



**Annual Information Form  
For the Year Ended December 31, 2017**

**March 7, 2018**

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## **INTRODUCTORY INFORMATION**

In this annual information form, unless otherwise specified or the context otherwise requires, references to "Paramount" or to the "Company" mean Paramount Resources Ltd., including subsidiaries and partnerships directly and indirectly owned by Paramount Resources Ltd. Information herein is presented as at December 31, 2017, unless otherwise noted.

Unless otherwise indicated, all financial information included in this annual information form has been prepared in accordance with International Financial Reporting Standards ("IFRS"). Paramount's audited consolidated financial statements as at and for the year ended December 31, 2017 can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

This annual information form contains disclosure expressed as "Boe" (barrels of oil equivalent), "MBoe" (thousands of barrels of oil equivalent), "MMBoe" (millions of barrels of oil equivalent), "Boe/d" (barrels of oil equivalent per day), "Bbl" (barrels), "MBbl" (thousands of barrels), "MMBbl" (millions of barrels), "Bbl/d" (barrels per day), "Mcf" (thousands of cubic feet equivalent), "Mcf" (thousands of cubic feet), "MMcf" (millions of cubic feet), "Bcf" (billions of cubic feet), "MMcf/d" (millions of cubic feet per day), "Btu" (British thermal units) and "MMBtu" (millions of British thermal units). The term "Liquids" is used to represent oil and natural gas liquids ("NGLs"), including pentanes-plus (or condensate) ("C5+"). The term "Other NGLs" means ethane ("C2"), propane ("C3") and butane ("C4"). All crude oil and natural gas information includes tight oil and shale gas, respectively, unless such product type is presented on a separate basis. Natural gas equivalency volumes have been derived using the ratio of six thousand cubic feet of natural gas to one barrel of oil (6:1). Equivalency measures may be misleading, particularly if used in isolation. A conversion ratio of six thousand cubic feet of natural gas to one barrel of oil is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. During the year ended December 31, 2017, the value ratio between crude oil and natural gas was approximately 27:1. This value ratio is significantly different from the energy equivalency ratio of 6:1. Using a 6:1 ratio would be misleading as an indication of value. In this document "adjusted funds flow" and "Netback", collectively the "Non-GAAP measures", are used and do not have any standardized meanings as prescribed by IFRS. Adjusted funds flow refers to cash from operating activities before net changes in operating non-cash working capital, geological and geophysical expenses, asset retirement obligation settlements and transaction and reorganization costs. Adjusted funds flow is commonly used in the oil and gas industry to assist management and investors in measuring the Company's ability to fund capital programs and meet financial obligations. Netback equals petroleum and natural gas sales less royalties, operating costs and transportation and NGLs processing costs. Netback is commonly used by management and investors to compare the results of the Company's oil and gas operations between periods. Non-GAAP measures should not be considered in isolation or construed as alternatives to their most directly comparable measure calculated in accordance with IFRS, or other measures of financial performance calculated in accordance with IFRS. The Non-GAAP measures are unlikely to be comparable to similar measures presented by other issuers. Unless otherwise indicated: (a) references herein to "Cavalier Energy" means, collectively, Paramount's wholly-owned subsidiary Cavalier Energy Inc., its subsidiaries and respective predecessors; and (b) references herein to "Fox Drilling" means Paramount's wholly-owned subsidiary Fox Drilling Limited Partnership.

Unless otherwise specified, all dollar amounts are expressed in Canadian dollars and all references to "dollars" or "\$" are to Canadian dollars and all references to "US\$" are to United States dollars.

## **NOTE REGARDING FORWARD-LOOKING STATEMENTS AND ADVISORIES**

Certain statements in this document constitute forward-looking information under applicable securities legislation. Forward-looking information typically contains statements with words such as "anticipate", "believe", "estimate", "will", "expect", "plan", "schedule", "intend", "propose", or similar words suggesting future outcomes or an outlook. Forward looking information in this document includes, but is not limited to:

- exploration, development and associated operational plans and strategies;
- estimated reserves and the undiscounted and discounted present value of future net revenues therefrom;
- future taxes payable or owing;
- the potential outcome and timing of any legal claims, audits, assessments or other regulatory matters or proceedings;
- the potential expiry of leases;
- the timing and cost of future abandonment and reclamation obligations;
- the timing and source of funds for the redemption of the Trilogy 2019 Senior Notes (as defined herein); and
- general business strategies and objectives.

Such forward-looking information is based on a number of assumptions which may prove to be incorrect. Assumptions have been made with respect to the following matters, in addition to any other assumptions identified in this document:

- future natural gas, NGLs (including condensate), oil, and bitumen prices;
- royalty rates, taxes and capital, operating, general & administrative and other costs;
- foreign currency exchange rates and interest rates;
- general business, economic and market conditions;
- the availability of Paramount to obtain the required capital to finance its exploration, development and other operations and meet its commitments and financial obligations;
- the ability of Paramount to obtain equipment, services, supplies and personnel in a timely manner and at an acceptable cost to carry out its activities;
- the ability of Paramount to secure adequate product processing, transportation, de-ethanization, fractionation and storage capacity on acceptable terms;
- the ability of Paramount to market its natural gas, NGLs (including condensate), oil, and bitumen production to current and new customers;
- the ability of Paramount and its industry partners to obtain drilling success (including in respect of anticipated production volumes, reserves additions, Liquids yields and resource recoveries) and operational improvements, efficiencies and results consistent with expectations;
- the timely receipt of required governmental and regulatory approvals; and
- anticipated timelines and budgets being met in respect of drilling programs and other operations (including well completions and tie-ins and the construction, commissioning and start-up of new and expanded facilities).

Although Paramount believes that the expectations reflected in such forward-looking information are reasonable, undue reliance should not be placed on them as Paramount can give no assurance that such expectations will prove to be correct. Forward-looking information is based on expectations, estimates and projections that involve a number of risks and uncertainties which could cause actual results to differ materially from those anticipated by Paramount and described in the forward-looking information. The material risks and uncertainties include, but are not limited to:

- fluctuations in natural gas, NGLs (including condensate), oil and bitumen prices;
- changes in foreign currency exchange rates and interest rates;
- the uncertainty of estimates and projections relating to future revenue, production, reserves additions, Liquids yields (including condensate to natural gas ratios), resource recoveries, royalty rates, taxes and costs and expenses;
- the ability to secure adequate product processing, transportation, de-ethanization, fractionation and storage capacity on acceptable terms;
- operational risks in exploring for, developing and producing natural gas, NGLs (including condensate), oil, and bitumen;
- the ability to obtain equipment, services, supplies and personnel in a timely manner and at an acceptable cost;
- potential disruptions, delays or unexpected technical or other difficulties in designing, developing, expanding or operating new, expanded or existing facilities (including third-party facilities);
- processing, transportation, de-ethanization and fractionation outages, disruptions and constraints;
- risks and uncertainties involving the geology of oil and gas deposits;
- the uncertainty of reserves estimates;
- general business, economic and market conditions;
- the ability to generate sufficient cash flow from operations and obtain financing to fund planned exploration, development and operational activities and meet current and future commitments and obligations (including product processing, transportation, de-ethanization, fractionation and similar commitments and obligations);
- changes in, or in the interpretation of, laws, regulations or policies (including environmental laws);
- the ability to obtain required governmental or regulatory approvals in a timely manner, and to obtain and maintain leases and licenses;
- the effects of weather and other factors, including wildlife and environmental restrictions which affect field operations and access;
- the timing and cost of future abandonment and reclamation obligations and potential liabilities for environmental damage and contamination;
- uncertainties regarding aboriginal claims and in maintaining relationships with local populations and other stakeholders;
- the outcome of existing and potential lawsuits, regulatory actions, audits and assessments; and
- other risks and uncertainties described elsewhere in this document and in Paramount's other filings with Canadian securities authorities.

The foregoing list of risks is not exhaustive. For more information relating to risks, see the section titled "RISK FACTORS" in this annual information form. The forward-looking information contained in this document is made as of the date hereof and, except as required by applicable securities law, Paramount undertakes no obligation to update publicly or revise any forward-looking statements or information, whether as a result of new information, future events or otherwise.

## **CORPORATE STRUCTURE**

Paramount Resources Ltd. is incorporated under the *Business Corporations Act* (Alberta). The Company's corporate and registered office is located at Suite 2800, 421 – 7<sup>th</sup> Avenue SW, Calgary, Alberta T2P 4K9. Paramount's Class A common shares ("Common Shares") are listed on the Toronto Stock Exchange ("TSX") under the symbol "POU".

Paramount Resources (ACL) Ltd. (formerly Apache Canada Ltd.) ("PRACL") and Paramount Resources (TEC) Ltd. (formerly Trilogy Energy Corp.) ("PRTEC") were both direct wholly-owned subsidiaries of Paramount Resources Ltd. at the end of 2017 and had annual revenues in 2017 that exceeded 10 percent of Paramount's consolidated annual revenues for the year. On January 1, 2018 Paramount Resources Ltd. amalgamated with PRACL and PRTEC and continued as Paramount Resources Ltd. Accordingly, PRACL and PRTEC are no longer subsidiaries of Paramount Resources Ltd. The Company's remaining subsidiaries and partnerships each accounted for (i) less than 10 percent of the Company's consolidated assets as at December 31, 2017; and (ii) less than 10 percent of the Company's consolidated revenues for the year ended December 31, 2017. In aggregate, these remaining unidentified subsidiaries and partnerships did not exceed 20 percent of the Company's total consolidated assets or total consolidated revenues as at and for the year ended December 31, 2017.

## **GENERAL DEVELOPMENT OF THE BUSINESS**

Paramount is an independent, publicly traded, liquids-focused Canadian energy company that explores for and develops both conventional and unconventional petroleum and natural gas resources. The Company also pursues long-term strategic exploration and pre-development plays and holds a portfolio of investments in other oil and gas entities. Paramount commenced operations as a public company in 1978. It has adapted to a multitude of operating climates over the years, and has grown into a company with a market capitalization of approximately \$2.4 billion as of March 6, 2018.

Paramount's operations have been organized into three regions as follows:

- the Grande Prairie Region, located in the Peace River Arch area of Alberta, which is focused on Montney developments at Karr, Wapiti and Resthaven/Jayar;
- the Kaybob Region, located in west-central Alberta, which is focused on Montney and Duvernay developments at Kaybob, Smoky River, Pine Creek and Ante Creek;
- the Central Alberta and Other Region, which includes Duvernay development plays in southern Alberta at Willesden Green and the East Shale Basin, and lands and production in northern Alberta and British Columbia.

The Company's investments include: (i) investments in other entities (ii) investments in exploration and development stage assets, including oil sands and carbonate bitumen interests held by Cavalier Energy, and prospective shale gas acreage in the Liard and Horn River Basins; and (iii) drilling rigs owned by Fox Drilling.

Set forth below is a brief description of the events that have influenced the general development of Paramount's business over the past three fiscal years.

### **2015**

In April 2015, pursuant to a private placement, Paramount issued 0.9 million Common Shares to arms-length investors on a "flow-through" basis in respect of CEE at a price of \$41.35 per share for gross proceeds of \$37.2 million.

In June 2015, Paramount issued US\$450 million principal amount of 6¾ percent senior unsecured notes due 2023 (the "2023 Notes") at a price of US\$995.33 per US\$1,000 principal amount, of which US\$9.0 million principal amount was purchased by entities controlled by the Company's Executive Chairman. The net proceeds were used to redeem all \$370 million aggregate principal amount of the Company's 8¼ percent senior unsecured notes due 2017, for capital expenditures and for general corporate purposes, including the temporary repayment of indebtedness under Paramount's bank credit facility (the "Credit Facility").

Paramount's Credit Facility was increased in 2015 from \$900 million to \$1.0 billion.

In 2015, Paramount's development activities were primarily focused on drilling and completing Montney wells on its Musreau/Kakwa lands in Alberta's Deep Basin and completing and utilizing the Company's expanded 250 MMcf/d natural gas processing facilities at its Musreau complex. Despite average sales volumes increasing by 80 percent in 2015 as a result of Paramount's development activities at Musreau, the sharply lower commodity prices that persisted throughout 2015 resulted in the Company (and its peers) having significantly lower netbacks during this period.

Capital spending in 2015 totaled approximately \$493.2 million and Paramount drilled 34 (31.0 net) wells.

In response to low commodity prices, the Company significantly reduced its 2015 capital spending from 2014 levels, implemented various cost cutting measures and focused on improving operational efficiencies.

The cost cutting measures included a number of initiatives to reduce general and administrative expense including:

- a five percent reduction to senior management salaries;
- an effective reduction of employee salaries by 20 percent during the summer months through 17 days of office closure;
- a reduction of the Company's permanent workforce by approximately 15 percent;
- the elimination of most corporate consultant positions; and
- a reduction in rates for remaining consultants by 10 to 15 percent.

## **2016**

In 2016, further cost cutting measures were implemented in response to persistently low commodity prices, including a five percent salary reduction for all employees, effective January 1, 2016 (including members of senior management who had received a five percent salary reduction in 2015), and a 15 percent reduction in annual retainers and fees payable to the Company's directors. In addition, the Company once again instituted unpaid Friday office closures during the summer months, resulting in a further 20 percent reduction in employee salaries during the summer months of 2016.

In April 2016, Paramount sold its Musreau complex and related midstream assets for net cash proceeds of approximately \$560 million (the "Midstream Sale"). In connection with the Midstream Sale, the Company entered into a long-term natural gas processing arrangement with the purchaser (the "Processing Arrangement") that secured Paramount priority access to the sold capacity at the Musreau complex. Under the Processing Arrangement, the Company was required to pay a fixed capital fee per Mcf of raw gas delivered to the Musreau complex, plus operating expenses.

In April 2016, proceeds from the Midstream Sale were used to pay down Paramount's Credit Facility.

In June 2016, Cavalier Energy's limited recourse demand credit facility was repaid and cancelled.

In August 2016, Paramount sold the majority of its oil and gas properties in the Musreau/Kakwa area of west central Alberta (the "Musreau Assets") to Seven Generations Energy Ltd. ("Seven Generations") pursuant to a Purchase and Sale Agreement dated July 6, 2016 (the "PSA") for total consideration of approximately \$2.1 billion (the "Musreau Disposition"). In connection with the Musreau Disposition, Seven Generations assumed Paramount's processing and transportation commitments relating to the Musreau Assets, including the Processing Arrangement. Paramount provided certain indemnities to Seven Generations in the PSA related to the Musreau Assets which survive for a number of years and are subject to the thresholds, limits and other terms and conditions set forth in the PSA. The PSA is available under Paramount's profile on SEDAR and is not incorporated by reference herein.

Consideration received by Paramount at closing for the Musreau Assets was comprised of: (i) \$496 million in cash; (ii) 33.5 million Class A common shares of Seven Generations ("7Gen Shares") having a market value of approximately \$972 million based on the closing market price of such shares on the day prior to closing; (iii) the assumption by Seven Generations of all US\$450 million principal amount of Paramount's 2023 Notes; and (iv) certain oil and gas properties of Seven Generations valued at approximately \$6 million.



In connection with the Musreau Disposition:

- (i) the Company repaid the remaining balance owing on its Credit Facility;
- (ii) the Company paid \$1.4 million to holders of its \$450 million aggregate principal amount of 7% percent senior unsecured notes due 2019 (the "2019 Notes") that provided consent to the Musreau Disposition;
- (iii) the Company redeemed \$163.4 million aggregate principal amount of its 2019 Notes, paying \$169.6 million plus accrued and unpaid interest to the redemption date; and
- (iv) Paramount was discharged and released from all obligations and covenants under the 2023 Notes indenture and the 2023 Notes.

In September 2016, the Fox Drilling limited recourse demand facility was repaid and cancelled.

In December 2016, Paramount redeemed all remaining \$286.6 million outstanding principal amount of 2019 Notes at a redemption price of 102.542 percent of the principal amount of such notes.

In December 2016, Cavalier Energy sold a royalty (the "Cavalier Royalty") to an unrelated third-party on its oil sands properties (the "Oil Sands Lands") for cash consideration of \$100 million. For further details concerning the Cavalier Royalty see "NARRATIVE DESCRIPTION OF THE BUSINESS – OTHER ASSETS".

In 2016, Paramount realized net cash proceeds of approximately \$861 million through the sale of 29.7 million of the 7Gen Shares it received through the Musreau Disposition. In December 2016, the Company declared a dividend of its remaining 3.8 million 7Gen Shares, which were distributed to Paramount's shareholders in January 2017. For additional information concerning the dividend, see "DIVIDENDS."

Following the Musreau Disposition, the Company reduced the size of its Credit Facility to \$100 million. The Company did not have any debt outstanding as at December 31, 2016 and had cash and cash equivalents of approximately \$622 million.

## **2017 AND YEAR TO DATE**

During the latter part of 2016 and the first half of 2017, Paramount focused its development efforts on the 27 (27.0 net) well horizontal Montney drilling and completion program at its Karr property, which is in the Grande Prairie area of Alberta. Fourth quarter sales volumes, excluding sales volumes from properties acquired or sold in the year, increased to approximately 34,100 Boe/d in 2017 compared to about 10,000 Boe/d in 2016.

In May 2017, Paramount sold non-core assets at Valhalla for cash consideration of approximately \$150 million.

In July 2017, Paramount's Credit Facility was increased from \$100 million to \$300 million following completion of the lender's annual review.

In August 2017, Paramount acquired all of the shares of Apache Canada Ltd. (renamed Paramount Resources (ACL) Ltd.) for cash consideration of \$486.9 million (the "ACL Acquisition").

In September 2017, Paramount merged with Trilogy Energy Corp. (renamed Paramount Resources (TEC) Ltd.) through an arrangement under the *Business Corporations Act* (Alberta) (the "Trilogy Merger") whereby



Paramount issued approximately 28.5 million Common Shares to acquire all of the outstanding Trilogy Energy Corp. shares not already owned by Paramount. Trilogy Energy Corp. was a public Canadian energy company with producing oil and natural gas assets primarily in the Kaybob area of Alberta. Immediately prior to the Trilogy Merger, Paramount owned approximately 12.8 million common shares and 6.4 million non-voting shares of Trilogy Energy Corp., representing an equity interest of approximately 15 percent.

The ACL Acquisition and the Trilogy Merger were each a “significant acquisition” for Paramount under National Instrument 51-102 and, accordingly, the Company filed a Business Acquisition Report in 2017 in relation to these transactions. This Business Acquisition Report is available under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).

Trilogy Energy Corp. had \$300 million principal amount of 7¼ percent senior unsecured notes due 2019 (the “Trilogy 2019 Senior Notes”) outstanding upon closing of the Trilogy Merger and \$158.7 million drawn on its \$285 million bank credit facility. The Trilogy 2019 Senior Notes became direct obligations of Paramount in January 2018.

In November 2017 Paramount’s Credit Facility was increased from \$300 million to \$700 million and was changed from a reserves-based structure to a financial covenant-based structure. Trilogy Energy Corp.’s bank credit facility was also repaid in full and cancelled. In March 2018 the Paramount Credit Facility was further increased by \$500 million to \$1.2 billion. At Paramount’s request, the size of the Paramount Credit Facility can be further increased by up to \$300 million (to a maximum of \$1.5 billion) pursuant to an accordion feature in such facility, subject to securing incremental lender commitments. Additional information concerning Paramount’s Credit Facility is included in the Company’s audited consolidated financial statements and Management’s Discussion and Analysis for the year ended December 31, 2017, which can be found under the Company’s profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

In March 2018, the Company delivered a redemption notice to redeem all \$300 million outstanding principal amount of the Trilogy 2019 Senior Notes. The redemption will be funded using the upsized Paramount Credit Facility and completed in early April 2018.

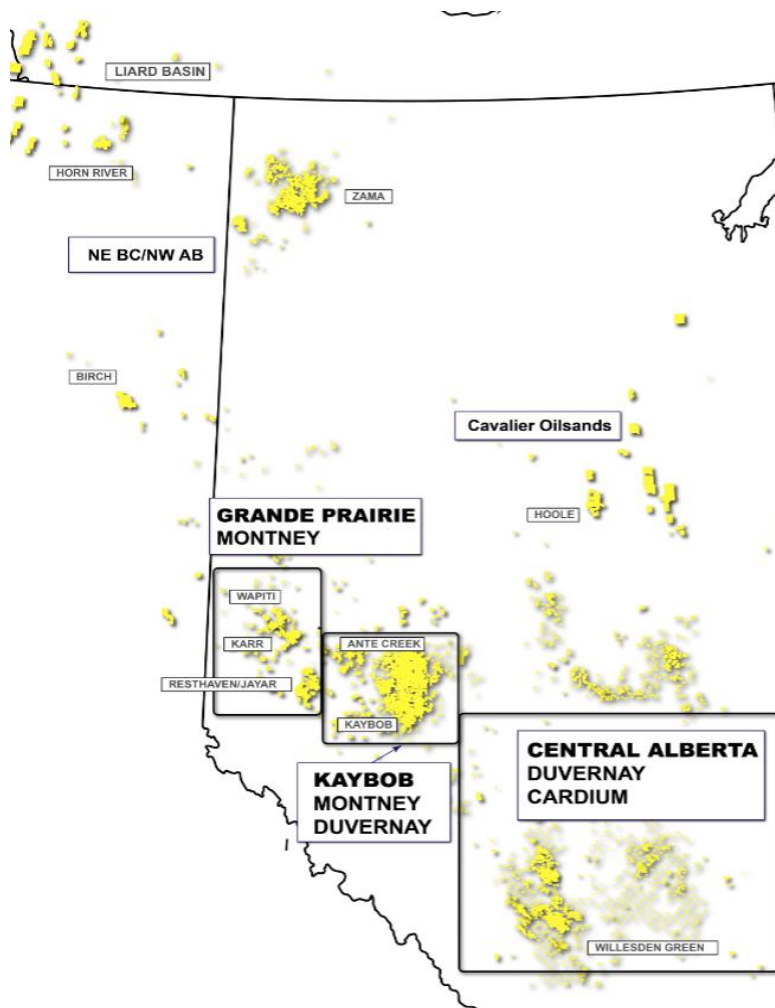
For reserves and related information as at December 31, 2017, see “NARRATIVE DESCRIPTION OF THE BUSINESS – RESERVES AND OTHER OIL AND GAS INFORMATION”.

## **NARRATIVE DESCRIPTION OF THE BUSINESS**

### **OVERVIEW**

Paramount's oil and gas properties are located primarily in Alberta and British Columbia. Approximately 60 percent of the Company's production in 2017 was natural gas. The Company's ongoing exploration, development and production activities are intended to establish new reserves and increase the productive capacity of existing fields. From time-to-time, Paramount enhances its exploration, development and production operations through strategic acquisitions of petroleum and natural gas assets and companies, farm-ins, farm-outs, joint ventures and dispositions.

Paramount’s operations are organized into the following three Regions: (i) the Grande Prairie Region, located in the Peace River Arch area of Alberta; (ii) the Kaybob Region, located in west-central Alberta; and (iii) the Central Alberta and Other Region, located in Central Alberta, northern Alberta and British Columbia and the Northwest Territories. The map below depicts the Company’s properties and these Regions.



As described under “GENERAL DEVELOPMENT OF THE BUSINESS”, Paramount sold its Musreau Assets in 2016 and completed the ACL Acquisition and Trilogy Merger in 2017. These transactions ultimately resulted in Paramount having average production for the fourth quarter of 2017 of more than 95,000 Boe/d. Following the sale of the Musreau Assets in mid-2016, the Company grew its production from approximately 11,000 Boe/d to approximately 37,000 Boe/d by October 2017 (excluding the results of the ACL Acquisition and Trilogy Merger), effectively returning the total Company production to the level it was at prior to the sale of the Musreau Assets.

The Company's reserves, properties, production and material development plans and facilities are discussed in more detail below.

## OIL AND GAS PROPERTIES

Paramount retained McDaniel & Associates Consultants Ltd. ("McDaniel"), an independent qualified reserves evaluator, to prepare a report on its natural gas, NGL and crude oil reserves for 2017. McDaniel evaluated 100 percent of the Company's proved plus probable reserves as at December 31, 2017 (other than those associated with Cavalier Energy) and reported on them in their report dated March 7, 2018. At December 31, 2017, approximately 95 percent of Paramount's proved plus probable reserves were located in Alberta.

The Company's gross reserves volumes, production and petroleum and natural gas sales for the years ended December 31, 2017 and 2016 are summarized below.

	2017	2016
<b>Oil and Gas Properties Reserves</b>		
<b>Proved</b>		
Shale Gas (Bcf)	986.0	210.7
Conventional Natural Gas (Bcf)	412.7	27.3
NGLs (MMBbl)	119.1	19.1
Tight Oil (MMBbl)	0.8	0.4
Light & Medium Crude Oil (MMBbl)	22.8	0.5
<b>Total (MMBoe)</b>	<b>375.8</b>	<b>59.6</b>
<b>Proved plus Probable</b>		
Shale Gas (Bcf)	1,611.7	428.9
Conventional Natural Gas (Bcf)	559.6	34.4
NGLs (MMBbl)	196.9	36.7
Tight Oil (MMBbl)	1.1	0.7
Light & Medium Crude Oil (MMBbl)	33.6	0.5
<b>Total (MMBoe)</b>	<b>593.5</b>	<b>115.2</b>
<b>Production <sup>(1)</sup></b>		
Shale Gas (MMcf/d)	69.7	59.9
Conventional Natural Gas (MMcf/d)	91.5	44.8
NGLs (Bbl/d)	15,161	13,959
Light & Medium Crude Oil and Tight Oil (Bbl/d)	2,933	443
<b>Total Production (Boe/d)</b>	<b>44,970</b>	<b>31,860</b>
<b>Petroleum and natural gas sales (\$ millions)</b>		
Shale gas revenue	60.9	46.8
Conventional natural gas revenue	71.9	35.3
NGLs revenue	286.5	157.9
Oil revenue	67.4	7.6
Royalty and sulphur revenue	4.7	1.2
<b>Petroleum and natural gas sales</b>	<b>491.4</b>	<b>248.8</b>
<b>Wells Drilled</b>		
Gross <sup>(2)</sup>	50	23
Net <sup>(3)</sup>	36.2	22.5

(1) Sales volumes measured in marketable quantities, after processing and shrinkage.

(2) "Gross" is the number of wells in which Paramount has a working interest or a royalty interest that may be converted to a working interest.

(3) "Net" is the aggregate number of wells obtained by multiplying each gross well by Paramount's percentage of working interest.

### **Grande Prairie Region**

As at December 31, 2017, Paramount had approximately 388,000 gross (267,000 net) acres of land in the Grande Prairie Region with approximately 155,000 net acres of Montney rights and approximately 165,000 net acres of Deep Basin Cretaceous rights which partially overlap the Montney rights. Approximately

177,000 net acres of the Company's land in this Region as at December 31, 2017 had no attributed reserves.

Sales volumes for this Region averaged 20,717 Boe/d (52 percent Liquids) in 2017.

The primary focus in the Grande Prairie Region is the Karr and Wapiti Montney properties, located south of Grande Prairie, Alberta, in the over-pressured liquids-rich Deep Basin Montney trend.

#### *Karr*

The Company operates 100 percent of its production at Karr.

In 2017, the Company rig released 18 (18.0 net) wells at Karr as part of its 2016/2017 27 (27.0 net) well horizontal Montney drilling and completion program at this property. Wells in this drilling program were designed with longer horizontal laterals, higher intensity completions, tighter frack spacing, and different completion fluids compared to prior years. Through this well program, Paramount grew its sales volumes at Karr to average approximately 26,600 Boe/d in October 2017 with peak output in 2017 of over 30,000 Boe/d.

Paramount is currently drilling a new five (5.0 net) well pad at Karr.

Production at Karr is gathered through a Company-owned gas gathering system and compressed and dehydrated at the Company's 6-18 compression and dehydration facility (the "6-18 Facility") which was expanded from 40 MMcf/d to 80 MMcf/d in 2017. Volumes are then shipped via pipeline to a third-party natural gas processing facility under a long-term firm-service arrangement to provide sales specification natural gas, condensate and C3+. The 6-18 Facility has been configured to facilitate the trucking-out of liquids so that volumes in excess of capacity at the third-party facility can be transported for processing at alternate locations. In addition, the 6-18 Facility is pipeline connected to an alternate third-party facility in the area, which provides the Company with access to incremental natural gas processing capacity on an interruptible basis in the event there is insufficient capacity at the other third-party facility during periods of maintenance downtime, temporary constraints or other service disruptions. The Company is expanding the 6-18 Facility from its current 80 MMcf/d of compression and dehydration capacity to approximately 100 MMcf/d, with the expansion expected to be completed in the latter half of 2018. Firm-service TCPL natural gas transportation capacity is in place for the planned production ramp up.

#### *Wapiti*

Paramount acquired the Wapiti property (including approximately 46,000 net acres of Montney rights) through the ACL Acquisition.

The Company operates approximately 80 percent of its production at Wapiti.

At Wapiti, two wells were rig released and two wells were completed and tested in 2017. To date, nine (9.0 net) delineation wells have been drilled and completed in three zones within the Middle and Lower Montney zones.

Production at Wapiti is currently processed through third-party facilities under firm agreements.

A new third-party natural gas processing plant at Wapiti (the "Wapiti Plant") is scheduled to be completed in the spring of 2019. Paramount has secured priority access to the full 150 MMcf/d of natural gas

processing capacity at the Wapiti Plant. The Wapiti Plant has been designed with sufficient Liquids processing capacity to process production from liquids-rich Montney wells and includes water management facilities, which will reduce Paramount's ongoing water disposal costs.

In 2018 the Company plans to drill up to 23 (23.0 net) Montney wells on two large multi-well pads and construct water management facilities for its completion programs. The majority of the well completions are scheduled in the first part of 2019 to align with the commissioning and start-up of the Wapiti Plant.

Paramount has firm-service natural gas transportation capacity for Wapiti production volumes on the TCPL system, which ramps up from 50 MMcf/d in 2019 to 130 MMcf/d in early 2021.

#### *Resthaven/Jayar*

The Company operates approximately 90 percent of its production at Resthaven/Jayar.

At Resthaven/Jayar, the 2016/2017 drilling program included five (4.5 net) Cretaceous wells and one (1.0 net) Montney well. The Montney well was completed with a similar design to recent Karr Montney wells. The Company plans to monitor the performance of this well and may accelerate the development of the Montney in this area.

Production at Resthaven/Jayar is processed through owned capacity at two third party operated facilities in the area. Both facilities are connected to TCPL and Pembina transportation facilities and firm arrangements are in place for transportation of Paramount's production from this property.

#### **Kaybob Region**

As at December 31, 2017, Paramount had 1.2 million gross (898,000 net) acres of land in the Kaybob Region. Substantially all of the land in this Region was added through the Trilogy Merger and the ACL Acquisition. The land acquired included approximately 88,000 net acres of Montney oil acreage, approximately 122,000 net acres of liquids-rich Montney gas and approximately 136,000 net acres of Duvernay rights. Approximately 456,000 net acres of the Company's land in this Region as at December 31, 2017 had no attributed reserves.

Sales volumes for this Region averaged 14,073 Boe/d (29 percent Liquids) in 2017.

The Company has six natural gas processing plants and three oil batteries in the Region. Company-owned natural gas processing capacity in the region exceeds 200 MMcf/d, and Company-owned oil batteries in the Region can process more than 40,000 Bbl/d of Liquids. The Company plans to invest approximately \$10 million in 2018 at Kaybob for processing optimization projects, primarily to re-route production from third party facilities to owned and operated facilities. These optimization opportunities are possible due to the overlap of the Trilogy and Apache Canada Ltd. land and infrastructure positions in Kaybob, which provide significant opportunities for cost saving synergies.

The primary focus in the Kaybob Region is Kaybob Montney Oil, Kaybob South Duvernay and Kaybob Smoky Duvernay.

### *Kaybob Montney Oil*

The Company operates 100 percent of its Kaybob Montney Oil production.

Twenty (20.0 net) wells were drilled in 2017 in the Kaybob Montney Oil Pool.

In 2018 the Company plans to drill up to 21 (21.0 net) wells. The 2018 program will also include optimization and infield infrastructure projects to facilitate the planned production growth of the Kaybob Montney Oil properties to 8,000 Bbl/d net to the Company.

Solution gas from Kaybob Montney Oil production is processed in Paramount's owned and operated Kaybob North 8-9 natural gas processing plant (the "8-9 Plant"), and delivered to market via firm-service transportation on the TCPL system. The 8-9 Plant is dually connected to both TCPL and Alliance providing optionality. Oil sales volumes from Kaybob Montney Oil properties are generally sold in Alberta at Edmonton Light Sour reference prices.

### *Kaybob South Duvernay*

The Company operates 100 percent of its Kaybob South Duvernay production.

Six (3.1 net) wells were drilled and completed in 2017 at Kaybob South Duvernay. In 2018, the Company plans to drill up to 11 (5.6 net) Kaybob South Duvernay wells on two multi-well pads and complete five (2.6 net) of those wells in 2018, with the remaining wells to be completed in early 2019.

The Kaybob South Duvernay wells produce through third-party processing facilities under firm agreements for up to approximately 100 MMcf/d of capacity, coupled with firm-service transportation capacity for natural gas and downstream contracts for condensate and NGLs.

### *Kaybob Smoky Duvernay*

The Company operates 100 percent of its Kaybob Smoky Duvernay production.

The Company did not drill any Duvernay wells into this pool in 2017.

The 2018 program at the Kaybob Smoky Duvernay properties will see a new four (4.0 net) well pad drilled and brought-on production in mid-2018.

This new four-well pad will produce to Paramount's owned and operated Smoky 6-16 natural gas processing plant (the "6-16 Plant"), which will have approximately 12 MMcf/d of throughput capacity following some minor capital expenditures. The 6-16 Plant is pipeline connected to the TCPL system, where the Company has firm-service transportation capacity. Condensate will be trucked to the Company's 12-10 oil battery, which is located about 24 kilometers east. NGLs will be trucked to Pembina's Fox Creek terminal.

The 2018 Kaybob Smoky Duvernay capital program is the first phase in a multi-phase development of the play. Phase Two will consist of further modifications to the 6-16 Plant to increase throughput capacity to about 20 MMcf/d, scheduled for the first quarter of 2019. Phase three of the development will include a pipeline connection to the 8-9 Plant and some modifications and enhancements to the plant for handling Duvernay Liquids.

The growth plan at Kaybob Smoky Duvernay is supported by firm-service transportation capacity on the TCPL system and downstream contracts for condensate and NGLs.

### ***Central Alberta and Other Region***

As at December 31, 2017, Paramount had approximately 3.4 million gross (1.9 million net) acres of land in the Central Alberta and Other Region as well as approximately 176,000 net acres of fee simple land. The Company's land base in the Region includes multiple formation and resource potential, including within Willesden Green and East Shale Basin Duvernay, Cardium, Glauconite and Ellerslie. Approximately 1,697,000 net acres of the land in this Region had no attributed reserves as at December 31, 2017.

Sales volumes for this Region averaged 9,403 Boe/d (33 percent Liquids) in 2017.

In 2017, the Company rig released 18 (4.8 net) wells. Nine (0.3 net) wells were rig released in West Central Alberta targeting Cardium and Glauconite rights while another 9 (4.5 net) wells were rig released in northern British Columbia targeting Montney rights. The Company plans to drill and complete a total of up to 5 (3.3 net) wells at Willesden Green and Leafield in 2018. The new wells will primarily produce through owned and operated infrastructure.

Production in this Region is currently processed through third-party facilities under firm agreements for natural gas processing and transportation.

At the Zama property in northwest Alberta, the Company is restarting legacy wells and optimizing gathering systems to improve operational efficiencies. Sales volumes increased to approximately 1,300 Boe/d in the fourth quarter of 2017, including a year-over-year increase in oil production of 270 percent from approximately 320 Bbl/d in the fourth quarter of 2016 to approximately 875 Bbl/d in the fourth quarter of 2017. These successful well reactivations underpin Paramount's strategic objective of driving to a positive netback at Zama. Extending the productive life of the Zama field provides the Company with increased flexibility in managing long-term abandonment obligations associated with the property.

### ***Business Strategies and Objectives***

The Company's business strategy is to achieve profitable growth through the low risk development of liquids-rich resource plays in the Western Canadian Sedimentary Basin. Specifically, Paramount's growth plans are currently focused on five focus areas: Karr Montney, Wapiti Montney, Kaybob Montney Oil, Kaybob South Duvernay and Kaybob Smoky Duvernay, each of which is discussed above.

Paramount's objective is to provide long-term value creation for its stakeholders by capturing and controlling the best opportunities available to it and leveraging the Company's technical and managerial expertise to seek to maximize the economic returns from the production of its resources.

The Company's land acquisition strategy is to identify new opportunities at an early stage and capture large holdings at a low cost. Paramount targets contiguous acreage blocks that are prospective for multi-zone development and have high working interests to preserve operational control.

Paramount employs multi-well pad developments to realize the benefits of commercial economies of scale and control capital and operating costs. The Company continually works to enhance its horizontal wellbore economics by refining drilling techniques and completion designs. Paramount also invests in natural gas processing facilities and gathering infrastructure and enters into firm-service arrangements to secure processing and transportation capacity for its production.



In addition, the Company has, as part of its portfolio, emerging longer-term conventional and unconventional assets, including oil sands and carbonate interests and prospective shale gas acreage. These assets are discussed further below and are viewed by Paramount as longer-term prospects with potential for future revenue generation, spin-outs or accretive dispositions.

The Company maintains capital discipline, directing investments towards the plays that exceed its economic hurdles, while balancing risks. Paramount manages liquidity in its capital structure to support growth initiatives and provide financial flexibility.

## **OTHER ASSETS**

### ***Investments in Securities***

As of December 31, 2017, the Company held investments in the shares of MEG Energy Corp. and certain other public and private corporations, including Blackbird Energy Inc., Marquee Energy Ltd., Storm Resources Ltd. and Strategic Oil & Gas Ltd., with a total value of \$53.3 million.

### ***Cavalier Energy***

Cavalier Energy Inc. was created in 2011 to be a self-funding entity that would develop the Company's Oil Sands Lands. Cavalier Energy held approximately 206,563 net acres of Crown leases in the Western Athabasca region of Alberta as at December 31, 2017.

Cavalier Energy's initial focus has been on the Grand Rapids formation in its 100 percent owned in-situ oil sands leases at Hoole, which is located 10 kilometers northeast of Wabasca-Desmarais, Alberta. Since 2004, approximately \$115 million has been invested in land acquisitions, stratigraphic drilling, engineering studies, and environmental field programs to bring this project (the "Hoole Project") to a stage capable of development. Front-end engineering and design work for the initial 10,000 Bbl/d phase of the Hoole Project ("Hoole Grand Rapids Phase 1") has been completed and the Alberta Energy Regulator approved the Hoole Grand Rapids Phase 1 project in the second quarter of 2014. However, given the current commodity-price environment no significant additional expenditures are planned for the Hoole Grand Rapids Phase 1 project in the near term.

In December 2016, Cavalier Energy granted the Cavalier Royalty on the Oil Sands Lands to an unrelated third-party for cash consideration of \$100 million. The agreement governing the Cavalier Royalty does not impose any development commitments on Cavalier Energy in respect of the Hoole Project or any of its other Oil Sands Lands, nor does it impose any terms or conditions on the use of the consideration paid for the Cavalier Royalty. Production from the Oil Sands Lands will not be subject to any royalty when the Western Canadian Select ("WCS") price is below US\$50 per barrel. At a WCS price of US\$50 per barrel, the royalty rate will be 2 percent and the rate will increase linearly to a maximum of 20 percent at a WCS price of US\$140 per barrel. As of December 31, 2017, the WCS price was US\$36.22 per barrel. The Cavalier Royalty will be payable based on Cavalier Energy's realized bitumen price, net of diluent, transportation and storage costs. The Cavalier Royalty is secured by a lien over the Oil Sands Lands.

The Oil Sands Lands are prospective for in-situ bitumen recovery development but are at the early stages of their evaluation and development. The Oil Sands Lands currently have no production and there are no assurances that any of Cavalier Energy's properties will commence production, generate earnings, operate profitably or provide a return on investment in the future.

## ***Fox Drilling***

Fox Drilling owns seven triple-sized rigs, including four walking rigs. The walking rigs have the capability of moving across a lease with the derrick and drill pipe remaining vertical, significantly increasing efficiencies on multi-well pads. The Fox Drilling rigs are being deployed on the Company's lands in 2018.

## ***Shale Gas***

Paramount's shale gas holdings in the Liard and Horn River Basins in northeast British Columbia and the Northwest Territories include approximately 134.6 net sections of land as at December 31, 2017, with potential for natural gas production from the Besa River shale formation. Paramount has drilled a total of 4 (4.0 net) exploration wells in the Liard Basin for delineation and retention purposes.

## **RESERVES AND OTHER OIL AND GAS INFORMATION**

The reserves information provided below is derived from the report of McDaniel on Paramount's oil and gas reserves effective as of December 31, 2017 and dated and prepared as of March 7, 2018 (the "McDaniel Report"). The evaluation by McDaniel was prepared in accordance with the standards included in the Canadian Oil and Gas Evaluation Handbook ("COGE Handbook") and National Instrument 51-101.

The following tables set forth information relating to Paramount's working interest share of reserves, net reserves after royalties, and estimated future net revenue as at December 31, 2017. The reserves are reported using forecast prices and costs. Columns and rows may not add due to rounding.

All evaluations of future net revenue are stated prior to any provisions for interest costs or general and administrative costs and after the deduction of estimated future capital expenditures for incomplete wells to which reserves have been assigned. It should not be assumed that estimated future net revenue is representative of the fair market value of Paramount's oil and gas properties. There is no assurance that price and cost assumptions will not differ materially from actual results. The reserves volumes of natural gas, NGLs, crude oil and bitumen provided herein are estimates only and there is no guarantee that the volumes will be recovered. Actual volumes of natural gas, NGLs and crude oil reserves recovered may be greater than or less than the estimates provided herein.

Paramount's Reserve Committee, comprised of independent board members, reviews the qualifications and appointment of McDaniel, Paramount's independent qualified reserves evaluator. The Reserve Committee also reviews the procedures for providing information to the evaluator.

## Reserves Information

### Reserves Data

The following table summarizes Paramount's reserves at December 31, 2017.

Reserves Category	Light & Medium Oil		Tight Oil		Natural Gas Liquids	
	Gross (1) (MBbl)	Net (2) (MBbl)	Gross (1) (MBbl)	Net (2) (MBbl)	Gross (1) (MBbl)	Net (2) (MBbl)
Proved						
Developed Producing	11,467	10,073	767	609	30,924	24,853
Developed Non-Producing	667	586	-	-	731	614
Undeveloped	10,669	9,413	-	-	87,479	74,390
<b>Total Proved</b>	<b>22,803</b>	<b>20,071</b>	<b>767</b>	<b>609</b>	<b>119,134</b>	<b>99,857</b>
<b>Total Probable</b>	<b>10,808</b>	<b>8,908</b>	<b>337</b>	<b>246</b>	<b>77,749</b>	<b>59,023</b>
<b>Total Proved &amp; Probable</b>	<b>33,610</b>	<b>28,979</b>	<b>1,104</b>	<b>855</b>	<b>196,883</b>	<b>158,881</b>

Reserves Category	Conventional Natural Gas		Shale Gas		Total Company	
	Gross (1) (Bcf)	Net (2) (Bcf)	Gross (1) (Bcf)	Net (2) (Bcf)	Gross (1) (MBoe)	Net (2) (MBoe)
Proved						
Developed Producing	363	346	272	251	149,032	135,014
Developed Non-Producing	7	7	8	6	3,903	3,437
Undeveloped	42	40	706	646	222,890	198,135
<b>Total Proved</b>	<b>413</b>	<b>394</b>	<b>986</b>	<b>903</b>	<b>375,824</b>	<b>336,586</b>
<b>Total Probable</b>	<b>147</b>	<b>139</b>	<b>626</b>	<b>542</b>	<b>217,648</b>	<b>181,641</b>
<b>Total Proved &amp; Probable</b>	<b>560</b>	<b>532</b>	<b>1,612</b>	<b>1,445</b>	<b>593,473</b>	<b>518,227</b>

(1) Gross reserves are working interest reserves before royalty deductions.

(2) Net reserves are working interest reserves after royalty deductions plus royalty interest reserves.

### Net Present Value of Future Net Revenue

The following table summarizes the net present values of future net revenue attributable to Paramount's reserves as at December 31, 2017 using forecast prices and costs. The net present values are reported before income tax and after income tax and have been discounted using rates of 0 percent, 5 percent, 10 percent, 15 percent and 20 percent and on a net unit value basis at a discount rate of 10 percent before income taxes. Future Net Revenue does not represent fair market value.

Net Present Values of Future Net Revenue											
Before Income Taxes Discounted at (%/year)						After Income Taxes Discounted at (%/year)					Unit Value Before Tax@10.0% (1) (\$/BOE)
Reserves Category	@0.0% (MM\$)	@5.0% (MM\$)	@10.0% (MM\$)	@15.0% (MM\$)	@20.0% (MM\$)	@0.0% (MM\$)	@5.0% (MM\$)	@10.0% (MM\$)	@15.0% (MM\$)	@20.0% (MM\$)	
Proved											
Developed	1,475	1,279	1,129	1,013	922	1,475	1,279	1,129	1,013	922	8.36
Producing											
Developed	42	36	32	28	25	42	36	32	28	25	9.21
Non-Producing											
Undeveloped	3,161	1,993	1,303	865	572	3,161	1,993	1,303	865	572	6.58
<b>Total Proved</b>	<b>4,678</b>	<b>3,308</b>	<b>2,464</b>	<b>1,906</b>	<b>1,519</b>	<b>4,678</b>	<b>3,308</b>	<b>2,464</b>	<b>1,906</b>	<b>1,519</b>	<b>7.32</b>
<b>Total Probable</b>	<b>4,373</b>	<b>2,746</b>	<b>1,889</b>	<b>1,387</b>	<b>1,067</b>	<b>3,214</b>	<b>2,092</b>	<b>1,490</b>	<b>1,130</b>	<b>897</b>	<b>10.40</b>
<b>Total Proved &amp; Probable</b>	<b>9,051</b>	<b>6,054</b>	<b>4,353</b>	<b>3,293</b>	<b>2,586</b>	<b>7,892</b>	<b>5,400</b>	<b>3,954</b>	<b>3,036</b>	<b>2,415</b>	<b>8.40</b>

(1) The unit values are based on net reserve volumes.

### Future Net Revenue

The following table summarizes the total undiscounted future net revenue attributable to Paramount's reserves as at December 31, 2017.

Reserves Category	Revenue (1) MM\$	Royalties (2) MM\$	Operating Costs MM\$	Development Costs MM\$	Abandonment & Reclamation Costs (3) MM\$	Future Net Revenue Before Income Taxes MM\$	Income Taxes (4) MM\$	Future Net Revenue After Income Taxes MM\$
Total Proved Reserves	14,830	1,932	4,729	3,148	341	4,678	-	4,678
Total Proved & Probable Reserves	24,875	3,920	7,290	4,222	392	9,051	1,159	7,892

(1) Includes all product revenues and other revenues as forecast.

(2) Royalties includes any net profits interests paid, as well as the Saskatchewan Corporation Capital Tax Surcharge.

(3) See "NARRATIVE DESCRIPTION OF THE BUSINESS – RESERVES AND OTHER OIL AND GAS INFORMATION" for further information regarding abandonment and reclamation costs.

(4) Estimates of the after income tax value of future net revenue have been prepared based on before income tax reserves information and include assumptions and estimates of Paramount's tax pools and the sequences of claims and rates of claim thereon.

### *Future Net Revenue by Product Type*

The following table summarizes the net present value of future net revenue by product type on a unit value basis, before income tax, attributable to Paramount's net reserves evaluated at December 31, 2017. Amounts have been discounted at 10 percent.

Reserves Category	Product Type	Future Net Revenue Before Income Taxes (discounted @ 10%) MM\$	Unit Value (1) \$/Mcf \$/Bbl
<b>Total Proved Reserves</b>	Light and Medium Oil (Including Solution Gas and By-products)	607	30.40
	Tight Oil (Including Solution Gas and By-products)	17	30.63
	Conventional Natural Gas (Including By-products)	227	0.76
	Shale Gas (Including By-products)	1,613	1.79
	<b>Total</b>	<b>2,464</b>	
<b>Total Proved &amp; Probable Reserves</b>	Light and Medium Oil (Including Solution Gas and By-products)	918	31.85
	Tight Oil (Including Solution Gas and By-products)	25	30.81
	Conventional Natural Gas (Including By-products)	343	0.88
	Shale Gas (Including By-products)	3,068	2.13
	<b>Total</b>	<b>4,353</b>	

(1) Unit values are calculated using the 10% discount rate divided by the Major Product Type Net reserves for each group.

The following definitions and assumptions form the basis of classification for reserves presented in the McDaniel Report:

- (a) Reserves are classified according to the degree of certainty associated with the estimates:
  - i. **Proved Reserves** are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.
  - ii. **Probable Reserves** are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves.
- (b) Each of the reserves categories (proved and probable) may be divided into developed and undeveloped categories:
  - i. **Developed Reserves** are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (for example, when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing.
  - ii. **Developed Producing Reserves** are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently

producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty.

- iii. **Developed Non-producing Reserves** are those reserves that either have not been on production, or have previously been on production, but are shut-in, and the date of resumption of production is unknown.
- iv. **Undeveloped Reserves** are those reserves expected to be recovered from known accumulations where a significant expenditure (for example, when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable) to which they are assigned.

In multi-well pools it may be appropriate to allocate total pool reserves between the developed and undeveloped categories or to subdivide the developed reserves for the pool between developed producing and developed non-producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities and completion intervals in the pool and their respective development and production status.

- (c) **Gross Reserves** are defined as the Company's working interest reserves before deduction of any royalties and without including royalty interests.
- (d) **Net Reserves** are defined as the Company's working interest reserves after deduction of royalties and including royalty interests.

### **Summary of Pricing and Inflation Rate Assumptions**

Pricing and inflation rate assumptions prepared by McDaniel, Paramount's independent qualified reserves evaluator, and used in the McDaniel Report in calculating the net present value of future net revenue attributable to Paramount's reserves as of December 31, 2017 are as follows:

Forecast Prices and Costs		2018	2019	2020	2021	2022	2023	2024	2025	Thereafter
U.S. Henry Hub Gas	(US\$/MMBtu)	3.00	3.05	3.25	3.55	3.80	3.85	3.95	4.00	+1 to 2% / year
AECO Spot	(Cdn\$/MMBtu)	2.25	2.65	3.05	3.40	3.60	3.65	3.75	3.80	+1 to 2% / year
Natural Gas at Plantgate	(Cdn\$/MMBtu)	2.05	2.45	2.85	3.20	3.40	3.45	3.50	3.55	+1 to 2% / year
WTI Crude Oil	(US\$/Bbl)	58.50	58.70	62.40	69.00	73.10	74.50	76.00	77.50	+2% / year
Edmonton Light Crude Oil	(Cdn\$/Bbl)	70.10	71.30	74.90	80.50	82.80	84.40	86.10	87.80	+2% / year
Edmonton Cond. & Natural Gasolines	(Cdn\$/Bbl)	73.10	74.40	78.00	83.70	86.00	87.70	89.50	91.20	+2% / year
Edmonton Ethane	(Cdn\$/Bbl)	8.20	9.80	11.40	12.80	13.60	13.80	14.00	14.20	+2% / year
Edmonton Propane	(Cdn\$/Bbl)	40.60	38.10	33.20	34.30	32.10	31.00	31.60	32.20	+2% / year
Edmonton Butane	(Cdn\$/Bbl)	51.40	52.20	54.90	59.0	60.70	61.80	63.10	64.30	+2% / year
Inflation Rate	(% / year)	0.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	+2% / year
Exchange Rate	(US\$/Cdn\$)	0.790	0.790	0.800	0.825	0.850	0.850	0.850	0.850	0.850

Paramount's 2017 weighted average realized prices before the settlement of commodity contracts were \$2.39/Mcf for shale gas, \$2.15/Mcf for conventional natural gas, \$62.93/Bbl for oil and \$51.78/Bbl for NGLs. Additional information on commodity contracts is included in the Company's audited consolidated financial statements and Management's Discussion and Analysis for the year ended December 31, 2017, which can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

The price of natural gas, NGLs and oil are determined by negotiations between buyers and sellers. The sales price received depends on quality, prices of competing fuels, distance to market, value of refined products, supply/demand balance and contract terms. The export of natural gas and oil is subject to rules and regulations set by the National Energy Board of Canada and the governments of Alberta and British Columbia.

Paramount's natural gas portfolio primarily consists of sales priced at the Alberta, California and Eastern Canada markets and is sold in a combination of daily and monthly contracts. The Company has arrangements in place to sell approximately 21,000 GJ/d of natural gas in California at prices based on the US\$ Malin reference prices. The Company has also secured firm-service transportation capacity for approximately 60,000 GJ/d of natural gas for delivery to the Dawn natural gas hub in Ontario, which is sold at US\$ NYMEX reference prices.

Paramount sells its condensate volumes in both stabilized and unstabilized condition, depending upon the location of production and the availability of stabilization capacity. Stabilized condensate volumes delivered through pipelines typically receive prices for condensate quoted at Edmonton, which are generally higher than prices for unstabilized condensate volumes, and are adjusted for applicable transportation, quality and density differentials. Prices for unstabilized condensate volumes trucked to terminals are based on crude oil or condensate prices quoted in Edmonton, depending on the terminal to which volumes are delivered, and are adjusted for transportation, quality and density differentials.



## Reserves Reconciliation

The following table reconciles Paramount's gross reserves by principal product type for the year ended December 31, 2017 based on forecast prices and costs.

	Shale Gas (Bcf)	Conventional Natural Gas (Bcf)	Light & Medium Oil (MBbl)	Tight Oil (MBbl)	Natural Gas Liquids (MBbl)	Total Reserves (MBoe)
<b>PROVED</b>						
December 31, 2016	210.7	27.3	498.6	383.6	19,100	59,645
Technical Revisions	58.0	1.0	(1.3)	88.6	11,918	21,837
Acquisition	680.0	406.4	20,483.8	502.8	84,020	286,082
Disposition	(11.5)	(6.7)	(121.3)	-	(278)	(3,433)
Economic Factors	(2.0)	(2.2)	(10.4)	(3.5)	(289)	(1,003)
Extension/Improved Recovery	76.3	20.3	2,819.4	-	10,197	29,112
Production	(25.4)	(33.4)	(866.2)	(204.5)	(5,534)	(16,414)
<b>December 31, 2017</b>	<b>986.0</b>	<b>412.7</b>	<b>22,802.5</b>	<b>767.0</b>	<b>119,134</b>	<b>375,824</b>
<b>PROBABLE</b>						
December 31, 2016	218.3	7.1	162.7	174.3	17,636	55,528
Technical Revisions	(102.8)	-	(19.0)	(11.3)	(6,278)	(23,434)
Acquisition	410.8	133.3	9,138.6	173.7	53,616	153,596
Disposition	(3.5)	(3.2)	(58.7)	-	(103)	(1,278)
Economic Factors	(1.5)	0.2	0.3	(0.1)	(71)	(291)
Extension/Improved Recovery	104.4	9.6	1,584.0	-	12,949	33,526
<b>December 31, 2017</b>	<b>625.6</b>	<b>146.9</b>	<b>10,807.8</b>	<b>336.6</b>	<b>77,749</b>	<b>217,648</b>
<b>PROVED PLUS PROBABLE</b>						
December 31, 2016	428.9	34.4	661.3	557.9	36,736	115,173
Technical Revisions	(44.8)	1.0	(20.4)	77.3	5,640	(1,597)
Acquisition	1,090.8	539.7	29,622.4	676.5	137,636	439,677
Disposition	(15.1)	(9.8)	(180.0)	-	(381)	(4,711)
Economic Factors	(3.5)	(2.0)	(10.1)	(3.6)	(360)	(1,294)
Extension/Improved Recovery	180.7	29.9	4,403.4	-	23,146	62,638
Production	(25.4)	(33.4)	(866.2)	(204.5)	(5,534)	(16,414)
<b>December 31, 2017</b>	<b>1,611.7</b>	<b>559.6</b>	<b>33,610.3</b>	<b>1,103.6</b>	<b>196,883</b>	<b>593,473</b>

## Additional Information Relating to Reserves Data

### Proved Undeveloped Reserves

The following table summarizes the Company's gross proved undeveloped reserves that were first attributed in each of the three most recent financial years.

Product Type	2015		2016		2017	
	First Attributed	Total at Year End	First Attributed	Total at Year End	First Attributed	Total at Year End
Shale Gas (Bcf)	-	509.7	97.3	171.7	562.9	706.1
Conventional Natural Gas (Bcf)	-	0.2	-	-	42.3	42.3
Light and Medium Crude Oil (MBbl)	-	-	-	-	10,668.5	10,668.5
Tight Oil (MBbl)	-	76	-	-	-	-
NGLs (MBbl)	-	80,078	8,555	15,469	71,223.9	87,479.3

Reserves are classified as proved undeveloped if they meet the requirements prescribed by the COGE Handbook, and if they are expected to be recovered from known accumulations on previously undrilled acreage or they are reserves from existing wells where significant expenditure is required to render them capable of production.

#### *Probable Undeveloped Reserves*

The following table summarizes the Company's gross probable undeveloped reserves that were first attributed in each of the three most recent financial years.

Product Type	2015		2016		2017	
	First Attributed	Total at Year End	First Attributed	Total at Year End	First Attributed	Total at Year End
Shale Gas (Bcf)	3.8	295.1	176.7	208.4	458.5	540.9
Conventional Natural Gas (Bcf)	-	0.1	-	-	33.6	33.6
Light and Medium Crude Oil (MBbl)	-	-	-	-	7,006.1	7,006.1
Tight Oil (MBbl)	-	31	-	-	-	-
NGLs (MBbl)	642	43,381	13,259	16,140	60,168.0	67,913.8

Reserves are classified as probable undeveloped when they are less certain to be recovered than proved undeveloped reserves as prescribed by the COGE Handbook.

#### *Significant Factors or Uncertainties Affecting Reserves Data*

Estimating reserves is a complex process requiring significant judgments based on available geological, geophysical, engineering and economic data. As additional data from development activities, including production results, becomes available and as internal or external economic conditions change, reserves estimates may change substantially. Paramount's reserves can be materially affected by changes in internal and external factors, including, without limitation: commodity prices; access to processing, fractionation (including de-ethanization) and transportation capacity; well performance; royalties; capital, operating, transportation and other costs; regulatory approvals and requirements; and available capital.

The Company's undeveloped reserves are primarily related to wells in the Grande Prairie and Kaybob Regions that are expected to be drilled within the next five years, in the case of proved undeveloped reserves and within the next seven years, in the case of probable undeveloped reserves. The development of these undeveloped reserves will depend upon, among other things, future commodity prices, access to processing, fractionation and transportation capacity, well performance, costs and availability of capital.

Abandonment and reclamation costs affecting the reserves data are discussed under "Abandonment and Reclamation Cost" below.

See "RISK FACTORS - RESERVES ESTIMATES", in particular, as well as the other risk factors herein.

### Future Development Costs

The following table provides the undiscounted estimated future development costs deducted in the estimation of future net revenue.

	2018	2019	2020	2021	2022	Remaining	Total
<b>Development Cost Forecast (MM\$)</b>							
<b>Total Proved</b>							
Undiscounted	406	755	742	695	460	90	3,148
<b>Total Proved &amp; Probable</b>							
Undiscounted	412	768	770	731	615	926	4,222

Paramount expects that funding for future development costs will come from the Company's cash and cash equivalents, adjusted funds flow, and if required, credit facilities, the sale of non-core assets and capital market transactions.

### Other Oil and Gas Information

#### Oil and Gas Properties and Wells

For a description of Paramount's properties, plants and facilities, see "NARRATIVE DESCRIPTION OF THE BUSINESS – OIL AND GAS PROPERTIES". As at December 31, 2017, Paramount had an interest in 6,444 gross (3,656 net) producing and non-producing<sup>(1)</sup> oil and natural gas wells as follows:

	Producing		Non-producing <sup>(1)</sup>	
	Gross <sup>(2)</sup>	Net <sup>(3)</sup>	Gross <sup>(2)</sup>	Net <sup>(3)</sup>
<b>Crude oil wells</b>				
Alberta	975	429	916	478
British Columbia	1	1	19	17
Saskatchewan	-	-	2	2
Northwest Territories	-	-	6	3
Subtotal	976	430	943	500
<b>Natural gas wells</b>				
Alberta	2,640	1,555	1,664	1,057
British Columbia	96	41	70	40
Saskatchewan	4	-	4	3
Northwest Territories	1	-	46	27
Subtotal	2,741	1,596	1,784	1,127
<b>Total</b>	<b>3,717</b>	<b>2,026</b>	<b>2,727</b>	<b>1,627</b>

(1) "Non-producing" wells are wells which Paramount considers capable of production but which, for a variety of reasons including, but not limited to, a lack of markets and lack of development, cannot be placed on production at the present time.

(2) "Gross" wells means the number of wells in which Paramount has a working or a royalty interest.

(3) "Net" wells means Paramount's gross wells multiplied by Paramount's percentage working interest therein.

#### Properties Without Attributed Reserves

Paramount's land base encompasses approximately 4.9 million gross (2.9 million net) acres in Western Canada. An additional 206,000 net acres of land in the Western Athabasca Region are held through Cavalier Energy.

As at December 31, 2017, the Company's oil and gas properties without attributed reserves totaled

approximately 3.6 million gross (2.1 million net) acres, with gross acreage calculated only once per lease or license of petroleum and natural gas rights ("Lease") regardless of whether Paramount holds a working and/or royalty interest and whether or not the Lease includes multiple prospective formations. If Paramount holds interests in different formations under the same surface area pursuant to separate Leases, the acreage set out in each Lease is counted.

As of December 31, 2017, Paramount held approximately 186,000 (155,000 net) acres of land due to expire in 2018 of which approximately 15,000 (15,000 net) acres is held by Cavalier Energy. The actual acreage that will expire in 2018 may be less than these amounts to the extent Paramount is able to continue leases through drilling, farm outs or other activities prior to their expiry.

#### *Significant Factors or Uncertainties Relevant to Properties with No Attributed Reserves*

Paramount's acreage with no attributed reserves in the Northwest Territories and shale gas acreage in the Liard and Horn River Basins will require significant capital to develop. In addition, the Company may experience operational challenges and higher costs due to the geographic location, weather conditions, formation depths and limited infrastructure in this region. There are no assurances that this acreage will ever be developed and, if they are, whether they will operate profitably or provide a return on investment. For additional information on the Company's shale gas holdings, see "NARRATIVE DESCRIPTION OF THE BUSINESS – OTHER ASSETS".

Cavalier Energy's oil sands acreage with no attributed reserves will also require significant capital to develop. These assets are subject to similar risks as those described under "RISK FACTORS – CAVALIER ENERGY'S OIL SANDS AND CARBONATE BITUMEN PROPERTIES" for the Hoole Project plus additional risks associated with exploration, delineation, establishing technological and commercial feasibility and other steps that would be required to advance these assets to a stage ready for regulatory approvals could be sought and efforts made to secure necessary financing.

#### *Abandonment and Reclamation Costs*

Abandonment and reclamation costs related to Paramount's working interest in wells, facilities, pipelines, and associated surface leases and roads are estimated by incorporating assumptions regarding expected costs of remediation, decommissioning, abandonment and reclamation. Costs are estimated for individual assets and aggregated to determine the total net liability. In estimating these costs, reference is made to historical costs and values, internal estimates, third-party environmental reports, and publications including the Alberta Energy Regulator's Directives 006 and 011, as well as the Material Price Catalogue (published by the Petroleum Accountants Society of Canada).

During 2017, Paramount incurred approximately \$21.5 million on environmental, remediation, reclamation and regulatory compliance activities.

The Company's estimates of abandonment and reclamation costs for surface leases, wells, facilities, and pipelines are \$1,752 million (undiscounted) and \$649 million (discounted at 10 percent). The estimated future net revenue of the Company's reserves disclosed in this annual information form does not include an allowance for abandonment and reclamation costs for surface leases, facilities and pipelines.

The McDaniel Report deducted \$392 million (undiscounted) and \$70 million (discounted at 10 percent) for estimated down hole abandonment and surface reclamation costs for wells, with reserves, on a total proved plus probable basis.

Additional information concerning abandonment and reclamation costs is included in the Company's audited consolidated financial statements and Management's Discussion and Analysis for the year ended December 31, 2017, which can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

#### *Forward Contracts*

The nature of Paramount's operations results in exposure to fluctuations in commodity prices, foreign exchange rates and interest rates. Paramount monitors and, from time-to-time, utilizes derivative financial instruments and/or physical forward delivery contracts to hedge its exposure to these risks. Paramount's derivative contracts and/or future commitments are disclosed in its audited consolidated financial statements as at and for the year ended December 31, 2017 which can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

#### *Pipeline Transportation and Production Processing Commitments*

As part of normal business operations, the Company has entered into firm-service agreements for the processing and transportation of natural gas, NGLs and oil. The Company renews or amends existing agreements and enters into new agreements from time-to-time based on forecast capacity requirements.

Based on forecast production volumes in the McDaniel Report, over the next five years the Company's transportation commitments exceed forecast production of the Company's proved reserves by an average of approximately 23,000 Boe/d and processing commitments do not exceed forecast production of the Company's proved reserves. If the Company's sales volumes were equivalent to the forecast production of proved reserves, the aggregate fees in respect of the differences described above would average approximately \$15 million per year over the next five years. Forecast production of the Company's proved plus probable reserves per the McDaniel Report is approximately 20 percent higher than forecast production from proved reserves used for the purposes of calculating the differences and fees described above. If the Company's sales volumes were equivalent to the forecast production of proved plus probable reserves, the aggregate fees in respect of such differences would average approximately \$12 million per year over the next five years.

The production, processing and transportation of natural gas, NGLs and oil are interdependent and the Company's ability to fulfill each commitment could be impacted by well performance and disruptions and constraints at the Company's and/or at third-party facilities and pipelines. The Company could experience a financial loss and its operations could be adversely affected if Paramount is unable to fulfill its commitments through its operations or, where necessary, amend its commitments or assign any excess capacity to one or more third-parties. Additional disclosure related to such commitments can be found in the Company's audited consolidated financial statements as at and for the year ended December 31, 2017, which can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

#### *Tax Horizon*

Based on the current tax regime, current commodity prices, the Company's available tax pools, assumptions of production and anticipated future net revenue from such production and capital expenditures, Paramount does not expect to be cash taxable in the near future. Taxable income varies depending on total income and expenses and Paramount's estimate is sensitive to assumptions regarding commodity prices, production, adjusted funds flow, capital spending levels and acquisition and disposition transactions.

Additional information concerning Paramount's tax pools is included in the Company's audited consolidated financial statements and Management's Discussion and Analysis for the year ended December 31, 2017 which can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com). Also, see "RISK FACTORS – GOVERNMENT REGULATION".

### *Costs Incurred*

The following table summarizes the costs incurred by Paramount for property acquisitions and exploration and development activities in 2017.

<b>Cost Type <sup>(1)</sup></b>	
<b>(\$ millions)</b>	<b>2017</b>
Acquisitions <sup>(2)</sup>	
Proved properties	0.3
Unproved properties	12.9
Exploration	6.9
Development (including facilities)	526.0
Investments – Cavalier Energy	0.7
<b>Total</b>	<b>546.9</b>

(1) Excludes corporate asset capital expenditures (e.g. computer hardware, furniture and fixtures, etc.) and drilling rig capital expenditures.

(2) Excludes property acquisitions relating to the ACL Acquisition and Trilogy Merger. Please refer to the consolidated financial statements for the year December 31, 2017 for a detailed breakdown of the net assets acquired on these acquisitions.

### *Exploration and Development Activities*

The following table summarizes the results of Paramount's drilling activity for the year ended December 31, 2017. The working interest in certain of these wells may change after payout.

	<b>Gross <sup>(1)(3)</sup></b>	<b>Net <sup>(2)(3)</sup></b>
<b>Development Wells <sup>(4)</sup></b>		
Gas	39	28.2
Oil	11	8.0
<b>Total Wells</b>	<b>50</b>	<b>36.2</b>

(1) "Gross" is the number of wells in which Paramount has a working interest or a royalty interest that may be converted to a working interest.

(2) "Net" is the aggregate number of wells obtained by multiplying each gross well by Paramount's percentage of working interest.

(3) Includes wells drilled by PRACL and PRTEC after they became subsidiaries of the Company.

(4) "Development Well" is a well drilled within or in close proximity to a discovered pool of petroleum or natural gas.

For a description of the Company's current and likely exploration and development activities, see "NARRATIVE DESCRIPTION OF BUSINESS – OIL AND GAS PROPERTIES".

## Production Estimates

The following table summarizes the total estimated gross production for 2018 from the McDaniel Report.

	Estimated Production (Gross)	
	Proved	Probable
Shale Gas (MMcf)	63,044	3,895
Conventional Natural Gas (MMcf)	64,219	3,920
Oil (MBbl)	3,735	566
NGLs (MBbl)	8,883	791
<b>Total Production (MBoe)</b>	<b>33,829</b>	<b>2,660</b>

McDaniel's estimated gross production in 2018 from the Karr field is 8,552 MBoe (Proved) and 795 MBoe (Probable).

## Production History

The following table summarizes daily sales volumes for Paramount before the deduction of royalties on a quarterly and annual basis for 2017.

Sales <sup>(1)</sup>	2017 <sup>(2)</sup>	Q4 <sup>(2)</sup>	Q3 <sup>(2)</sup>	Q2	Q1
Shale Gas (MMcf/d)	69.7	136.7	80.0	33.5	27.3
Conventional Natural Gas (MMcf/d)	91.5	223.2	97.2	19.5	24.1
Oil (Bbl/d)	2,933	7,938	2,920	312	481
NGLs (Bbl/d)	15,161	27,497	16,566	9,220	7,122
<b>Total (Boe/d)</b>	<b>44,970</b>	<b>95,412</b>	<b>49,023</b>	<b>18,367</b>	<b>16,163</b>

(1) Sales volumes measured in marketable quantities, after processing and shrinkage.

(2) Includes the results of operations of Apache Canada Ltd. following the ACL Acquisition on August 16, 2017 and the results of operations of Trilogy Energy Corp. following the closing of the Trilogy Merger on September 12, 2017.



The following table summarizes Paramount's average per-unit netbacks, by principal product, on a quarterly and annual basis for 2017.

	Netback – 2017 <sup>(1)</sup>				
	2017 <sup>(4)</sup>	Q4	Q3 <sup>(4)</sup>	Q2	Q1
<b>Shale gas (including by-products) <sup>(2)</sup> (\$/Mcf)</b>					
Revenue	5.91	5.82	5.07	6.78	7.14
Royalties	(0.25)	(0.35)	(0.16)	(0.14)	(0.26)
Operating costs <sup>(3)</sup>	(1.54)	(1.45)	(1.55)	(1.70)	(1.66)
Transportation and NGLs processing	(0.59)	(0.54)	(0.51)	(0.80)	(0.72)
Netback	3.52	3.48	2.85	4.14	4.50
<b>Conventional natural gas <sup>(2)</sup> (including by-products) (\$/Mcf)</b>					
Revenue	4.06	4.28	3.47	4.12	4.42
Royalties	(0.24)	(0.30)	(0.20)	0.12	(0.19)
Operating costs <sup>(3)</sup>	(2.26)	(2.16)	(2.39)	(2.50)	(2.44)
Netback	1.57	1.82	0.87	1.74	1.78
<b>Light and Medium Crude &amp; Tight Oil (including by-products) (\$/Boe)</b>					
Revenue	34.35	31.00	33.39	48.77	55.41
Royalties	(2.04)	(1.85)	(2.30)	(4.94)	(0.81)
Operating costs <sup>(3)</sup>	(14.09)	(13.87)	(11.53)	(28.19)	(15.20)
Netback	18.23	15.27	19.56	15.64	39.39

- (1) The Company's production volumes are generally gathered and processed through common gathering systems, processing facilities and transportation pipelines. As a result, operating and other costs have been allocated to each product type based on volume equivalencies and other reasonable methods of allocation.
- (2) Based on sales volumes measured in marketable quantities, after processing and shrinkage.
- (3) Operating costs include all costs related to the operation of wells, Paramount's facilities and gathering systems, transportation and processing. Processing revenue earned from Company facilities has been deducted from these costs.
- (4) Includes the results of operations of Apache Canada Ltd. following the ACL Acquisition on August 16, 2017 and the results of operations of Trilogy Energy Corp. following the closing of the Trilogy Merger on September 12, 2017.

The Company realized \$14.4 million from the settlement of commodity contracts in fiscal 2017. These proceeds have not been reflected in the Netback amounts above.

The following table summarizes the Company's total sales volumes for the year ended December 31, 2017, as well as for its Karr field separately.

	Shale Gas MMcf	Conventional Natural Gas MMcf	Natural Gas Liquids MBbl	Light & Medium Oil MBbl	Tight Oil MBbl	Total Company MBoe
Total:	25,445	33,414	5,534	866	204	16,414
Karr	15,741	-	3,096	-	-	5,984

## GENERAL

### ***Competitive Conditions, Seasonality, and Trends***

Competitive conditions affecting Paramount are described under the "RISK FACTORS" section of this annual information form.

The development and exploration of oil and natural gas reserves, including the drilling, completion and tie-in of wells, and road, lease, facility and pipeline construction, is dependent on access to areas where operations are to be conducted. Winter-access areas, seasonal weather variations, including freeze-up, break-up and wet ground conditions, and other restrictions can affect access. In addition, the seasonal accessibility of certain locations increases competition for equipment and personnel during those periods.

The oil and gas industry continues to develop new technologies that increase the recoverability of natural gas, NGLs, oil and bitumen and/or improve returns, particularly longer multi-stage hydraulically-fractured horizontal wells incorporating higher intensities of proppant per stage and more fracs per well. Reservoir floods, polymer injection, water or oil based fractionation fluids, and carbon dioxide ("CO<sub>2</sub>") injection techniques have also been used to increase recoveries.

### ***Alberta Royalties***

On January 1, 2017, the Government of Alberta implemented a modernized royalty framework (the "Modernized Framework") based on recommendations of the Royalty Review Advisory Panel. The Modernized Framework applies to all conventional wells spud on or after January 1, 2017. The Modernized Framework does not apply to oil sands production, which has its own separate royalty framework. Wells spud prior to July 13, 2016 will continue to operate under the previous royalty framework (the "Old Framework"). Wells spud between such dates may elect to opt-in to the Modernized Framework if certain criteria are met. After December 31, 2026, all wells will be subject to the Modernized Framework.

Under the Modernized Framework, royalties are determined on a "revenue-minus-costs" basis, with the cost component based on a drilling and completion cost allowance formula for each well, which is dependent on the vertical depth, horizontal length of the well and proppant placed. The formula is based on the industry's average drilling and completion costs as determined by the Alberta Department of Energy ("ADOE") on an annual basis. The cost component attempts to incentivize innovation to reduce costs by allowing wells that operate under the average cost to remain at a lower rate of royalty even after recovering actual costs. Producers pay a flat royalty rate of five percent of gross revenue from each well that is subject to the Modernized Framework until the well reaches payout. Payout for a well is the point at which cumulative revenues from the well equals the drilling and completion cost allowance for the well set by the ADOE. After payout, producers pay an increased post-payout royalty on revenues determined by reference to the then current commodity prices of the various hydrocarbons and rates of production from the well. Similar to the Old Framework, the post-payout royalty rate under the Modernized Framework varies with commodity prices. Once production in a mature well drops below a threshold level where the rate of production is too low to sustain the full royalty burden, its royalty rate will be adjusted downward as the mature well's production declines, to a minimum of five percent. The drilling and completion cost allowance formula, post-payout royalty rates and production thresholds for mature wells came into effect on January 1, 2017.

As part of the Modernized Framework, the Alberta government announced two new strategic royalty programs to encourage oil and gas producers to boost production and explore resources in new areas: the Enhanced Hydrocarbon Recovery Program and the Emerging Resources Program. These programs will

take into account the higher costs associated with development of emerging resources and enhanced recovery methods when calculating royalty rates.

### ***Employees***

At December 31, 2017, Paramount had 422 full-time head office employees, 220 full-time field employees and 50 employees of Fox Drilling. The Company also engages a number of contractors and service providers.

### ***Environment, Health and Safety***

Paramount's oil and gas operations are governed by environmental requirements under Canadian federal, provincial, territorial and municipal laws that, among other things, restrict and/or prohibit the release of emissions or pollutants, regulate the storage, handling, transportation and disposal of various substances produced or utilized in association with oil and gas industry operations, and require Paramount to remedy the effect of its activities on the environment at current and former operating sites (including through the proper abandonment and decommissioning of wells, pipelines, facilities, and roads and the remediation and reclamation of associated lands). See "NARRATIVE DESCRIPTION OF THE BUSINESS – RESERVES AND OTHER OIL AND GAS INFORMATION" AND "RISK FACTORS – COMPLIANCE WITH AND CHANGES TO ENVIRONMENTAL, HEALTH AND SAFETY LAWS AND REGULATIONS". Paramount is also required to comply with a wide range of regulatory requirements designed to ensure the health and safety of its workers and other stakeholders who may be impacted by its operations. Paramount has implemented monitoring, reporting and compliance programs to address environmental, health and safety issues in its operations, and conducts ongoing inspections and assessments in an effort to ensure that applicable regulatory standards are met. In addition, contingency and response plans have been put in place to deal with environmental incidents and other emergency situations.

Paramount has a Health, Safety and Environment Policy (the "HSE Policy") which forms an integral part of the business operations of the Company. The HSE Policy together with the Paramount Operations Excellence Management System (POEMS) provide the framework pursuant to which the Company has developed a comprehensive operations management system. One component of POEMS is the health, safety and environmental management system (the "HSE Management System") which contains specific policies and procedures to address environmental, health and safety matters associated with Paramount's operations. The Company is committed to the prevention of incidents in all phases of its operations that could cause harm to people, property loss or an adverse impact on the environment.

Paramount's HSE Policy and HSE Management System emphasize the Company's responsibility to make environmental, health and safety protection a consistent component of its decision-making processes and requires its management, employees, contractors, consultants and other parties performing work on behalf of Paramount to act in accordance with the HSE Policy and HSE Management system. Paramount's managers and supervisors are required to assess the potential effects of their projects and to integrate protective measures to prevent environmental, health or safety incidents from occurring as a result of Paramount's business activities. Managers and supervisors also are expected to provide training and to be prepared to respond safely and effectively to environmental, health or safety incidents. An HSE Steering Committee has been established to ensure the proper implementation and functioning of Paramount's Operations Management System, and to endeavor to achieve continuous improvement on environmental, health and safety matters.

Paramount's environmental, health and safety policies and programs are monitored by a committee of the Board of Directors, the "Environmental, Health and Safety Committee", which is comprised of three directors of the Company. The duties and responsibilities of the committee are to:

- review and monitor the environmental, health and safety policies and activities of Paramount on behalf of the Board of Directors;
- recommend actions for developing policies, programs and procedures to ensure that the principles contained in the HSE Policy are being adhered to and achieved;
- review with management any material environmental, health and safety issues that have arisen in the course of the Company's operations to determine, on behalf of the Board of Directors, that Paramount is taking all necessary steps and exercising all necessary due diligence both in respect of these specific issues and in carrying out its environmental, health and safety responsibilities generally; and
- review and report to the Board of Directors on the sufficiency of the resources available to fulfill the environmental, health and safety responsibilities of the Company.

The Environmental, Health and Safety Committee meets at least semi-annually and receives reports from management with respect to the above matters and in particular relative to Paramount's compliance with health, safety and environmental laws and regulations, and the Company's management of its ongoing abandonment, reclamation, remediation and similar obligations.

#### *Greenhouse Gas Compliance and Reporting Obligations*

##### *Alberta*

The Alberta government currently imposes greenhouse gas ("GHG") emission intensity limits on industrial facilities that emit more than 100,000 tonnes of Carbon dioxide equivalent ("tCO<sub>2e</sub>") per year pursuant to the Carbon Competitiveness Incentive Regulation (CCIR)<sup>1</sup>. As Paramount does not currently operate any facilities that emit more than 100,000 tCO<sub>2e</sub> per year it does not have any compliance obligations under these regulations.

In 2016, the Alberta government passed the *Carbon Leadership Act* and enacted the *Carbon Leadership Regulation* pursuant to which an economy-wide carbon tax on emissions from transportation and heating fuels has been imposed effective January 1, 2017. The current tax rate is \$30 per tCO<sub>2e</sub>.

Emissions from flaring at oil and gas wells, pipelines and facilities, and from produced natural gas that is used by oil and gas companies as fuel gas in operating oil and gas wells, pipelines and facilities, will become subject to the \$30 per tCO<sub>2e</sub> tax commencing January 1, 2023 (unless the facility is already subject to compliance obligations under the CCIR, or its replacement, in which case the facility operator will receive a rebate in respect of any carbon levies paid).

It is proposed that the \$30 per tCO<sub>2e</sub> levy will increase at a rate equal to the rate of inflation plus two percent per year so long as it does not significantly exceed carbon prices in comparable jurisdictions, or that are imposed by any national carbon pricing scheme.

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(1) the CCIR replaced the Specified Gas Emitters Regulations on December 18, 2017.

Methane emissions reduction in the oil and gas industry is also a key element of Alberta's GHG reduction plan. Under Directive 60 published by the Alberta Energy Regulator, oil and gas companies are required to detect and repair fugitive leaks of methane and other hydrocarbons. In addition, the Alberta government has set a target of reducing methane emissions from the oil and gas industry by 45 percent by 2025. This target is to be achieved by:

- putting in place by mid-2018 more stringent methane emissions design standards for new oil and gas facilities; and
- utilizing a multi-stakeholder joint initiative to identify and implement methane emission reduction measures at existing oil and gas facilities (with regulated emission standards for existing facilities to be implemented as a backstop by 2020).

A further component of Alberta's climate change strategy is the imposition of a 100 megatonne limit on GHG emissions from provincial oil sands production. This limit has been given force of law in the *Oil Sands Emissions Limit Act*, but until regulations setting out how the emissions cap will work are enacted it is unclear how it might impact the future development of the oil sands properties held by Cavalier Energy. Currently, emissions from the province's oil sands sector are well below the 100 megatonne limit.

In 2017, the Alberta government amended the *Specified Gas Reporting Regulation* to require companies to report the annual GHG emissions from facilities emitting more than 10,000 tCO<sub>2e</sub> per year. The previous threshold was 50,000 tCO<sub>2e</sub> per year. Paramount will have additional reporting obligations as a result of this change.

#### *British Columbia*

In 2008, British Columbia implemented a carbon tax that applies to the purchase or use of fossil fuels by end users in the province and is designed to encourage individuals, businesses and industries to consume less fossil fuel and thus reduce the emission of GHG. Accordingly, to the extent Paramount consumes fossil fuel as part of its exploration, development and production operations in British Columbia, the Company is required to pay a carbon tax.

#### *Federal*

In November 2015, Canada participated in the twenty first session of the Conference of the Parties of the United Nations Framework Convention on Climate Change in Paris, France, which resulted in the adoption of the Paris Agreement. The Paris Agreement is intended to provide the foundation for coordinated international action to attempt to hold the increase in the global average temperature to well below 2°C above pre-industrial levels, and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

On June 29, 2016, Canada joined the United States and Mexico in agreeing to reduce methane emissions from the oil and gas sector by up to 45 percent by 2025 by developing and implementing federal regulations for both existing and new sources of vented and fugitive methane emissions. Draft regulations were released in June 2017.

It remains unclear how the federal regulations will operate in conjunction with the Alberta government's methane-emission reduction measures which have a similar reduction target and timeline.

On October 3, 2016, the Government of Canada announced its intention to implement a national carbon pricing system, and on January 15, 2018 a draft *Greenhouse Gas Pollution Pricing Act* was released for public comment. The federal government has stated that it now intends to have its national carbon pricing scheme come into effect on January 1, 2019. Under the federal plan Canadian provinces and territories will have one year to introduce carbon pricing schemes consisting of either a carbon tax or an emissions cap and trade program that meet prescribed standards, failing which the federal government will begin to levy its own carbon tax on a broad set of emission sources. The initial default carbon tax is expected to begin at \$10 per tCO<sub>2e</sub> on January 1, 2019 and increase by \$10 per tCO<sub>2e</sub> per year until it reaches \$50 per tCO<sub>2e</sub> in 2023. While further details of the federal plan still need to be disclosed, there is a risk that the Company may find itself subject to payment obligations under the federal carbon tax system that are incremental to those that will be imposed on it under the Alberta *Carbon Leadership Regulation*.

Similar to Alberta, the federal government has lowered the threshold for reporting GHG emissions from facilities under its Greenhouse Gas Reporting Program from 50,000 tCO<sub>2e</sub> to 10,000 tCO<sub>2e</sub> per year.

## DIRECTORS AND EXECUTIVE OFFICERS

The following information is provided for each director and executive officer of Paramount as at the date of this annual information form. Each director will serve until the next annual meeting of Shareholders or until his or her respective successor is elected or appointed.

### DIRECTORS

Name and Municipality of Residence	Director Since	Principal Occupation for Past Five Years
<b>Clayton H. Riddell</b> <sup>(1)</sup> Calgary, Alberta, Canada	1978	Executive Chairman, Paramount; previously Chairman and Chief Executive Officer, Paramount
<b>James H.T. Riddell</b> <sup>(1) (3) (6)</sup> Calgary, Alberta, Canada	2000	President and Chief Executive Officer, Paramount; previously President and Chief Operating Officer, Paramount
<b>James G.M. Bell</b> <sup>(2) (4) (5)</sup> Calgary, Alberta, Canada	2011	Chief Operating Officer and General Counsel, Founders Advantage Capital Corp. (a TSX Venture Exchange listed company); previously General Counsel, Olympia Financial Group Inc. (a TSX listed company) and Olympia Trust Company (a non-deposit taking trust company)
<b>Wilfred A. Gobert</b> <sup>(2) (5) (7)</sup> Calgary, Alberta, Canada	2017	Independent Businessman
<b>John C. Gorman</b> <sup>(4) (5) (7)</sup> Calgary, Alberta, Canada	2002	Independent Businessman
<b>Dirk Jungé, CFA</b> <sup>(5) (6)</sup> Bryn Athyn, Pennsylvania, United States	2000	Chairman of the Board, Pitcairn Trust Company (a private trust company)
<b>Robert M. Macdonald</b> <sup>(4) (5)</sup> Calgary, Alberta, Canada	2017	Independent Businessman
<b>R. Keith MacLeod</b> <sup>(5) (6) (7) (8)</sup> Calgary, Alberta, Canada	2017	Independent Businessman
<b>Susan L. Riddell Rose</b> <sup>(1)</sup> Calgary, Alberta, Canada	2000	President and Chief Executive Officer, Perpetual Energy Inc. (a public oil and natural gas exploration and development company) and its predecessor Paramount Energy Trust
<b>John B. Roy</b> <sup>(1) (2) (4) (5)</sup> Calgary, Alberta, Canada	1981	Independent Businessman

- (1) From 1992 to 2008, Paramount was the general partner of T.T.Y. Paramount Partnership No. 5 ("TTY"), a limited partnership which was an unlisted reporting issuer in certain provinces of Canada. TTY was established in 1980 to conduct oil and gas exploration and development activities, but had not carried on operations since 1984 and had only nominal assets. A cease trade order against TTY was issued by the Quebec Securities Commission in 1999 for failing to file its June 30, 1998 financial statements in Quebec. The cease trade order was revoked on April 9, 2008. TTY was dissolved on July 21, 2008.
- (2) Member of the Compensation Committee.
- (3) Mr. J. H. T. Riddell was a director of Sonde Resources Corp. ("Sonde") and Great Prairie Energy Services Inc. ("Great Prairie"), both public oil and gas companies, within one year of Sonde becoming bankrupt and Great Prairie having a receiver-manager appointed to manage its assets, undertakings and properties.
- (4) Member of the Audit Committee.
- (5) Member of the Corporate Governance Committee.
- (6) Member of the Environmental, Health and Safety Committee.
- (7) Member of the Reserves Committee.
- (8) Mr. MacLeod was a Director of Manitok Energy Inc., a public oil and gas exploration and production company, within one year of Manitok filing a Notice of Intention to Make a Proposal under the Bankruptcy and Insolvency Act.



## EXECUTIVE OFFICERS

Name and Municipality of Residence	Office	Principal Occupation for Past Five Years
<b>Clayton H. Riddell</b> Calgary, Alberta, Canada	Executive Chairman	Executive Chairman of Paramount; previously Chairman and Chief Executive Officer of Paramount
<b>James H.T. Riddell</b> Calgary, Alberta, Canada	President and Chief Executive Officer	President and Chief Executive Officer of Paramount; previously President and Chief Operating Officer of Paramount
<b>Bernard K. Lee</b> Calgary, Alberta, Canada	Executive Vice President, Finance and Chief Financial Officer	Chief Financial Officer of Paramount; also appointed Executive Vice President, Finance on September 14, 2017
<b>D. Blake Reid</b> Calgary, Alberta, Canada	Executive Vice President, Operations	Executive Vice President, Operations of Paramount; previously Managing Director of Energy Engineering Inc.
<b>John B. Williams</b> Calgary, Alberta, Canada	Executive Vice President, Kaybob Region	Executive Vice President, Kaybob, previously President and Chief Operating Officer of Trilogy Energy Corp.
<b>E. Mitchell Shier</b> Calgary, Alberta, Canada	General Counsel and Corporate Secretary	General Counsel and Corporate Secretary; previously also the Manager, Land of Paramount until September 14, 2017
<b>Michael G. Kohut</b> Calgary, Alberta, Canada	Vice President, Finance	Vice President, Finance; previously Chief Financial Officer of Trilogy Energy Corp.
<b>Paul R. Kinvig</b> Calgary, Alberta, Canada	Vice President Finance, Capital Markets	Vice President Finance, Capital Markets; previously Vice President Finance and Controller
<b>Rodrigo R. Sousa</b> Calgary, Alberta, Canada	Vice President, Corporate Development	Vice President, Corporate Development; previously Vice President, Corporate Development of Athabasca Oil Corporation

As at December 31, 2017, the directors and executive officers of the Company as a group beneficially owned or controlled, directly or indirectly, 61,753,878 Common Shares, representing approximately 46 percent of the 135,058,811 Common Shares outstanding at such date.

Certain directors and officers of Paramount are also directors and/or officers and/or significant shareholders of other companies or entities engaged in the oil and gas business generally and which, in certain cases, own interests in oil and gas properties in which Paramount holds, or may in the future, hold an interest. As a result, situations may arise where such individuals have a conflict of interest. Such conflicts of interest will be resolved in accordance with Paramount's governing corporate statute, the *Business Corporations Act* (Alberta), and Paramount's internal policies respecting conflicts of interest. The *Business Corporations Act* (Alberta) requires that a director or officer of a corporation who is party to a material contract or proposed material contract with the corporation, or is a director or an officer of or has a material interest in any person who is a party to a material contract or proposed material contract with the corporation, disclose in writing to the corporation or request to have entered into the minutes of meetings of directors the nature and extent of the director's or officer's interest; and, if a director, that he or she not vote on any resolution to approve the contract, except in certain circumstances. The *Business Corporations Act* (Alberta) also requires that a corporation's directors and officers act honestly and in good faith with a view to the best interest of the corporation. Paramount's internal policies respecting conflicts of interest require that directors and officers

of Paramount avoid putting themselves in a conflict of interest position and, if such a position arises, that disclosure of such position be made so that Paramount can approve or disapprove such position, with disapproved conflict of interest positions requiring immediate cessation by the director or officer.

## **AUDIT COMMITTEE INFORMATION**

The full text of the audit committee's charter is included in APPENDIX C of this annual information form.

## **COMPOSITION OF THE AUDIT COMMITTEE**

The audit committee consists of four members, all of whom are independent and financially literate. The relevant education and experience of each audit committee member is outlined below:

### ***John C. Gorman***

Mr. Gorman has been a director of the Company since 2002. He is an independent businessman. Mr. Gorman was the President and CEO of an energy trading, marketing and financial services company from 1996 to 2000 and a corporate banker with the Bank of Montreal (a Canadian chartered bank) from 1972 to 1996, retiring as Senior Vice President, Natural Resources Group. Mr. Gorman obtained a Bachelor of Arts degree from the University of Ottawa and a Master of Business Administration degree from the University of Western Ontario.

### ***James G. M. Bell***

Mr. Bell has been a director of the Company since 2011. Mr. Bell is currently Chief Operating Officer and General Counsel for Founders Advantage Capital Corp., a public investment company listed on the TSX Venture Exchange. From 2010 to 2016, Mr. Bell was General Counsel for Olympia Financial Group Inc. (a TSX listed company) and its wholly-owned subsidiary Olympia Trust Company (a non-deposit taking trust company). Prior thereto, Mr. Bell practiced securities and corporate commercial law as Partner at an international law firm until December 31, 2009. Mr. Bell has acted as legal counsel in connection with private placements, prospectus offerings, take-over bids, plans of arrangement and general securities and corporate finance matters. Mr. Bell graduated from the University of Saskatchewan with a Bachelor of Laws degree in 1999.

### ***Robert M. MacDonald***

Mr. MacDonald is an oil and gas banking professional with 14 years' experience as a corporate director and 27 years' experience as a senior officer of several Canadian chartered banks, including 18 years in Alberta and 9 years in the United States. He has expertise in oil and gas banking/financing, having handled and provided advisory services on strategic alternatives for senior and bridge debt structuring, project financing, mezzanine debt structuring, portfolio management, financial analysis and loan re-structuring. From 1998 to 2003, he was a Director, Oil & Gas, Commercial Banking, with CIBC World Markets Inc. From 1993 to 1998, Mr. MacDonald was Vice President, Oil & Gas Group with CIBC. Mr. MacDonald graduated from the University of Saskatchewan (Regina Campus) with a Bachelor of Business Administration degree (major in Economics and Finance and minor in Accounting). He is a Fellow of the Institute of Canadian Bankers and has completed the academic requirements for the Director Education Program of the Institute of Corporate Directors.

## **John B. Roy**

Mr. Roy has been a director of the Company since 1981. He is an independent businessman. Prior to December 1, 2003, he served as the Vice-President and Director, Investment Banking of Jennings Capital Inc. (a private investment banking firm). From 1970 to 1996, he held various positions at Greenshields Incorporated and its successor, Richardson Greenshields of Canada Ltd. (a private investment banking firm). Mr. Roy graduated from Queen's University with a Bachelor of Science degree in Mechanical Engineering and received a Diploma in Management from McGill University. He is a member of the Association of Professional Engineers and Geoscientists of Alberta.

## **PRE-APPROVAL POLICIES AND PROCEDURES**

The Company's audit committee has adopted a policy with respect to the pre-approval of audit and permitted non-audit services to be provided by its independent auditor (the "Policy"). Pursuant to the Policy, the audit committee has identified certain services that have been granted pre-approval and which the independent auditors may provide. The Policy also establishes procedures by which permitted audit and permitted non-audit services proposed to be performed by the Company's independent auditors may be pre-approved.

The audit committee has delegated authority to the Chairman of the audit committee to pre-approve permitted audit and permitted non-audit services to be provided by the independent auditor that have not otherwise been pre-approved by the full audit committee, including the fees and terms of the proposed services (the "Delegated Authority"). All pre-approvals granted pursuant to the Delegated Authority must be presented by the Chairman of the audit committee to the full audit committee at its next meeting.

All fees payable in connection with services provided by the independent auditor must be pre-approved by either the full audit committee or the Chairman of the audit committee pursuant to his Delegated Authority.

## **EXTERNAL AUDITOR SERVICE FEES**

The following table provides information about the fees billed to the Company for professional services rendered by Ernst & Young LLP in respect of the financial years ended December 31, 2017 and December 31, 2016:

(\$ thousands)	2017	2016
Audit Fees <sup>(1)</sup>	359	182
Audit-Related Fees <sup>(2)</sup>	663	225
All Other Fees <sup>(3)</sup>	7	5
<b>Total</b>	<b>1,029</b>	<b>412</b>

(1) Represents the aggregate fees of the Company's auditors for audit services in respect of the financial year.

(2) Represents the aggregate fees billed for assurance and related services by the Company's auditors that are reasonably related to the performance of the audit or review of the Company's financial statements and are not included under "Audit Fees" and primarily resulted from the Company's corporate acquisitions, the Trilogy Merger and asset sales.

(3) Represents the aggregate fees billed for products and services provided by the Company's auditors other than those services reported under "Audit Fees" and "Audit Related Fees".

## **DESCRIPTION OF SHARE CAPITAL**

The Company's authorized share capital as of the date hereof consists of an unlimited number of Common Shares and an unlimited number of preferred shares, issuable in series. As of December 31, 2017, 135,058,811 Common Shares were issued and outstanding and no preferred shares were issued and outstanding.

## **COMMON SHARES**

The holders of Common Shares are entitled to receive dividends if, as and when declared by the board of directors of the Company. The holders of Common Shares are entitled to receive notice of and to attend all meetings of the shareholders of the Company. Holders of Common Shares are entitled to one (1) vote in respect of each Common Share held at all meetings of the shareholders of the Company (except meetings at which only holders of another specified class or series of shares of the Company are entitled to vote separately as a class or series at such meeting) provided that if the Company fails to pay the full amount of any dividend declared by the board of directors of the Company on the Common Shares on the date specified for payment of such dividend, then, for so long as any dividends remain in arrears on the Common Shares, the holders of Common Shares shall be entitled to two (2) votes in respect of each Common Share held at all meetings of the shareholders of the Company. In the event of liquidation, dissolution or winding up of the Company or other distributions of assets of the Company among its shareholders for the purpose of winding up its affairs, the holders of Common Shares will be entitled, subject to preferences accorded to holders of any class or series of preferred shares, to participate ratably in any distribution of the assets of the Company.

## **PREFERRED SHARES, ISSUABLE IN SERIES**

Preferred shares are non-voting and may be issued in one or more series. The board of directors may determine the designation, rights, privileges, restrictions and conditions attached to each series of preferred shares before the issue of such series. As of December 31, 2017, no preferred shares were issued and outstanding.

## **NORMAL COURSE ISSUER BID**

Paramount implemented a normal course issuer bid in December 2017 (the "NCIB"). The NCIB will terminate on the earlier of: (i) December 21, 2018; and (ii) the date on which the maximum number of Common Shares that can be acquired pursuant to the NCIB are purchased. Purchases of Common Shares under the NCIB will be effected through the facilities of the TSX or alternative Canadian trading systems at the market price at the time of purchase. Paramount may purchase up to 7,497,530 Common Shares under the NCIB. Pursuant to the rules of the TSX, the maximum number of Common Shares that the Company may purchase under the NCIB in any one day is 102,659 Common Shares. Paramount may also make one block purchase per calendar week which exceeds such daily purchase restriction, subject to the rules of the TSX. Any Common Shares purchased pursuant to the NCIB will be cancelled by the Company. Any shareholder may obtain, for no charge, a copy of the notice in respect of the NCIB filed with the TSX by contacting the Company at 403-290-3600.

Under Paramount's last normal course issuer bid (which was in place from October 12, 2016 to October 11, 2017) Paramount acquired an aggregate of 622,900 Common Shares at an average price of \$15.56 per share.

In 2017 no Common Shares were acquired pursuant to either the last normal course issuer bid or the new NCIB.

To date in 2018 Paramount has purchased and cancelled 1,454,100 Common Shares at a total cost of \$27.4 million under the new NCIB.

## **CREDIT RATINGS**

The following table outlines the current credit ratings for the Company and its securities:

	Standard & Poor's Rating Services ("S&P")
Company Rating	BB-
Outlook	Stable
Trilogy 2019 Senior Notes	BB-

A credit rating generally provides an indication of the risk that the borrower will not fulfill its full obligations in a timely manner with respect to both interest and principal commitments.

On September 13, 2017, S&P upgraded Paramount's corporate credit rating from B- to BB-, with a stable outlook.

S&P's long-term credit ratings are on a scale that ranges from "AAA" to "D", which represents the range from highest to lowest opinions of creditworthiness. According to the S&P rating system, obligations rated "BB", "B", "CCC", "CC" and "C" are regarded as having significant speculative characteristics. While such obligations will likely have some quality and protective characteristics, these may be outweighed by large uncertainties or major exposure to adverse conditions. An obligation rated "BB" is considered less vulnerable to nonpayment than other speculative issues. However, it faces major ongoing uncertainties or exposure to adverse business, financial, or economic conditions that could lead to the obligor's inadequate capacity to meet its financial commitments on the obligation. The ratings from "AA" to "CCC" may be modified by the addition of a plus (+) or a minus (-) sign to show relative standing within the major rating categories. In addition, S&P may add a rating outlook of "positive", "negative", "stable" or "developing" which assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years).

The credit ratings accorded by S&P are not recommendations to purchase, hold or sell securities and such ratings do not comment as to market price or suitability for a particular investor. There is no assurance that any rating will remain in effect for any given period of time or that any rating will not be revised or withdrawn entirely by a rating agency in the future, if in its judgment, circumstances so warrant.

In 2016 and 2017, the Company made payments to S&P in connection with annual monitoring and surveillance fees.

## **MARKET FOR SECURITIES**

Paramount's Common Shares are listed on the TSX under the trading symbol "POU". The following table outlines the trading price range and volume of the Common Shares traded by month in 2017.

2017	Price Range (\$ per share)		Trading Volume
	High	Low	
January	18.55	15.95	7,323,135
February	18.92	15.23	5,545,617
March	18.06	14.60	5,664,952
April	19.03	16.55	6,352,686
May	22.41	15.96	7,337,244
June	21.45	18.55	9,894,772
July	20.49	17.01	6,574,755
August	22.11	19.09	10,010,244
September	25.57	20.81	10,024,352
October	24.85	20.10	8,300,080
November	25.28	19.87	7,346,777
December	21.74	16.55	7,966,354

## **DIVIDENDS**

In December 2016, the Company's board of directors declared a dividend of 3.8 million 7Gen Shares to holders of record of Paramount's Common Shares on January 9, 2017 (the "January 2017 Dividend"), resulting in an entitlement of approximately 0.036 of a 7Gen Share for each Common Share, subject to rounding for fractions. The dividend was paid on January 16, 2017. The closing trading price of the 7Gen Shares on the TSX on January 13, 2017, the last trading day before the dividend was paid, was \$26.27.

Other than the January 2017 Dividend, Paramount has not declared a dividend in the last three fiscal years. Paramount currently has no plans to pay a dividend in the future. Any future dividends will be dependent upon the financial requirements of the Company to reinvest earnings, the financial condition of the Company and other factors which the board of directors of the Company may consider appropriate.

## **LEGAL PROCEEDINGS**

The Company is involved in various claims and litigation arising in the normal course of business both as a plaintiff and defendant. The Company does not currently believe that the outcome of any pending or threatened proceedings, individually or collectively, or the amounts which the Company may be required to pay by reason thereof, would have a material adverse impact on its financial position, results of operations or liquidity, or exceed 10 percent of its current assets.

## **RISK FACTORS**

Set forth below are the most significant risk factors related to Paramount which you should carefully consider. If any event arising from these risk factors occurs, the Company could be materially adversely affected including in respect of its business, prospects, financial condition, results of operations, cash flows, reputation and the market price of its securities.

## **VOLATILITY OF OIL AND NATURAL GAS PRICES AND PRICE DIFFERENTIALS**

Paramount's financial performance and condition are substantially dependent on the prices of natural gas, NGLs and oil. Low natural gas, NGLs and oil prices adversely affect the Company's cash flows and the value and amount of its reserves, and could have a number of other negative consequences including the delay or cancellation of drilling programs and other potential projects, the curtailment or shutting-in of production and unutilized firm-service transportation and processing commitments. Natural gas prices are determined primarily by North American supply and demand, weather conditions, transportation and infrastructure constraints and by prices of alternate sources of energy (including refined products, coal, and renewable energy). Factors that affect oil prices include international and domestic supply and demand, the actions of the Organization of Petroleum Exporting Countries ("OPEC"), world economic conditions, government regulation, political instability in the Middle East and elsewhere, the price of foreign imports, the availability of alternate fuel sources, transportation and infrastructure constraints and weather conditions. Historically, NGLs prices have generally been correlated with oil prices, and are determined based on supply and demand in international and domestic NGLs markets.

Oil and NGLs prices suffered a serious and sustained decline commencing in mid-2014 as a result of, among other things, increases in United States shale oil production and OPEC's refusal to make supply cuts to stabilize the market. Prices have somewhat stabilized recently, albeit at levels significantly below their pre-2014 levels, as a result of improving supply/demand fundamentals which have been aided by OPEC and Russian supply cuts that were implemented in November 2016. Natural gas prices have been under significant pressure in recent years as a result of large increases in United States shale gas production, with prices for Canadian gas being particularly hard hit in recent months due to a number of factors including increased Western Canadian production coupled with pipeline maintenance and export capacity restrictions. Canadian crude oil prices (and, in particular, heavy crude prices), have also experienced greater than normal price differentials to WTI recently as a result of shortages in export pipeline and rail capacity.

In the longer term, prices for fossil fuels could be impacted by global climate change initiatives that have the stated goal of transitioning the world to a low carbon energy system.

Natural gas and oil producers in North America, and particularly in Canada, currently receive discounted prices for their production relative to certain international prices due to constraints on their ability to transport and sell such production to international markets. A failure to resolve such constraints will result in Canadian producers continuing to be subject to discounted or reduced commodity prices. In addition, the prices individual producers, including Paramount, receive could be subject to additional discounts as a result of various factors including regional supply and demand issues, infrastructure capacity constraints, location and quality.

## **EXPLORATION FOR AND DEVELOPMENT OF OIL AND NATURAL GAS RESERVES**

Paramount's future success depends upon its ability to successfully find and develop additional oil and natural gas reserves that are economically recoverable. If Paramount is unable to increase its reserves, the Company's business will be adversely affected because it will eventually deplete its current reserves.

The cost of drilling, completing and operating wells is often uncertain. The Company may experience unexpected cost increases, overruns, delays or cancellations of projects in their entirety as a result of numerous factors, many of which are beyond its control, including, but not limited to, increased labour costs, higher costs of inputs, weather conditions, required compliance with laws and regulations, the ability to



obtain stakeholder support and approvals, and shortages or delays in the delivery of equipment and services.

The North American oil and gas industry has achieved significant reductions in its cost structure in response to the material and sustained decline in commodity prices that has been experienced in recent years. If third-party service and other costs materially increase as industry activity regains momentum, this could materially adversely affect the Company. There is the risk that Paramount's exploration activities will not encounter commercially productive reservoirs, that Paramount will not recover all or any portion of its investment, and that Paramount's reserves, revenues and cash flow will decline. Paramount cannot provide any assurances that it will be able to find and develop additional reserves at an acceptable cost or at all.

The successful development of oil and natural gas properties requires an assessment of recoverable reserves, future natural gas, NGLs and oil prices, operating and capital costs, potential environmental and other liabilities, and the expected productivity of future wells. These assessments are inexact and, if actual results differ materially from these assessments, the Company may not recover the purchase price or development costs of a property.

## **ACCESS TO NECESSARY INFRASTRUCTURE**

Paramount's ability to produce and sell its natural gas, NGLs and oil requires it to have access to both Company constructed and owned, as well as third-party, infrastructure, including gathering systems, compression and dehydration facilities, processing facilities, pipelines and NGLs fractionation facilities. The costs and timing of constructing, expanding and maintaining such infrastructure, is often uncertain. Construction projects may experience unexpected cost increases, overruns and delays as a result of numerous factors, including, but not limited to, labour shortages, increased labour costs, higher cost of inputs, weather conditions, required compliance with government laws and regulations, the ability to obtain stakeholder support and approvals, and shortages or delays in the delivery of equipment and services.

There is also the risk that such infrastructure may not operate as designed or at the expected capacity levels and that actual operating and other costs are materially higher than estimated due to maintenance issues or for other reasons. In addition, there is a risk that processing facilities may be unable to produce products that meet the specification requirements of interconnected facilities or that there is a limited or no market for products produced. Maintenance of, or repairs to, Company and third-party infrastructure (as well as apportionments and other capacity constraints) may result in unbudgeted or unexpected costs and lower production and cash flow.

Paramount has entered into firm-service processing, transportation and NGLs fractionation commitments covering a substantial portion of its natural gas and NGLs production. If Paramount is unable to meet its obligations under these firm-service agreements, it will be required to pay for the unutilized capacity thereunder, and may be exposed to other liabilities. To the extent Paramount does not either currently, or in the future, have sufficient Company-owned or firm-service capacity in place, it will have to utilize interruptible capacity on third-party infrastructure (and/or in the case of insufficient NGLs transportation capacity, trucking or rail options). There is no guarantee that such interruptible capacity, or other NGLs transportation options, will be available, or if they are, that they can be obtained or utilized at a reasonable cost. For additional information, see "NARRATIVE DESCRIPTION OF THE BUSINESS – RESERVES AND OTHER OIL AND GAS INFORMATION".



## **INDUSTRY COMPETITION**

The oil and gas industry is highly competitive. Paramount competes with other industry participants in searching for, acquiring and developing natural gas, NGLs and oil reserves, and processing, transporting and marketing these products. Competition is particularly intense in the acquisition of prospective oil and natural gas properties and reserves and in pursuing technological advancements to enhance well productivity and reduce drilling and completion costs. Other oil and gas companies may have greater financial, technical and human resources than Paramount that gives them a competitive advantage over the Company in these areas.

## **OPERATING RISKS AND INSURANCE**

There are many operating hazards in exploring for, developing and producing natural gas, NGLs, oil and bitumen including, but not limited to, unexpected formations, blowouts, accidents, equipment failures (including computer hardware and software systems), spills, releases, environmental damage or other unexpected or dangerous conditions that could result in damage to Paramount, injury or death of employees or contractors, damage to equipment and facilities, suspension or revocation of regulatory approvals, environmental contamination and potential liability to third-parties (including government bodies). Also, a significant event may result in lost revenue and/or profit.

The Company cannot fully protect against all of these potential risks. Some of them cannot be insured against, and the coverage that can be obtained with respect to those that are insurable will be subject to exclusions and monetary limits. Accordingly, Paramount may be exposed to liabilities that are outside the scope of its insurance, are only partially covered by it, or that Paramount could not insure against (either at all or because of high premium costs or for other reasons).

The occurrence of a significant event against which Paramount is not fully insured could have a material adverse effect on the Company.

## **DEPENDENCE ON CERTAIN SENIOR OFFICERS**

Paramount is highly dependent on its Executive Chairman and its President and Chief Executive Officer. The loss of either of these officers could impede the achievement of Paramount's objectives and could adversely affect Paramount's business and results of operations.

## **GOVERNMENT REGULATION**

Paramount's operations are governed by numerous laws and regulations at the municipal, provincial, territorial and federal levels. These laws and regulations cover a wide range of issues including, without limitation, royalties, taxes (including income taxes), land tenure, drilling practices and obligations, production rates, the development and abandonment of oil and gas fields, the export of petroleum and natural gas and environmental protection. In addition, regulatory approval processes often involve numerous stakeholders including aboriginal groups (who must be consulted with respect to potential impacts on treaty or other actual or asserted aboriginal rights) and other resource and surface rights holders. Changes to, or the failure to comply with, laws and regulations, potential regulatory interventions by stakeholders and delays in obtaining regulatory approvals could have a material adverse effect on the Company.

Paramount's income tax and royalty filings are subject to subsequent audit and potential reassessment by government entities. The reassessment of filings could result in additional obligations for income tax, royalties, interest and penalties which could have a material adverse effect on the Company.

## **COMPLIANCE WITH AND CHANGES TO ENVIRONMENTAL, HEALTH AND SAFETY LAWS AND REGULATIONS**

Paramount's operations are subject to extensive federal, provincial, territorial and local laws and regulations that address environmental, health and safety matters relating to the exploration, development and production of oil and gas including the release of emissions or pollutants, the storage, handling, transportation and disposal of hazardous and other substances, the remediation of environmental damage, the protection of environmentally sensitive areas and of endangered and protected species and worker and operational safety. Compliance with these laws and regulations may impose substantial costs on Paramount and may subject Paramount to significant potential liabilities. Future changes in such legislation could result in stricter standards and enforcement, larger fines and increased costs of compliance, all of which could have a material adverse effect on Paramount's financial condition or results of operations.

Environmental laws may require parties to undertake or pay for remedial action or to pay damages regardless of fault. Environmental laws may also impose liability with respect to divested or terminated operations, even if the operations were divested or terminated many years ago.

In Alberta, Paramount is subject to regulations and directives of the Alberta Energy Regulator which require licensees of wells, pipelines and facilities to contribute to the Orphan Well Fund to cover the costs of suspending, abandoning, remediating and reclaiming wells, pipelines or other facilities when the licensees of those facilities become defunct or insolvent. Recent court decisions in Alberta have held that receivers and trustees in bankruptcy may renounce uneconomic assets in receivership and bankruptcy processes in spite of any outstanding suspension, abandonment, remediation and reclamation obligations with the result that these obligations fall to the Orphan Well Fund. Any increases to the number of wells, pipelines or other facilities renounced by receivers and trustees as a result of these decisions would increase the Company's operating costs.

Paramount's operations may result in the occurrence of spills, pipeline releases, or the discharge of hazardous materials which could result in the Company being subject to remediation and clean-up obligations and exposure to potential liabilities for personal injuries and property and environmental claims. Environmental laws may impose liability on Paramount for environmental damages caused by previous owners. As a result, substantial liabilities to third-parties or government entities may be incurred, and the payment of such liabilities could have a material adverse effect on Paramount's financial condition and results of operations. In addition, the release of harmful substances in the environment or other environmental damage caused by Paramount's activities could result in the suspension or revocation of operating and environmental permits.

As previously discussed in the section "NARRATIVE DESCRIPTION OF THE BUSINESS – GENERAL", both the Alberta and British Columbia governments have imposed carbon taxes and taken other steps to regulate GHG emissions. Further, the Government of Canada has introduced its own carbon pricing plan that calls for a carbon tax that will increase to \$50 per tCO<sub>2e</sub> by 2022, and that will apply in those provinces that have not adopted equivalent measures. If Alberta's and British Columbia's current carbon taxes and associated GHG reduction measures are not considered equivalent to the federal plan, Paramount could be subject to incremental obligations and costs under the federal plan. In addition, the Alberta and federal governments have set a target of reducing methane emissions from upstream oil and gas operations by 45 percent by 2025, which is to be achieved through new emission design standards for new facilities,

regulated standards and other initiatives starting in 2020. Further, the ability of Cavalier Energy to develop its oil sands properties could be impacted by the 100 megatonne limit the Alberta government has recently imposed on GHG emissions from the oil sands sector.

These provincial and federal GHG reduction measures, together with any further regulatory steps Alberta, British Columbia and the federal government may choose to take in this area could materially impact the oil and gas industry, including Paramount.

## **POTENTIAL ENVIRONMENTAL RISKS ASSOCIATED WITH HYDRAULIC FRACTURING**

The Company utilizes horizontal, multi-stage hydraulic fracturing, and other technologies in its drilling and completion activities. Public concern over the hydraulic fracturing process has focused on a number of issues including the completion fluids used in the fracturing process and their potential effect on fresh water aquifers, the use and disposal of water in connection with fracturing operations and the potential for fracturing operations to contribute to low level seismic events (particularly in proximity to existing faults). The Canadian Association of Petroleum Producers, an industry group, has issued guidelines on hydraulic fracturing in shale gas and other tight gas or oil reservoirs.

Due to seismic activity reported in the Fox Creek area of Alberta in 2015, the AER announced a number of seismic monitoring and reporting measures for fracturing operations in the Duvernay zone in this area. These include requirements to assess the potential for induced seismicity prior to operations, to have a response plan in place to address potential events and to suspend operations if a seismic event above a prescribed threshold occurs. The AER continues to monitor seismic activity around the province and may extend these requirements to other areas if that is deemed to be necessary.

In British Columbia, the BC Oil and Gas Commission has completed two reports on seismic events related to fracturing and has imposed mitigation measures, including requirements to shut down operations if seismic activity reaches a certain threshold. In addition, the new BC government has announced its intention to conduct a scientific review of hydraulic fracturing (which will include issues relating to induced seismicity). This review is to commence in the first quarter of 2018 and be completed by the end of 2018.

If new regulations are enacted that impose new requirements for, or restrictions on, hydraulic fracturing, the Company may experience increases in its costs, and have its assets, operations and prospects negatively impacted.

## **ROYALTY REGULATION**

On several occasions over the past decade, the Governments of Alberta and British Columbia have amended their legislation governing Crown royalties paid by oil and natural gas producers. Any further changes to this legislation that increases royalties would reduce the Company's cash flow and earnings, and could make future capital investments, or the Company's operations and assets, less economic.

## **FAILURE TO REALIZE ANTICIPATED BENEFITS OF ACQUISITIONS**

The ability to realize benefits of the ACL Acquisition and the Trilogy Merger will depend in part on successfully consolidating functions and integrating operations, procedures and personnel in a timely and efficient manner, as well as on Paramount's ability to realize the anticipated growth opportunities and operating synergies from the ACL Acquisition and the Trilogy Merger and the related integration. The integration will require the dedication of substantial management effort, time and resources which may divert management's focus and resources from other strategic opportunities, and from operational matters

during this process. The integration process may result in the loss of key employees and the disruption of ongoing relationships. Additionally, the obligations and liabilities of Apache Canada Ltd. and Trilogy Energy Corp. became Paramount's obligations on a consolidated basis following the ACL Acquisition and the Trilogy Merger, respectively. The annual and total quantum of such obligations and liabilities may be materially different than as estimated by Paramount at the time of completing the ACL Acquisition and the Trilogy Merger, respectively, due to unknown factors, change of law or regulations or otherwise. In addition, due to the transformational transactions that we completed in 2017, we have a limited operating history with certain of our assets. One or more of the foregoing factors or other factors may adversely affect our ability to achieve the anticipated benefits of the ACL Acquisition or the Trilogy Merger.

## **SURFACE ACCESS**

The development and exploration of natural gas, NGLs and oil reserves requires ongoing access to sites where wells are to be drilled and produced, and where gathering systems, pipelines and other facilities and infrastructure are to be constructed and operated. In recent years, the regulatory process for obtaining surface access rights for Crown land has become increasingly complex and time consuming, particularly in environmentally sensitive areas and where stakeholder consultation (including with aboriginal groups) is required. In addition, surface access rights may be granted subject to conditions that restrict operations to prescribed areas or times of year for various environmental reasons (including the protection of wildlife and wildlife habitat). There is a risk that certain areas may be completely closed to oil and gas activity due to environmental concerns. Road bans are frequently imposed during the spring breakup period and at other times because of wet conditions, snow, mud and rock slides, wild fires, wildlife migrations and other events, which can result in the Company being temporarily unable to access well sites and production facilities. If Paramount is unable to obtain required surface access rights on a timely basis, and on acceptable terms, or such access is restricted, interrupted or terminated, this could have a material adverse effect on the Company.

## **CONTROL OF OPERATIONS**

Paramount does not operate all of its properties, and to the extent a third-party operator fails to conduct operations in a timely or proper manner, Paramount could be adversely affected.

## **ESSENTIAL EQUIPMENT AND PERSONNEL**

Oil and natural gas exploration and development activities depend upon the availability of qualified personnel and drilling and related equipment. Shortages of qualified personnel or equipment may delay Paramount's exploration and development activities.

## **RESERVES ESTIMATES**

Estimates of natural gas, NGLs and oil reserves require numerous assumptions including, but not limited to, the price at which such natural gas, NGLs and oil can be sold, the costs of recovering, processing, transporting and selling such products, the availability of enhanced recovery techniques and governmental and other regulatory factors, such as royalty rates, taxes and environmental laws.

A change in one or more of these factors, or other factors, could result in quantities of natural gas, NGLs, and oil previously estimated as reserves becoming unrecoverable. For example, a decline in the market price of natural gas, NGLs or oil to an amount that is less than the cost of recovering them at a particular location would make the production of the affected natural gas, NGLs and oil reserves commercially uneconomic.

In addition, if estimates of reserves and the anticipated future net revenues associated with them are prepared by different independent engineers, or by the same engineers at different times, the results may vary substantially.

Furthermore, under IFRS, Paramount could be required to write-down the carrying value of its oil and natural gas properties if future natural gas, NGLs, crude oil prices become depressed, or if there are substantial downward revisions to Paramount's quantities of reserves. A write-down would result in a charge to net income and a reduction of shareholders' equity. Write-downs may also be required to be reversed if there is an increase in future natural gas, NGLs, crude oil prices, or if there are substantial upward revisions to Paramount's quantities of reserves. Additional information on write-downs is included in the Company's audited consolidated financial statements and Management Discussion and Analysis for the year ended December 31, 2017, which can be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

## **MARKET PRICE OF COMMON SHARES**

The trading price of Paramount's Common Shares, and other securities of the Company outstanding from time to time, have experienced significant historical volatility and the prices of such securities could be subject to significant volatility in the future. Market price fluctuations in Paramount's securities may occur due to factors both related and unrelated to the Company, including but not limited to the Company's operating and financial results, the Company's financial condition, the Company's business prospects, the Company's results failing to meet forecasts or the expectations of analysts or investors, downward revisions in analysts' estimates, governmental regulatory action, adverse changes in general market conditions or economic trends, acquisitions, dispositions or other material public announcements by the Company or its competitors, macroeconomic developments, domestic and global commodity prices, current perceptions of the oil and gas industry and other factors, including, without limitation, those set forth above under the section titled "NOTE REGARDING FORWARD-LOOKING STATEMENTS AND ADVISORIES".

## **HEDGING, INTEREST RATES AND FOREIGN EXCHANGE RATES**

The nature of Paramount's operations and capital structure exposes it to risks from fluctuations in commodity prices, foreign exchange rates and interest rates. Paramount monitors and, from time-to-time, utilizes derivative and/or physical forward delivery contracts to manage its exposure to these risks. Paramount could be required to make cash payments to settle outstanding contracts or lose the cost of derivative premiums paid. In addition, contracts with a fixed or ceiling price could result in Paramount not receiving the full benefit of commodity price increases, changes in the value of the Canadian dollar or changes in interest rates. Paramount may suffer financial loss if it is unable to produce sufficient natural gas or oil to fulfill its obligations under commodity hedging arrangements, and may be required to pay Crown royalties based on a market or reference price that is higher than the fixed or ceiling price under such arrangements. Paramount may also be required to pay margin calls under, or amounts to settle, derivative contracts. In addition, Paramount may be exposed to credit related losses in the event of non-performance by a counterparty to a derivative contract.

Changes in commodity prices and changes in the US\$/CDN\$ dollar exchange rate can have a material impact on the Company's revenues. Changes in market interest rates can have a material impact on interest expense related to any floating rate debt and the market value of any fixed rate debt outstanding from time to time. Changes in the US\$/CDN\$ dollar exchange rate may also impact the Company's Canadian dollar equivalent interest costs related to any US\$ denominated debt outstanding from time to time and the principal amount of such debt, which may have a material impact on the Company's debt service costs and the cost of repaying principal amounts.

## **UNFORESEEN TITLE DEFECTS, EXPIRATION OF LICENSES AND LEASES, AND LAND CLAIMS**

Unforeseen title defects may result in the loss of entitlement to production and reserves. The Company conducts title reviews in accordance with industry practice when it acquires oil and gas properties, however such reviews do not guarantee that an unforeseen defect in the chain of title will not arise and defeat the Company's title to the assets.

The Company's properties are held in the form of working interests in oil and gas licenses and leases. Failure to meet the rental, drilling and other requirements of such licenses or leases will result in their termination or expiry. To the extent Paramount fails, or is financially unable, to continue prospective oil and gas licenses this could have a material adverse effect on the Company.

Aboriginal groups have recognized aboriginal rights over a significant portion of Paramount's oil and gas properties. Accordingly, consultation with such groups is required in connection with Paramount's exploration and development activities, and in certain cases accommodations may be required for infringements of these aboriginal rights. In addition, there are outstanding claims to aboriginal title affecting areas in Northeast British Columbia and the Northwest Territories where Paramount's Liard Basin shale gas properties are located. If these claims are successful, it is possible that Paramount's interests in these properties could be adversely affected.

## **FUNDING OF EXPLORATION, DEVELOPMENT AND OPERATIONAL ACTIVITIES**

Paramount may not be able to obtain, through operations, financings, asset dispositions or otherwise, on terms acceptable to Paramount or at all, the necessary capital to fund our future exploration and development activities and other operations. Paramount's failure to obtain necessary capital when required could result in Paramount being unable to develop the Company's existing reserves and resources, discover new reserves and make acquisitions. It could also, among other things, result in Paramount being unable to retain oil and gas licenses and leases, and satisfy contractual commitments to third-parties.

## **THIRD PARTY CREDIT RISK**

Paramount is exposed to third-party credit risk through its contractual arrangements, including in respect of its investments of cash and cash equivalents and with marketers and purchasers of its natural gas, NGLs and oil production and its current and future joint venture partners. If any of these third-parties fail or are unable to meet their contractual obligations to the Company, this could have a material adverse effect on the Company. In addition, poor credit conditions in the industry may affect a joint venture partner's willingness to participate in the Company's capital programs, potentially delaying such programs and impacting the results thereof.

## **VANDALISM AND TERRORISM**

Oil and gas industry participants, including Paramount, are a potential target for vandals and terrorists. The possibility that the Company's or third-party infrastructure facilities may be direct targets of, or indirect casualties of, an act of vandalism or terrorism and the implementation of security measures as a precaution against such attacks may result in increased cost to our business. If any of the Company's properties, wells or facilities or those of third-parties that the Company utilizes are the subject of a serious act of vandalism, or a terrorist attack, it may have a material adverse effect on the Company.



## **INFORMATION SECURITY**

The Company's information technology systems are subject to cyber security risks. While the Company invests in security systems to prevent and detect inappropriate or illegal access to its key systems and regularly reviews its policies, procedures and protocols for data and system integrity, there can be no assurance that critical systems will not be breached or compromised. Targeted attacks on Paramount's systems (or on systems of third-parties that it relies on), the failure or non-availability of a key information technology system or a breach of security measures designed to protect Paramount's information technology systems could result in the theft, misuse, modification or destruction of information, including trade secrets and confidential business information, and cause disruptions to various systems and equipment (which could potentially include wells, production facilities or pipelines, creating risks of production loss, environmental damage and personal injury).

## **LITIGATION**

In the normal course of Paramount's operations, the Company may become involved in, named as a party to, or be the subject of, various legal proceedings, including regulatory proceedings, tax proceedings and legal actions. The outcome of outstanding, pending or future proceedings cannot be predicted with certainty and may be determined adversely to the Company and as a result, could have a material adverse effect on the Company. Even if Paramount prevails in any such legal proceedings, they could be costly and time-consuming and divert the attention of management and key personnel from the Company's core business operations.

## **CAVALIER ENERGY'S OIL SANDS AND CARBONATE BITUMEN PROPERTIES**

Cavalier Energy's Oil Sands Lands are prospective for in-situ bitumen recovery development but are at the early stages of their evaluation and development. The Oil Sands Lands currently have no production and there are no assurances that any of these lands will commence production, generate earnings, operate profitably or provide a return on investment at any time in the future. Any decision to develop any portion of the Oil Sands Lands would require bitumen prices to be at a level that could support the payment of the Cavalier Royalty.

## **TRANSFER AGENT AND REGISTRAR**

The Company's transfer agent and registrar is Computershare Trust Company of Canada at its principal offices in Calgary, Alberta and Toronto, Ontario.

## **INTEREST OF EXPERTS**

The Company's auditors are Ernst & Young LLP, Chartered Professional Accountants, Suite 2200, 215 – 2nd Street SW, Calgary, Alberta, T2P 1M4. Ernst & Young LLP is independent in accordance with the Rules of Professional Conduct of the Chartered Professional Accountants of Alberta.

Information relating to Paramount's reserves in this annual information form was prepared by McDaniel as an independent qualified reserves evaluator.

The principals of McDaniel own beneficially, directly or indirectly, less than one percent of any class of Paramount's securities.

## **ADDITIONAL INFORMATION**

Additional information relating to Paramount is available via the System for Electronic Document Analysis and Retrieval (SEDAR) at [www.sedar.com](http://www.sedar.com).

Additional information, including directors' and officers' remuneration, principal holders of Paramount's securities, and options to purchase securities, is included in the information circular for Paramount's most recent annual meeting of shareholders that involves the election of directors. Additional financial information is contained in Paramount's audited consolidated financial statements and Management's Discussion and Analysis for the year ended December 31, 2017.



**APPENDIX A**  
**REPORT ON RESERVES DATA BY INDEPENDENT QUALIFIED RESERVES EVALUATOR –**  
**PARAMOUNT RESOURCES LTD.**

To the board of directors of Paramount Resources Ltd. (the "Company"):

1. We have evaluated the Company's reserves data as at December 31, 2017. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2017 estimated using forecast prices and costs.
2. The reserves data are the responsibility of the Company's management. Our responsibility is to express an opinion on the reserves data based on our evaluation.
3. We carried out our evaluation in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook as amended from time to time (the "COGE Handbook") maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter).
4. Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An evaluation also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.
5. The following table shows the net present value of future net revenue (before deduction of income taxes) attributed to proved plus probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent, included in the reserves data of the Company evaluated for the year ended December 31, 2017, and identifies the respective portions thereof that we have evaluated and reported on to the Company's Management:

Independent Qualified Reserves Evaluator	Effective Date of Evaluation Report	Location of Reserves	Net Present Value of Future Net Revenue - \$M (before income taxes, 10% discount rate)			
			Audited	Evaluated	Reviewed	Total
McDaniel & Associates	December 31, 2017	Canada	-	4,353,101	-	4,353,101

6. In our opinion, the reserves data respectively evaluated by us have, in all material respects, been determined and are in accordance with the COGE Handbook, consistently applied. We express no opinion on the reserves data that we reviewed but did not audit or evaluate.
7. We have no responsibility to update our reports referred to in paragraph 5 for events and circumstances occurring after the effective date of our report.
8. Because the reserves data are based on judgments regarding future events, actual results will vary and the variations may be material.

Executed as to our report referred to above:

**MCDANIEL & ASSOCIATES CONSULTANTS LTD.**

/s/ P.A. Welch, P. Eng  
President & Managing Director

Calgary, Alberta  
March 7, 2018

**APPENDIX B**  
**REPORT OF MANAGEMENT AND DIRECTORS ON RESERVES DATA AND OTHER INFORMATION**

Management of Paramount Resources Ltd. (the "Company") is responsible for the preparation and disclosure of information with respect to the Company's oil and gas activities in accordance with securities regulatory requirements. This information includes reserves data.

An independent qualified reserves evaluator has evaluated and reviewed, as applicable, the Company's reserves data. The reports of the independent qualified reserves evaluator will be filed with securities regulatory authorities concurrently with this report.

The Reserves Committee of the board of directors of the Company has:

- (a) reviewed the Company's procedures for providing information to the independent qualified reserves evaluator;
- (b) met with the independent qualified reserves evaluator to determine whether any restrictions affected the ability of the independent qualified reserves evaluator to report without reservation; and
- (c) reviewed the reserves data with management and the independent qualified reserves evaluator.

The Reserves Committee of the board of directors of the Company has reviewed the Company's procedures for assembling and reporting other information associated with oil and gas activities and has reviewed that information with management. The board of directors has, on the recommendation of the Reserves Committee, approved:

- (a) the content and filing with securities regulatory authorities of Form 51-101F1 containing the reserves data and other oil and gas information;
- (b) the filing of Form 51-101F2 which is the reports of the independent qualified reserves evaluators on the reserves data; and
- (c) the content and filing of this report.

Because the reserves data are based on judgments regarding future events, actual results will vary and the variations may be material.

/s/ James H.T. Riddell  
President and Chief Executive Officer

/s/ Bernard K. Lee  
Executive Vice President, Finance and  
Chief Financial Officer

/s/ R. Keith MacLeod  
Director

/s/ John C. Gorman  
Director

March 7, 2018

**APPENDIX C**  
**PARAMOUNT RESOURCES LTD.**  
**AUDIT COMMITTEE CHARTER**

(Adopted by the Board of Directors on May 19, 2005 with revisions to and including September 14, 2017)

**A. PURPOSE**

The overall purpose of the Audit Committee (the “Committee”) is to ensure that management of Paramount Resources Ltd. (the “Corporation”) has designed and implemented an effective system of internal financial controls and disclosure controls and procedures, to review and report on the integrity of the consolidated financial statements of the Corporation and to review the Corporation's compliance with regulatory and statutory requirements as they relate to financial statements, taxation matters and disclosure of material facts.

**B. COMPOSITION, PROCEDURES AND ORGANIZATION**

1. The Committee shall consist of at least three members of the Board of Directors (the “Board”) of the Corporation, all of whom shall be “independent”, as that term is defined in Sections 1.4 and 1.5 of National Instrument 52-110, Audit Committees.
2. All of the members of the Committee shall be “financially literate” (i.e. able to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of those of the Corporation and that can be reasonably expected to be raised by the Corporation’s financial statements).
3. The Board shall appoint the members of the Committee. The Board may at any time remove or replace any member of the Committee and may fill any vacancy in the Committee.
4. Unless the Board shall have appointed a chair of the Committee, the members of the Committee shall elect a chair from among their members.
5. The Corporate Secretary of the Corporation shall be the secretary of the Committee, unless otherwise determined by the Committee.
6. The quorum for meetings shall be a majority of the members of the Committee, present in person or by telephone or other telecommunication device that permits all persons participating in the meeting to speak and to hear each other.
7. The Committee shall have access to such officers and employees of the Corporation and to the Corporation's external auditors, and to such information respecting the Corporation, as it considers necessary or advisable in order to perform its duties and responsibilities.
8. Meetings of the Committee shall be conducted as follows:
  - (a) the Committee shall meet at least four times annually at such times and at such locations as may be requested by the chair of the Committee. The external auditors, the Chief Executive Officer or any member of the Committee may request a meeting of the Committee;
  - (b) the external auditors shall receive notice of and have the right to attend all meetings of the Committee;
  - (c) the following management representatives shall be invited to attend all meetings, except executive sessions and private sessions with the external auditors:

President and Chief Executive Officer  
Chief Financial Officer  
Controller  
Corporate Secretary

- (d) other management representatives shall be invited to attend as necessary or desirable
  - (e) as necessary or desirable but in any case at least quarterly, the Committee will meet with members of management and representatives of the external auditors, in separate executive sessions to discuss any matters that the Committee or any of these groups believes should be discussed privately; and
  - (f) the Committee shall meet in camera, without management, during or after any Committee meeting.
9. The external auditors shall report directly to the Committee and the external auditors and internal auditors (if any) shall have a direct line of communication to the Committee through its chair and may bypass management if deemed necessary. The Committee, through its chair, may contact directly any employee of the Corporation as it deems necessary, and any employee may bring before the Committee any matter involving questionable, illegal or improper financial practices or transactions.
10. The Committee may retain, at the Corporation's expense, special legal, accounting or other consultants or experts it deems necessary in the performance of its duties and may set and pay the compensation for any advisor engaged. The Committee will notify the Chairman of the Corporate Governance Committee whenever independent consultants are engaged.

## **C. ROLES AND RESPONSIBILITIES**

1. The overall duties and responsibilities of the Committee shall be as follows:
- (a) to assist the Board in the discharge of its responsibilities relating to the Corporation's accounting principles, reporting practices and internal controls and its approval of the Corporation's annual and quarterly consolidated financial statements and management's discussion and analysis;
  - (b) to establish and maintain a direct line of communication with the Corporation's internal (if any) and external auditors and assess their performance;
  - (c) to ensure that the management of the Corporation has designed, implemented and is maintaining an effective system of internal financial controls and disclosure controls and procedures;
  - (d) to periodically review the audit and non-audit services pre-approval policy and recommend to the Board any changes which the Committee deems appropriate;
  - (e) to periodically consider whether there is a need to outsource internal audit functions or create an internal audit department;
  - (f) to receive and review complaints received pursuant to the Corporation's Whistleblower Policy and oversee and provide direction on the investigation and resolution of such concerns and to periodically review the said policy and recommend to the Board changes which the Committee may deem appropriate;
  - (g) to report regularly to the Board on the fulfillment of its duties and responsibilities;

- (h) to identify and monitor the management of the principal risks that could impact the financial reporting of the Corporation; and
  - (i) review and approve the Corporation's hiring policies regarding partners, employees and former partners and employees of the present and former external auditors of the Corporation.
2. The duties and responsibilities of the Committee as they relate to the external auditors shall be as follows:
- (a) to be directly responsible for overseeing the work of the external auditors engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Corporation, including the resolution of disagreements between management and the external auditors regarding financial reporting;
  - (b) to recommend to the Board a firm of external auditors to be nominated for appointment by the shareholders of the Corporation, and to monitor and verify the independence of such external auditors;
  - (c) to review and approve the fee, scope and timing of the audit and other related services rendered by the external auditors;
  - (d) review the audit plan of the external auditors prior to the commencement of the audit;
  - (e) to review with the external auditors, upon completion of their audit:
    - (I) contents of their report;
    - (II) scope and quality of the audit work performed;
    - (III) adequacy of the Corporation's financial and auditing personnel;
    - (IV) co-operation received from the Corporation's personnel during the audit;
    - (V) internal resources used;
    - (VI) significant transactions outside of the normal business of the Corporation;
    - (VII) significant proposed adjustments and recommendations for improving internal accounting controls, accounting principles or management systems; and
    - (VIII) the non-audit services provided by the external auditors, as pre-approved pursuant to the audit and non-audit services pre-approval policy;
  - (f) to discuss with the external auditors the quality and not just the acceptability of the Corporation's accounting principles;
  - (g) to review any unresolved issues between management and the external auditors that could affect the financial reporting or internal controls of the Corporation; and
  - (h) to implement structures and procedures to ensure that the Committee meets the external auditors on a regular basis in the absence of management.
3. The duties and responsibilities of the Committee as they relate to the internal control procedures of the Corporation are to:

- (a) review the appropriateness and effectiveness of the Corporation's policies and business practices which impact on the financial integrity of the Corporation, including those relating to insurance, accounting, information services and systems and financial controls, management reporting and risk management;
- (b) review compliance under the Corporation's Code of Business Conduct Policy with those matters addressed in the policy which affect the financial integrity of the Corporation and to periodically review this policy and recommend to the Board changes which the Committee may deem appropriate; and
- (c) periodically review the Corporation's financial and auditing procedures and the extent to which recommendations made by the internal accounting staff or by the external auditors have been implemented.

4. The Committee is also charged with the responsibility to:

- (a) review and recommend to the Board for its approval, the Corporation's and its subsidiaries, partnerships and joint venturers, as applicable, annual financial statements, management's discussion and analysis, annual information form and annual earnings press releases before the Corporation publicly discloses this information;
- (b) review and approve the Corporation's and its subsidiaries, partnerships and joint venturers, as applicable, interim financial statements, interim management's discussion and analysis including the impact of unusual items and changes in accounting principles and estimates and report to the Board in due course with respect thereto and to review and approve the Corporation's interim earnings press releases before the Corporation publicly discloses this information;
- (c) review and approve the financial sections of:
  - (I) the annual report to shareholders;
  - (II) the annual information form;
  - (III) prospectuses;
  - (IV) other public reports requiring approval by the Board; and
  - (V) press releases related thereto,
 and report to the Board with respect thereto;
- (d) review regulatory filings and decisions as they relate to the Corporation's consolidated financial statements;
- (e) review the appropriateness of the policies and procedures used in the preparation of the Corporation's consolidated financial statements and other required disclosure documents, and consider recommendations for any material change to such policies;
- (f) review and report on the integrity of the Corporation's consolidated financial statements;
- (g) review the minutes of any audit committee meeting of any subsidiary of the Corporation;
- (h) review with management, the external auditors and, if necessary, with legal counsel, any litigation, claim or other contingency, including tax assessments that could have a material

effect upon the financial position or operating results of the Corporation and the manner in which such matters have been disclosed in the consolidated financial statements;

- (i) review the Corporation's compliance with regulatory and statutory requirements as they relate to financial statements, tax matters and disclosure of material facts; and
- (j) develop a calendar of activities to be undertaken by the Committee for each ensuing year related to the Committee's duties and responsibilities as set forth in this Charter and to submit the calendar in the appropriate format to the Board within a reasonable period of time following each annual general meeting of shareholders.

#### **D. ANNUAL REVIEW AND ASSESSMENT**

The Committee shall conduct an annual review and assessment of its performance, including compliance with this Charter and its role, duties and responsibilities, and submit such report to the Board.