubic feet
m^3	Cubic metre (= 35.31cf)
Units	
M	Thousand (10^3)
MM	Million (10^6)
B	Billion (10^9)
T	Trillion (10^{12})
Energy Contents	
KJ	Kilojoule (10^3 joules)
MJ	Megajoule (10^6 joules)
GJ	Gigajoule (10^9 joules)
PJ	Petajoule (10^{12} joules)
btu	British thermal units
Non Gas Liquids	
C3	Propane (the number refers to the number of carbon atoms in the molecule
C4	Butane
C5+	Pentane and heavier
Energy Equivalents	
1 Mcf	~1.162 MMbtu
1 Mcf	~1.09 GJ
1 boe	6 Mcf gas
Miscellaneous	
pd	per day
pa	per annum
WTI	West Texas Intermediate crude
AECO	Alberta Energy Company

Source: Various

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