

# ANNUAL INFORMATION FORM

For the Year Ended December 31, 2018

Dated March 13, 2019

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#### DEFINITIONS

Capitalized terms in this annual information form ("**Annual Information Form**") have the meanings set forth below. Unless otherwise indicated, references herein to "\$" or "dollars" are to Canadian dollars.

"ABCA" means the *Business Corporations Act* (Alberta) R.S.A. 2000, c. B 9, as amended, including the regulations promulgated thereunder.

"Arrangement" means the arrangement involving Petrus, PhosCan, Old Petrus, Fox River and the shareholders thereof, completed pursuant to a plan of arrangement under section 193 of the ABCA.

"Arrangement Agreement" means the arrangement agreement dated November 29, 2015, as amended on December 15, 2015, among Petrus, Old Petrus, PhosCan and Fox River in respect of the Arrangement.

"Arriva" means Arriva Energy Inc., a corporation amalgamated with Old Petrus.

"Arriva Acquisition" means the acquisition by Old Petrus of all of the issued and outstanding Arriva Shares.

"Arriva Shares" means the common shares in the capital of Arriva.

"Board of Directors" or "Board" means our board of directors.

"Common Shares" means our common shares, as presently constituted.

"**DSU Plan**" means the deferred share unit plan for non-management directors of Petrus dated effective October 17, 2017.

"DSUs" means deferred share units of the Corporation granted pursuant to the DSU Plan.

"Fox River" means Fox River Resources Corporation.

"GAAP" means generally accepted accounting principles for publicly accountable enterprises in Canada which is currently in accordance with the International Financial Reporting Standards.

"NGP" means Wingren B.V., a company formed under the laws of the Netherlands and a subsidiary of NGP Natural Resources X, L.P.

"**Old Petrus**" means Petrus Resources Corp., which prior to filing articles of amendment on February 2, 2016, was named "Petrus Resources Ltd".

"Old Petrus Shares" means the common shares of Old Petrus.

"Option Plan" means the share option plan of Petrus dated December 19, 2015.

"Options" means options to purchase Common Shares granted pursuant to the Option Plan.

"**Petrus**", "**we**", "**us**", "**our**" or the "**Corporation**" means Petrus Resources Ltd., a corporation incorporated under the ABCA and includes its direct and indirect subsidiaries where the context requires.

"Petrus Credit Facilities" means, collectively, Petrus' operating facility and its reserve based revolving credit facility.

"**Petrus Term Loan**" means the commitment letter and term sheet with an arm's length third party lender dated August 22, 2014, in respect of a committed second lien term loan.

"**PhosCan**" means Petrus Resources Inc., which prior to filing articles of amendment on February 2, 2016, was named "PhosCan Chemical Corp.".

"PhosCan Shares" means the Class A common shares in the capital of PhosCan.

"Preferred Shares" means our first preferred shares issuable in series.

"**Private Placement**" means the private placement of an aggregate of 16,217,000 Subscription Receipts at a price of \$1.85 per Subscription Receipt completed on January 14, 2016.

"Ravenwood" means Ravenwood Energy Corp., a corporation amalgamated with Old Petrus.

"Ravenwood Acquisition" means the acquisition by Old Petrus of all of the issued and outstanding Ravenwood Shares.

"Ravenwood Shares" means the common shares in the capital of Ravenwood.

"**RSU Plan**" means the restricted share unit plan for officers, employees and consultants of the Corporation and its subsidiaries dated October 17, 2017, as amended on March 29, 2018.

"RSUs" means restricted share unit awards of the Corporation granted pursuant to the RSU Plan.

"Shareholders" means holders of Common Shares.

"Sproule" means Sproule Associates Limited, independent petroleum consultants of Calgary, Alberta.

"**Sproule Report**" means the report prepared by Sproule dated March 13, 2019 and effective December 31, 2018 evaluating the crude oil, NGLs and natural gas and future net production revenues attributable to the properties of Petrus.

"**Subscription Receipts**" means the subscription receipts of Petrus, each of which entitled the holder thereof to receive 0.25 of one Common Share in accordance with the terms and conditions of subscription receipt agreements dated December 22, 2015, December 30, 2015 and January 13, 2015, respectively.

"Tax Act" means the Income Tax Act, R.S.C., 1985, c. 1, as amended.

"**TSX**" means the Toronto Stock Exchange.

#### Selected Defined Oil and Natural Gas Terms

Certain terms used in this Annual Information Form in describing reserves and other oil and natural gas information are defined below. Certain other terms and abbreviations used in this Annual Information Form, but not defined or described, are defined in NI 51-101, CSA 51-324 or the COGE Handbook (as each is defined below), as applicable and, unless the context otherwise requires, shall have the same meanings herein as in NI 51-101, CSA 51-324 or the COGE Handbook, as applicable.

"**COGE Handbook**" means the Canadian Oil and Gas Evaluation Handbook prepared jointly by the Society of Petroleum Evaluation Engineers (Calgary chapter) and the Canadian Institute of Mining, Metallurgy & Petroleum.

"**conventional natural gas**" means natural gas that has been generated elsewhere and has migrated as a result of hydrodynamic forces and is trapped in discrete accumulations by seals that may be formed by localized structural, depositional or erosional geological features.

"CSA 51-324" means Staff Notice 51-324 – Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities of the Canadian Securities Administrators.

"**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 (e.g., when compared to the cost of drilling a well) to put the reserves on production.

"**development costs**" means costs incurred to obtain access to reserves and to provide facilities for extracting, treating, gathering and storing the oil and natural gas from reserves. More specifically, development costs, including applicable operating costs of support equipment and facilities and other costs of development activities, are costs incurred to:

- (a) gain access to and prepare well locations for drilling, including surveying well locations for the purpose of determining specific development drilling sites, clearing ground, draining, road building, and relocating public roads, gas lines and power lines, to the extent necessary in developing the reserves;
- (b) drill and equip development wells, development type stratigraphic test wells and service wells, including the costs of platforms and of well equipment such as casing, tubing, pumping equipment and wellhead assembly;
- (c) acquire, construct and install production facilities such as flow lines, separators, treaters, heaters, manifolds, measuring devices and production storage tanks, natural gas cycling and processing plants, and central utility and waste disposal systems; and
- (d) provide improved recovery systems.

"**development well**" means a well drilled inside the established limits of an oil or gas reservoir, or in close proximity to the edge of the reservoir, to the depth of a stratigraphic horizon known to be productive.

"**exploration costs**" means costs incurred in identifying areas that may warrant examination and in examining specific areas that are considered to have prospects that may contain oil and natural gas reserves, including costs of drilling exploratory wells and exploratory type stratigraphic test wells. Exploration costs may be incurred both before acquiring the related property (sometimes referred to as "prospecting costs") and after acquiring the property. Exploration costs, which include applicable operating costs of support equipment and facilities and other costs of exploration activities, are:

- (a) costs of topographical, geochemical, geological and geophysical studies, rights of access to properties to conduct those studies, and salaries and other expenses of geologists, geophysical crews and others conducting those studies (collectively referred to as "geological and geophysical costs");
- (b) costs of carrying and retaining unproved properties, such as delay rentals, taxes (other than income and capital taxes) on properties, legal costs for title defence, and the maintenance of land and lease records;
- (c) dry hole contributions and bottom hole contributions;
- (d) costs of drilling and equipping exploratory wells; and
- (e) costs of drilling exploratory type stratigraphic test wells.

"exploration well" means a well that is not a development well, a service well or a stratigraphic test well.

"forecast prices and costs" means future prices and costs that are:

- (a) generally accepted as being a reasonable outlook of the future; or
- (b) if, and only to the extent that, there are fixed or presently determinable future prices or costs to which the Corporation is legally bound by a contractual or other obligation to supply a physical product, including those for an extension period of a contract that is likely to be extended, those prices or costs rather than the prices and costs referred to in subparagraph (a).

"future net revenue" means a forecast of revenue, estimated using forecast prices and costs, arising from the anticipated development and production of resources, net of the associated royalties, operating costs, development costs, and abandonment and reclamation costs.

"gross" means:

- (a) in relation to an entity's interest in production and reserves, its "company gross reserves", which are such entity's working interest (operating or non-operating) share before deduction of royalties and without including any royalty interest of such entity;
- (b) in relation to wells, the total number of wells in which an entity has an interest; and
- (c) in relation to properties, the total area of properties in which an entity has an interest.

"hydrocarbon" means a compound consisting of hydrogen and carbon, which, when naturally occurring, may also contain other elements such as sulphur.

"light crude oil" means crude oil with a relative density greater than 28° API.

"natural gas" means a naturally occurring mixture of hydrocarbon gases and other gases.

"**natural gas liquids**" or "**NGLs**" means those hydrocarbon components that can be recovered from natural gas as a liquid including, but not limited to, ethane, propane, butanes, pentanes plus, and condensates.

"net" means:

- (a) in relation to an entity's interest in production and reserves, such entity's working interest (operating or non-operating) share after deduction of royalty obligations, plus the entity's royalty interests in production or reserves;
- (b) in relation to an entity's interest in wells, the number of wells obtained by aggregating an entity's working interest in each of its gross wells; and
- (c) in relation to an entity's interest in a property, the total area in which an entity has an interest multiplied by the working interest owned by it.

"NI 51-101" means National Instrument 51-101– Standards of Disclosure for Oil and Natural Gas Activities.

"**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.

"property" includes:

- (a) fee ownership or a lease, concession, agreement, permit, licence or other interest representing the right to extract oil or gas subject to such terms as may be imposed by the conveyance of that interest;
- (b) royalty interests, production payments payable in oil or gas, and other non-operating interests in properties operated by others; and
- (c) an agreement with a foreign government or authority under which a reporting issuer participates in the operation of properties or otherwise serves as "producer" of the underlying reserves (in contrast to being an independent purchaser, broker, dealer or importer). A property does not include supply agreements, or contracts that represent a right to purchase, rather than extract, oil or gas.

"**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.

The qualitative certainty levels referred to in the definitions above are applicable to "individual reserves entities" (which refers to the lowest level at which reserves calculations are performed) and to "reported reserves" (which refers to the highest-level sum of individual entity estimates for which reserves estimates are presented). Reported reserves should target the following levels of certainty under a specific set of economic conditions:

- at least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated proved reserves; and
- at least a 50 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable reserves.

"**reserves**" are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on: (a) analysis of drilling, geological, geophysical and engineering data; (b) the use of established technology; and (c) specified economic conditions, which are generally accepted as being reasonable.

"**service well**" means a well drilled or completed for the purpose of supporting production in an existing field. Wells in this class are drilled for the following specific purposes: gas injection (natural gas, propane, butane or flue gas), water injection, steam injection, air injection, salt water disposal, water supply for injection, observation or injection for combustion.

"**undeveloped reserves**" are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., 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, possible) 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 sub-divide 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.

"**working interest**" means the percentage of undivided interest held by Petrus in the oil and/or natural gas or mineral lease granted by the mineral owner, Crown or freehold, which interest gives Petrus the right to "work" the property (lease) to explore for, develop, produce and market the leased substances.

# ABBREVIATIONS AND CONVERSIONS

In this Annual Information Form, the abbreviations set forth below have the following meanings:

	Oil and Natural Gas Liquids		Natural Gas
Bbl	barrel	Mcf	thousand cubic feet
Bbls	barrels	MMcf	million cubic feet
Mbbls	thousand barrels	Mcf/d	thousand cubic feet per day
Bbls/d	barrels per day	MMcf/d	million cubic feet per day
NGLs	natural gas liquids	MMBtu	million British Thermal Units

#### **Other Abbreviations:**

AECO	a natural gas storage facility located at Suffield, Alberta
API	American Petroleum Institute
°API	an indication of the specific gravity of crude oil measured on the API gravity scale. Liquid petroleum with a specified gravity of 28° API or higher is generally referred to as light crude oil
BOE	barrel of oil equivalent on the basis of 1 BOE to 6 Mcf of natural gas
BOE/d	barrel of oil equivalent per day
MBOE	1,000 barrels of oil equivalent
MMBOE	1,000,000 barrels of oil equivalent
m3	cubic metres
\$000s or M\$	thousands of dollars
WTI	West Texas Intermediate, the reference price paid in U.S. dollars at Cushing, Oklahoma for crude oil of standard grade

The following table sets forth certain standard conversions from Standard Imperial Units to the International System of Units (or metric units).

<b>To Convert From</b>	То	Multiply By
Mcf	Cubic metres	0.28174
Cubic metres	Cubic feet	35.494
Bbls	Cubic metres	0.159
Cubic metres	Bbls	6.293
Feet	Metres	0.305
Metres	Feet	3.281
Miles	Kilometres	1.609
Kilometres	Miles	0.621
Acres	Hectares	0.405
Hectares	Acres	2.50
Gigajoules	MMbtu	0.950
MMbtu	Gigajoules	1.0526

#### NOTE ON SHARE REFERENCES

On February 2, 2016, Petrus completed the Arrangement pursuant to which: (i) all of the issued and outstanding Old Petrus Shares were transferred to Petrus in exchange for one-quarter (0.25) of one Common Share per Old Petrus Share, which Common Shares were issued to the former holders of the Old Petrus Shares; (ii) holders of Subscription Receipts were issued one-quarter (0.25) of one Common Share for each Subscription Receipt held; and (iii) Petrus acquired all of the PhosCan Shares in exchange for 0.0452672 of one Common Share per PhosCan Share, which Common Shares were issued to the former holders of the PhosCan Shares. Unless otherwise indicated, references in this Annual Information Form to Old Petrus Shares are on a pre-Arrangement basis while references to Common Shares are on a post-Arrangement basis. Readers should multiply any referenced number of Old Petrus Shares and other rights to acquire Old Petrus Shares by 0.25 to arrive at the equivalent number of Common Shares or rights to acquire Common Shares post-Arrangement. Readers should multiply the issuance price of any Old Petrus Shares or

the exercise price of any rights to acquire Old Petrus Shares by 4 to arrive at the equivalent issuance price or exercise price for Common Shares or rights to acquire Common Shares post-Arrangement.

# NOTES ON RESERVES DATA AND OTHER OIL AND NATURAL GAS INFORMATION

#### **Caution Respecting Reserves Information**

The determination of oil and natural gas reserves involves the preparation of estimates that have an inherent degree of associated uncertainty. Categories of proved and probable reserves have been established to reflect the level of these uncertainties and to provide an indication of the probability of recovery. The estimation and classification of reserves requires the application of professional judgment combined with geological and engineering knowledge to assess whether or not specific reserves classification criteria have been satisfied. Knowledge of concepts including uncertainty and risk, probability and statistics, and deterministic and probabilistic estimation methods is required to properly use and apply reserves definitions.

The recovery and reserve estimates of oil, NGLs and natural gas reserves provided herein are estimates only. Actual reserves may be greater than or less than the estimates provided herein. The estimated future net revenue from the production of our natural gas and petroleum reserves does not represent the fair market value of our reserves.

# **Caution Respecting BOE**

In this Annual Information Form, the abbreviation BOE means barrel of oil equivalent on the basis of 1 Bbl to 6 Mcf of natural gas when converting natural gas to BOEs. **BOEs may be misleading, particularly if used in isolation.** A **BOE conversion ratio of 6 Mcf to 1 Bbl is based on an energy equivalency conversion method primarily applicable at the burner tip and does not represent a value equivalency at the wellhead. Given the value ratio based on the current price of crude oil as compared to natural gas is significantly different from the energy equivalency of 6 Mcf to 1 Bbl, utilizing a conversion ratio at 6 Mcf to 1 Bbl may be misleading as an indication of value.** 

#### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements contained in this Annual Information Form constitute forward-looking statements. These statements relate to future events or our future performance. All statements other than statements of historical fact may be forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "seek", "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "predict", "potential", "targeting", "intend", "could", "might", "should", "believe" and similar expressions. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. We believe the expectations reflected in these forward-looking statements are reasonable but no assurance can be given that such expectations will prove to be correct and the forward-looking statements included in, or incorporated by reference into, this Annual Information Form should not be unduly relied upon. These forward-looking statements speak only as of the date of this Annual Information Form.

More particularly, this Annual Information Form contains forward-looking statements with respect to:

- Petrus' corporate strategy;
- planned capital expenditures and drilling activity in 2019;
- development plans for our proved and probable undeveloped reserves;
- plans for funding future development costs including the timing of future development projects;
- plans for debt repayment and the timing thereof;
- Petrus' dividend policy;
- anticipated timing of expenditures by us to satisfy our asset retirement obligations;
- anticipated impact of environmental laws and regulations on our business;
- anticipated land expiries;

- anticipated future abandonment and reclamation costs;
- expectations of the means of funding our ongoing environmental obligations;
- waterflood expansion opportunities;
- drilling inventories; and
- the anticipated impact of the factors discussed under the heading "Industry Conditions" on the Corporation.

These forward-looking statements are based on certain key expectations and assumptions made by us, including, but not limited to:

- the performance characteristics of our assets;
- oil and natural gas production levels;
- the size of the oil and natural gas reserves;
- projections of market prices and costs;
- supply and demand for oil and natural gas;
- expectations regarding the ability to raise capital and to continually add to reserves through acquisitions and development;
- prevailing weather conditions, commodity prices and exchange rates;
- drilling plans;
- availability of labour, services and equipment;
- timing and amount of capital expenditures;
- future abandonment and reclamation costs;
- general economic and financial market conditions;
- tax horizons;
- government regulation in the areas of taxation, royalty rates and environmental protection;
- the success of our exploration and development activities;
- current commodity prices and royalty regimes;
- timing and amount of capital expenditures;
- future exchange rates;
- the impact of increasing competition;
- future operating costs;
- that the Corporation will have sufficient cash flow, debt or equity sources or other financial resources required to fund its capital and operating expenditures and requirements as needed;
- that the Corporation's conduct and results of operations will be consistent with its expectations;
- that the Corporation will have the ability to develop the Corporation's oil and natural gas properties in the manner currently contemplated;
- that current or, where applicable, proposed assumed industry conditions, laws and regulations will continue in effect or as anticipated as described herein; and
- that the estimates of the Corporation's reserves volumes and the assumptions related thereto (including commodity prices and development costs) are accurate in all material respects.

Statements relating to "reserves" are deemed to be forward-looking statements, as they involve the implied assessment, based on certain estimates and assumptions, that the reserves described can be profitably produced in the future.

The actual results could differ materially from those currently anticipated due to a number of factors and risks. These include, but are not limited to:

- volatility in market prices for oil and natural gas;
- volatility in exchange rates;
- liabilities inherent in oil and natural gas operations;
- uncertainties associated with estimating oil and natural gas reserves;
- inability to secure labour, services and equipment on a timely basis or favourable terms;
- competition for, among other things, acquisitions of reserves, undeveloped lands and skilled personnel;
- unfavourable weather conditions;

- incorrect assessments of the value of acquisitions and exploration and development programs;
- geological, technical, drilling, production and processing problems;
- availability and cost of capital;
- changes in legislation, including changes in tax laws, royalty rates and incentive programs relating to the oil and natural gas industry; and
- the other factors discussed under *Risk Factors*.

Although the forward-looking statements contained in this Annual Information Form are based upon assumptions which Petrus believes to be reasonable, Petrus cannot assure readers that actual results will be consistent with these forward-looking statements.

Petrus has included the above summary of assumptions and risks related to forward-looking information provided in this Annual Information Form in order to provide readers with a more complete perspective on the Corporation's current and future operations and such information may not be appropriate for other purposes. The Corporation's actual results, performance or achievement could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurance can be given that any of the events anticipated by the forward-looking statements will transpire or occur, or if any of them do so, what benefits Petrus will derive therefrom.

Readers are cautioned that the foregoing lists of factors are not exhaustive. The forward-looking statements contained in this Annual Information Form are expressly qualified by this cautionary statement. We do not undertake any obligation to publicly update or revise any forward-looking statements other than as required under applicable securities laws.

# NON-GAAP MEASURES

This Annual Information Form contains the term "operating netback". This indicator is not a recognized measure under GAAP and does not have a standardized meaning prescribed by GAAP.

We use operating netback to analyze our financial and operating performance and believe this measure provides useful supplemental information enabling us to analyze operating performance and provides an indication of the results generated by the Corporation's principal business activities. We feel this benchmark is a key measure of Petrus' profitability and overall sustainability. Readers should be cautioned that this measure is not intended to represent operating profits and should not be construed as an alternative to cash flows from operating activities, net income (loss) or other measures of financial performance as determined in accordance with GAAP. Petrus' method of calculating this measure may differ from other companies, and accordingly, it may not be comparable to similar measures used by other companies.

Operating netback is a common non-GAAP financial measure used in the oil and natural gas industry which is a useful supplemental measure to evaluate the specific operating performance by product at the oil and gas lease level. The operating netback is calculated as oil and natural gas realized revenue (price) less royalties, operating and transportation expenses. It is presented on an absolute value and per unit of production basis.

#### **CORPORATE STRUCTURE**

#### General

Petrus was incorporated pursuant to the ABCA on November 25, 2015 as "Petrus Acquisition Corp.", for the sole purpose of participating in the Arrangement and the Private Placement. On February 2, 2016, pursuant to the Arrangement, Petrus filed articles of amendment to change its name to "Petrus Resources Ltd.". See "*Development of Our Business*".

Our head office is located at 2400, 240 – 4th Avenue S.W., Calgary, Alberta and our registered office is located at 2400, 525 – 8th Avenue S.W., Calgary, Alberta. We are a reporting issuer in each of the provinces of British Columbia, Alberta and Ontario.

#### **Inter-corporate Relationships**

Petrus has two wholly owned subsidiaries, Old Petrus and PhosCan. Old Petrus is a corporation existing under the laws of Alberta. Phoscan is a corporation that was incorporated under the federal laws of Canada and, pursuant to the Arrangement, was continued to and currently exists under the laws of Alberta.

#### **DEVELOPMENT OF OUR BUSINESS**

The following is a summary of the developments of the business of Petrus over the last three completed financial years, including the business of Old Petrus during such period, as Petrus assumed and continued the business of Old Petrus following the completion of the Arrangement. Petrus did not assume or continue the business of Phoscan, as Phoscan spun-off all its assets and liabilities to Fox River, a company incorporated for the sole purpose of assuming the liabilities and non-retained assets of PhosCan upon completion of the Arrangement. See "*Note on Share References*" and "*Description of Our Business – Reorganizations*".

#### 2016

#### **Overview of Capital Expenditure Program**

During the financial year ended December 31, 2016, Petrus invested \$28.2 million to drill 11 gross (7.3 net) wells and for construction costs related to facilities and pipeline infrastructure in the Ferrier/Strachan area of Alberta. Average production for the year ended December 31, 2016 was 8,236 BOE/d (31% oil and natural gas liquids).

#### General Business Developments

On February 1, 2016, Petrus amended the Petrus Credit Facilities to account for the change caused by the Arrangement to Petrus' corporate and share structure. Both the reserve based revolving credit facility of the Petrus Credit Facilities (the "**Syndicated Facility**") and the operating facility of the Petrus Credit Facilities (the "**Operating Facility**") remained unchanged at \$140 million and \$20 million, respectively.

On February 8, 2016, the Common Shares were listed on the TSX under the symbol "PRQ".

On February 16, 2016, the Board of Directors approved an interim budget for the first half of 2016 in the amount of \$11 million. The program included the drilling of up to 3 gross (2.5 net) Cardium horizontal wells in the Ferrier/Strachan area. The budget also included funds for facilities and gathering system acquisitions and enhancements to further improve operational efficiencies and lower operating expenses.

On March 22, 2016, Petrus made a \$40 million repayment on the Petrus Term Loan, using proceeds from the Arrangement and the Private Placement. The maturity date of the Petrus Term Loan was extended to October 1, 2017. The Petrus Credit Facilities were unchanged other than an amendment to require lender consent for advances in excess of \$120 million under the Petrus Credit Facilities.

On July 8, 2016, Petrus sold its oil and natural gas interests in the Peace River area of Alberta to Rising Star Resources Ltd. ("**Rising Star**"), a private company, for total consideration of \$30.0 million subject to customary closing adjustments (the "**Disposition**"). The consideration was comprised of \$29.0 million in cash and 1.0 million shares of Rising Star at a deemed value of \$1.00 per share. The Disposition closed on July 8, 2016 and had an effective date of April 1, 2016. Petrus disposed of the shares of Rising Star on December 16, 2016 at a price of \$1.07 per share for gross proceeds of approximately \$1.07 million.

The cash proceeds from the Disposition were used to reduce the amount owing under the Syndicated Facility to approximately \$84 million and the amount owing under the Petrus Term Loan to \$42 million. The borrowing capacity under the Syndicated Facility was reduced as a result of the Disposition, from \$100 million to \$86 million. The Operating Facility remained unchanged at \$20 million for total Petrus Credit Facilities of \$106 million.

On October 20, 2016 the Board of Directors approved a capital budget for the second half of 2016 in the amount of \$17.5 million. The program included the drilling of up to 9 gross (4.8 net) Cardium horizontal wells in the Ferrier/Strachan area.

On November 7, 2016, Mr. Kevin Adair resigned from his position as President and Chief Executive Officer, and as a director of Petrus. Mr. Neil Korchinski, previously Vice President Engineering and Chief Operating Officer, was promoted to the role of President and Chief Executive Officer and joined the Board of Directors.

#### 2017

#### **Overview of Capital Expenditure Program**

During the financial year ended December 31, 2017, Petrus invested \$72.8 million to drill 19 gross (13.2 net) wells and for construction costs related to facilities and pipeline infrastructure in the Ferrier/Strachan area of Alberta. Average production for the year ended December 31, 2017 was 10,217 BOE/d (29% oil and natural gas liquids).

#### General Business Development

In January 2017, the Board of Directors approved a \$50 to \$60 million capital budget for 2017, primarily directed at the development of Petrus' Ferrier assets.

On January 23, 2017, Petrus appointed three new officers, Mr. Brett Booth was appointed Vice President Land, Mr. Ross Keilly was appointed Vice President Exploration and Mr. Marcus Schlegel was appointed Vice President Engineering.

On January 24, 2017, Petrus entered into an agreement to extend the Petrus Term Loan by two years to October 8, 2019. Concurrent with the extension, Petrus reduced the amount outstanding under the Petrus Term Loan by \$7 million to \$35 million.

On February 28, 2017, Petrus completed the acquisition, from a private company, of certain oil and natural gas interests in the Ferrier area of Alberta (the "**2017 Ferrier Acquisition**") for cash consideration of \$8.9 million net of closing adjustments.

Also on February 28, 2017, the Corporation closed a private placement of Common Shares at a price of \$2.53 per Common Share for aggregate gross proceeds of \$10.3 million. A portion of the net proceeds of the private placement were used to fund the 2017 Ferrier Acquisition and the remainder were used to fund Petrus' 2017 capital program.

On August 15, 2017, Petrus closed the disposition of its working interest in certain non-core oil and natural gas properties in the Foothills area of Alberta for cash consideration of \$4.9 million. The assets disposed of included approximately 150 BOE/d of production along with related land and infrastructure. The proceeds were utilized to repay indebtedness under the Petrus Credit Facilities.

In October 2017, Petrus entered into a farm-in agreement to drill two extended reach horizontal Cardium wells in Ferrier. In order to accommodate for the farm-in agreement, the Board of Directors approved a \$10 million increase to Petrus' capital budget for 2017 to \$60 to \$70 million.

In October 2017, Petrus completed its semi-annual review of the Syndicated Facility. The syndicate of lenders under the Syndicated Facility, increased the borrowing base under the Petrus Credit Facilities from \$120 million to \$130 million. In addition, the Petrus' total debt borrowing limit was increased from \$141 million to \$155 million.

In December 2017, the Board of Directors approved a \$25 to \$30 million capital budget for 2018, primarily directed at the development of Petrus' Ferrier assets.

#### 2018

#### Overview of Capital Expenditure Program

During the financial year ended December 31, 2018, Petrus invested \$24.0 million to drill 10 gross (4.3 net) wells in the Ferrier/Strachan area of Alberta. Average production for the year ended December 31, 2018 was 9,019 BOE/d (31% oil and natural gas liquids).

# General Business Development

In May 2018, Petrus entered into an agreement with the lender under the Petrus Term Loan to extend the maturity date of the Petrus Term Loan from October 8, 2019 to October 8, 2020. At that time, Petrus also completed its semi-annual review of the Syndicated Facility. The syndicate of lenders under the Syndicated Facility agreed to maintain the borrowing base of \$120 million until June 30, 2018 after which time it was decreased to \$110 million. Petrus' total debt borrowing limit was reduced to \$140 million, effective June 30, 2018.

In October 2018, Petrus completed its semi-annual review of the Syndicated Facility. The syndicate of lenders under the Syndicated Facility maintained the borrowing base under the Petrus Credit Facilities at \$110 million. Petrus' total debt borrowing limit was also maintained at \$140 million.

# **Recent Developments**

In January 2019, the Board of Directors approved a first quarter 2019 capital budget of \$8 to \$10 million, focused on drilling opportunities in Ferrier. The Corporation plans to drill throughout 2019 within funds flow and repay \$1 to \$2 million of debt each quarter.

# Significant Acquisitions

Petrus did not complete any significant acquisitions during its most recently completed financial year for which disclosure is required under Part 8 of National Instrument 51-102 – *Continuous Disclosure Obligations*.

# **DESCRIPTION OF OUR BUSINESS**

#### **Corporate Strategy**

Petrus is a Canadian oil and natural gas company focused on property exploitation and strategic acquisitions in Alberta. Through a combination of acquisitions and drilling, our production has grown to an annual average of 9,019 BOE/d as of December 31, 2018.

Our current areas of operation are in all season access lands with significant infrastructure in the Ferrier/Strachan, Foothills and Thorsby/Pembina areas of Alberta. Management believes these properties provide a sustainable platform of low decline oil and natural gas production, along with a multi-year inventory of drilling locations that includes light oil and liquids rich natural gas locations which management believes are economic in today's commodity price environment. See "*Principal Properties*".

Petrus is focused on designing its 2019 capital plan to invest capital systematically each quarter within funds flow, permitting excess funds each quarter to reduce debt. The objectives of the 2019 capital plan are to increase the Corporation's liquids weighting, maintain or reduce current debt levels, maintain or grow production and grow cash flow per share through disciplined capital spending.

The Board of Directors may, in its discretion, approve asset or corporate acquisitions or investments based upon its consideration of the qualitative aspects of the subject properties, including risk profile, technical upside, reserve life, strategic importance and asset quality. See "Industry Conditions" and "Risk Factors – Failure to Realize Anticipated Benefits of Acquisitions and Dispositions".

#### Specialized Skill and Knowledge

Petrus employs individuals with various professional skills in the course of pursuing its business plan. These professional skills include, but are not limited to, engineering, financial, geology, geophysics and business skills, which are widely available in the industry. Drawing on significant experience in the oil and natural gas business, Petrus believes its management team has a demonstrated track record of bringing together all of the key components to a successful exploration and production company: strong technical skills; expertise in planning and financial controls; ability to execute on business development opportunities; capital markets expertise; and an entrepreneurial spirit that allows Petrus to effectively identify, evaluate and execute on its business plan.

#### Reorganizations

On February 2, 2016, Petrus completed the Arrangement, whereby, among other things: (i) PhosCan spun-off all of its assets, including its mineral leases, other than approximately \$45.4 million in cash (after taking into consideration adjustments for the shareholders of PhosCan that exercised dissent rights), and all of its liabilities to Fox River (ii) all of the issued and outstanding Old Petrus Shares were transferred to Petrus in exchange for one-quarter (0.25) of one Common Share per Old Petrus Share, which Common Shares were issued to the former holders of the Old Petrus Shares; (iii) pursuant to the Private Placement, holders of Subscription Receipts were issued one-quarter (0.25) of one Common Share for each Subscription Receipt held; and (iv) Petrus acquired all of the PhosCan Shares in exchange for 0.0452672 of one Common Share per PhosCan Share, which Common Shares were issued to the former holders of the former holders of the PhosCan Shares.

#### **Competitive Conditions**

The oil and natural gas industry is competitive in all its phases. We compete with numerous other participants in the acquisition, exploration and development of oil and natural gas assets and in the marketing of oil and natural gas. Our competitors include resource companies which may have greater financial resources, staff and facilities than us. We believe that our competitive position is, on the whole, equivalent to that of other oil and natural gas producers of similar size and at a similar stage of development. See "*Industry Conditions*" and "*Risk Factors – Competition*".

#### **Environmental Policies**

We promote safety and environmental awareness and protection through the implementation and communication of our environmental management and employee occupational health and safety programs, policies and procedures. Committee structures are established in our operations which are designed to allow for employee participation and development of policies and programs which provide employees with job orientation, training, instruction and supervision to assist them in conducting their activities in an environmentally responsible and safe manner.

We have developed emergency response teams and preparedness plans in conjunction with local authorities, emergency services and the communities in which we operate in order to effectively respond to an environmental incident should it arise. Environmental assessments are undertaken for new projects, or when acquiring new properties or facilities, in order to identify, assess and minimize environmental risks and operational exposures. We periodically conduct reviews of operations to confirm compliance with internal standards and to stimulate improvement in practices where needed. Documentation is maintained to support internal accountability to assist in achieving the objectives of the described policies and programs.

We also face environmental, health and safety risks in the normal course of our operations due to the handling and storage of hazardous substances. Our environmental and occupational health and safety management systems are designed to manage such risks and allow action to be taken to mitigate the extent of any environmental, health or safety impacts from such operations. A key aspect of these systems is the performance of annual environmental and occupational health and safety reviews. See "*Industry Conditions*" and "*Risk Factors - Environmental*".

#### **Seasonal Factors**

The exploration for and development of oil and natural gas reserves is dependent on access to areas where operations are to be conducted. Seasonal weather variations, including freeze-up and break-up, affect access in certain circumstances. Unexpected adverse weather conditions, such as flooding or prolonged break-up, can have a significant negative impact on our operations and costs. See "*Industry Conditions*" and "*Risk Factors - Availability of Drilling Equipment and Access*".

#### Personnel

As at December 31, 2018, Petrus had 22 full-time employees, one part-time employee and 17 consultants under contract.

# PRINCIPAL PROPERTIES

# Ferrier/Strachan Area – West Central Alberta

The Ferrier/Strachan area is Petrus' principal property and is located in west central Alberta near the town of Rocky Mountain House, Alberta. Petrus currently holds an average 55% working interest in 81,346 gross (44,983 net) acres of land in the Ferrier/Strachan area, of which 52,899 gross (31,767 net) acres are undeveloped and 28,447 gross (13,216 net) acres are developed. Petrus acquired the assets in the Ferrier/Strachan area through the Arriva Acquisition, the Ferrier Asset Acquisition, farm-in agreements with joint venture partners and other minor acquisitions. Exploration, development and production activities in the Ferrier/Strachan area are primarily directed toward oil, natural gas and natural gas liquids in the Cardium formation.

Sproule assigned approximately 22,702 MBOE of proved reserves and 34,266 MBOE of proved plus probable reserves to the Ferrier/Strachan area in the Sproule Report. During the year ended December 31, 2018, the Ferrier/Strachan area provided Petrus with average production of approximately 6,508 BOE/d (including 2,050 Bbls/d of oil and natural gas liquids and 26,745 Mcf/d of natural gas) from 99 gross (55.26 net) producing wells. As at December 31, 2018, we operated approximately 90% of our production in the Ferrier/Strachan area. The majority of Petrus' Ferrier/Strachan production is pipeline connected to its owned and operated gas plant. Natural gas and natural gas liquids are either processed at a third party gas plant, or at Petrus' processing facility and gas plant, both of which are pipeline connected to a sales point.

Petrus invested approximately \$20.6 million in the Ferrier/Strachan area in the year ended December 31, 2018. 10 gross (4.3 net) wells were drilled in the year ended December 31, 2018 and 7 gross (3.6 net) were on production by year-end. The majority of the capital invested at Ferrier/Strachan during 2018 was directed towards drilling, completion, tie-in and equipping of the new wells in addition to investment in the expansion of Ferrier production processing infrastructure.

In addition to its core property in the Ferrier/Strachan area of Alberta, Petrus also has two non-core properties also located in Alberta. These properties are described below.

#### Thorsby/Pembina Area – Central Alberta

The Thorsby/Pembina area of central Alberta is located approximately 70 kilometers southwest of Edmonton, Alberta. Petrus currently holds an average 61% working interest in 119,266 gross (72,791 net) acres of land in the Thorsby/Pembina area, of which 42,695 gross (24,929 net) acres are undeveloped and 76,571 gross (47,862 net) acres are developed. Petrus acquired its assets in the central Alberta area through the Ravenwood Acquisition. Our exploration, development and production activities in the Thorsby/Pembina area are primarily directed towards light oil in the Glauconite formation.

Sproule assigned approximately 4,989 MBOE of proved reserves and 8,766 MBOE of proved plus probable reserves in Central Alberta in the Sproule Report. The majority of the reserves are attributed to the Thorsby area (4,911 MBOE

of proved reserves and 8,597 MBOE of proved plus probable reserves). The remaining reserves are attributed to noncore, minor properties in the greater central Alberta area.

During the year ended December 31, 2018, Petrus had average production of approximately 1,714 BOE/d (including 591 Bbls/d of oil and liquids and 6,735 Mcf/d of natural gas) from 122 gross (93.08 net) producing wells in the central Alberta area. As at December 31, 2018, we operated approximately 95% of the production in the Thorsby/Pembina area. Substantially all of our production in the area is pipeline connected to owned and operated oil batteries and gas plants. Clean oil and natural gas is transferred directly to sales pipelines once processed at an oil battery.

Petrus did not invest significant capital in this area in 2018.

#### Foothills Area – West Central Alberta

The Foothills area is located in a trend from approximately 75 km northwest of Rocky Mountain House, Alberta to approximately 75 km northwest of Hinton, Alberta. Petrus currently holds an average 52% working interest in 82,919 gross (43,095 net) acres of land in the Foothills area, of which 61,319 gross (35,448 net) acres are undeveloped and 21,600 gross (7,647 net) acres are developed. Petrus has wells producing from the Cardium, Charlie Lake, Montney, Leduc, Dunvegan and Notikewin formations, as well as other formations. The properties located in the northern section of the Foothills area feature a predominantly mature production base with a stable production decline and reserve bookings. The properties located in the southern Foothills area include Brown Creek and Cordel/Stolberg, where we have focused the majority of our Foothills development to date. Petrus acquired its Foothills assets through a combination of asset acquisitions and farm-ins. Petrus currently operates 23% of its Foothills production and has a working interest in a variety of compressor stations, gas plants and pipeline infrastructure.

Sproule assigned approximately 4,626 MBOE of proved reserves and 6,969 MBOE of proved plus probable reserves to the Foothills area in the Sproule Report. During the year ended December 31, 2018, the Foothills area provided Petrus with average production of approximately 797 BOE/d (including 194 Bbls/d of oil and natural gas liquids and 3,621 Mcf/d of natural gas) from 63 gross (18.34 net) producing wells. Substantially all of our Foothills natural gas production is pipeline connected. Natural gas and natural gas liquids are processed at jointly owned and third party gas plants and then go directly to sales. The majority of our Foothills light oil production is pipeline connected to satellite oil batteries; clean oil is trucked directly to sale terminals once processed at the respective oil battery.

Petrus did not invest significant capital in this area in 2018; however, Petrus has plans for additional development opportunities in the area in the event that commodity prices improve.

#### STATEMENT OF RESERVES DATA

The report of Sproule in Form 51-101F2 and the report of management and directors on oil and natural gas disclosure in Form 51-101F3 and the report on reserves data by are attached as Schedules "B" and "C" to this Annual Information Form, respectively.

#### **Disclosure of Reserves Data**

The statement of reserves data and other oil and natural gas information set forth below (the "**Reserves Data**") is based upon an evaluation by Sproule with an effective date of December 31, 2018, contained in the Sproule Report, which has a preparation date of March 13, 2019. The Sproule Report evaluated, as at December 31, 2018, the crude oil, NGLs and natural gas reserves of Petrus. The Reserves Data summarizes Petrus' crude oil, NGLs and natural gas reserves of future net revenue for these reserves using forecast prices and costs.

The Sproule Report has been prepared in accordance with the standards contained in the COGE Handbook and the reserve definitions contained in NI 51-101 and the COGE Handbook. Additional information not required by NI 51-101 has been presented to provide continuity and additional information which the Corporation believes is important to readers of this Annual Information Form. Sproule was engaged to provide evaluations of proved and proved plus probable reserves and no attempt was made to evaluate possible reserves.

The Sproule Report is based on certain factual data supplied by us and Sproule's opinion of reasonable practice in the industry. The extent and character of ownership and all factual data pertaining to petroleum properties and contracts (except for certain information residing in the public domain) were supplied by us to Sproule. Sproule accepted this data as presented and neither title searches nor field inspections were conducted.

The net present value of future net revenue attributable to reserves is stated without provision for interest costs and general and administrative costs, but after providing for estimated royalties, production costs, development costs, other income, future capital expenditures and well abandonment and reclamation costs.

Petrus determined the future net revenue and present value of future net revenue after income tax expenses by utilizing Sproule's before income tax future net revenue and our estimate of income tax. Our 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 our tax pools and the sequences of claims and rates of claim thereon. The values shown may not be representative of future income tax obligations, applicable tax horizon or after tax valuation. The after tax net present value of our oil and natural gas properties reflects the tax burden of our properties on a stand-alone basis. It does not provide an estimate of the value of Petrus as a business entity, which may be significantly different. Our financial statements for the year ended December 31, 2018 should be consulted for additional information regarding our taxes.

All of Petrus' consolidated reserves are in Canada and, specifically, in the Province of Alberta.

There are numerous uncertainties inherent in estimating quantities of crude oil, NGLs and natural gas reserves and the future cash flows attributed to such reserves. In general, such estimates are based upon a number of variable factors and assumptions, such as historical production from the properties, production rates, ultimate reserve recovery, timing and amount of capital expenditures, marketability of oil and natural gas, royalty rates, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary materially from actual results. For those reasons, estimates of the economically recoverable crude oil, NGL and natural gas reserves attributable to any particular group of properties, classification of such reserves based on risk of recovery and estimates of future net revenues associated with reserves prepared by different engineers, or by the same engineers at different times, may vary. The Corporation's actual production, revenues, taxes and development and operating expenditures with respect to its consolidated reserves will vary from estimates thereof and such variations could be material.

It should not be assumed that the undiscounted or discounted net present value of future net revenue attributable to reserves estimated by Sproule represent the fair market value of those reserves. Other assumptions and qualifications relating to costs, prices for future production and other matters are summarized herein. The recovery and reserve estimates of crude oil, NGLs and natural gas reserves provided herein are estimates only. Actual reserves may be greater than or less than the estimates provided herein.

The information relating to the Corporation's consolidated crude oil, NGLs and natural gas reserves contains forward-looking statements relating to future net revenues, forecast capital expenditures, future development plans, timing and costs related thereto, forecast operating costs, anticipated production and abandonment costs. See "*Special Note Regarding Forward-Looking Statements*", "*Industry Conditions*" and "*Risk Factors*".

In certain of the tables set forth below, the columns may not add due to rounding.

**Reserves Data (Forecast Prices and Costs)** 

SUMMARY OF OIL AND NATURAL GAS RESERVES AND NET PRESENT VALUES OF FUTURE NET REVENUE AS OF DECEMBER 31, 2018 FORECAST PRICES AND COSTS

	RESERVES									
		GROS	S RESERVES			NET RESERVES				
RESERVE CATEGORY	Light and Medium Crude Oil (Mbbls)	Natural Gas Liquids (Mbbls)	Conventional Natural Gas (MMcf)	Coalbed Methane Gas (MMcf)	Total BOE (MBOE)	Light and Medium Crude Oil (Mbbls)	Natural Gas Liquids (Mbbls)	Conventional Natural Gas (MMcf)	Coalbed Methane Gas (MMcf)	Total BOE (MBOE)
PROVED:	(1110013)	(110013)	(initial)	(initial)	(IIIBOL)	(110013)	(110013)	(initial)	(minici)	(MBOE)
Developed Producing	1,249.5	3,387.6	52,491	-	13,385.6	1,083.5	2,564.1	46,154	-	11,339.9
Developed Non-Producing	93.7	120.7	16,980	-	3,044.4	90.9	89.7	14,424	-	2,584.5
Undeveloped	1,474.4	4,882.4	57,180	-	15,886.8	1,262.3	4,185.8	51,377	-	14,010.9
TOTAL PROVED	2,817.7	8,390.7	126,650	-	32,316.8	2,436.7	6,839.6	111,954	-	27,935.4
PROBABLE	2,518.8	4,319.7	65,072	-	17,684.1	2,103.8	3,430.4	58,640		15,307.5
TOTAL PROVED PLUS PROBABLE	5,336.5	12,710.4	191,723		50,000.8	4,540.5	10,270.0	170,594		43,242.9

# NET PRESENT VALUES OF FUTURE NET REVENUE BEFORE INCOME TAX EXPENSES DISCOUNTED AT (%/year)

RESERVES CATEGORY	0% (\$000s)	5% (\$000s)	10% (\$000s)	15% (\$000s)	20% (\$000s)	Unit Value Before Income Tax Discounted at 10% per Year <sup>(1)</sup> (\$/BOE)
PROVED:						
Developed Producing	258,437	211,579	181,588	159,464	142,586	16.01
Developed Non-Producing	21,959	16,299	12,754	10,349	8,616	4.93
Undeveloped	249,274	172,272	121,860	87,262	62,566	8.70
TOTAL PROVED	529,671	400,149	316,203	257,075	213,768	11.32
PROBABLE	390,858	262,581	190,929	145,945	115,421	12.47
TOTAL PROVED PLUS PROBABLE	920,528	662,730	507,132	403,019	329,189	11.73

Note: (1) Unit values based on net volumes.

#### NET PRESENT VALUES OF FUTURE NET REVENUE AFTER INCOME TAX EXPENSES DISCOUNTED AT (%/year)

0% (\$000s)	5% (\$000s)	10% (\$000s)	15% (\$000s)	20% (\$000s)
258,437	211,579	181,588	159,464	142,586
21,959	16,299	12,754	10,349	8,616
233,029	163,753	117,193	84,606	61,003
513,425	391,630	311,535	254,418	212,206
291,404	196,175	144,111	111,617	89,476
804,830	587,805	455,646	366,035	301,681
	(\$000s) 258,437 21,959 233,029 513,425 291,404	(\$000s)         (\$000s)           258,437         211,579           21,959         16,299           233,029         163,753           513,425         391,630           291,404         196,175	(\$000s)         (\$000s)         (\$000s)           258,437         211,579         181,588           21,959         16,299         12,754           233,029         163,753         117,193           513,425         391,630         311,535           291,404         196,175         144,111	(\$000s)         (\$000s)         (\$000s)         (\$000s)           258,437         211,579         181,588         159,464           21,959         16,299         12,754         10,349           233,029         163,753         117,193         84,606           513,425         391,630         311,535         254,418           291,404         196,175         144,111         111,617

# TOTAL FUTURE NET REVENUE (UNDISCOUNTED) AS OF DECEMBER 31, 2018 FORECAST PRICES AND COSTS <sup>(1)(2)</sup>

RESERVES CATEGORY	REVENUE (\$000s)	ROYALTIES (\$000s)	OPERATING COSTS (\$000s)	DEVELOPMENT COSTS (\$000s)	ABANDONMENT AND RECLAMATION COSTS (\$000s)	FUTURE NET REVENUE BEFORE INCOME TAX EXPENSES (\$000s)	INCOME TAX EXPENSES (\$000s)	FUTURE NET REVENUE AFTER INCOME TAX EXPENSES (\$000s)
Total Proved	1,302,251	154,218	369,995	194,757	53,610	529,671	16,245	513,425
Total Proved plus Probable	2,108,474	263,262	574,589	290,875	59,219	920,528	115,699	804,830

Notes:

Total revenue includes company revenue before royalty and includes other income.
 Royalties include Crown, freehold and overriding royalties and mineral tax.

	FUTURE NET REVENUE BY PRODUCTION GROUP AS OF DECEMBER 31, 2018 FORECAST PRICES AND COSTS					
<b>RESERVES</b> CATEGORY	PRODUCTION GROUP	FUTURE NET REVENUE BEFORE INCOME TAX EXPENSES (discounted at 10%/year) (\$000s)	UNIT VALUE <sup>(1)</sup>			
		70 (07	(\$/Boe)			
Proved	Light and Medium Crude Oil <sup>(2)</sup>	72,607	14.50			
	Conventional Natural Gas <sup>(3)</sup>	243,597	10.62			
	Coalbed Methane <sup>(3)</sup>	-	-			
	Total	316,203				
Proved plus Probable	Light and Medium Crude Oil <sup>(2)</sup>	127,658	14.67			
	Conventional Natural Gas (3)	379,474	10.99			
	Coalbed Methane <sup>(3)</sup>	-	-			
	Total	507,132				

Notes:

(1) Unit values are based on net reserve volumes.

(2) Including solution gas and other by-products.

(3) Including by-products but excluding solution gas and by-products from oil wells.

# **Pricing Assumptions – Forecast Prices and Costs**

Weighted average historical prices we realized for the year ended December 31, 2018, excluding price risk management activities, were \$69.74/Bbl for light and medium crude oil, \$1.73/Mcf for conventional natural gas and \$40.50/Bbl for NGLs. Sproule employed the following pricing, exchange rate and inflation rate assumptions as of December 31, 2018 in the Sproule Report in estimating reserves data using forecast prices and costs as shown in the table below.

#### SUMMARY OF WEIGHTED AVERAGE HISTORICAL PRICES FOR 2018 AND PRICING AND INFLATION RATE ASSUMPTIONS FORECAST PRICES AND COSTS <sup>(1)</sup>

	MEDIUM AND I OI		NATURAL GAS	NATURAL GAS LIQUIDS			
YEAR	Canadian Light Sweet Crude 40° API (\$/Bbl)	Western Canada Select 20.5° API (\$/Bbl)	Alberta AECO-C Spot (\$/MMBtu)	Edmonton Propane (\$/Bbl)	Edmonton Butane (\$/Bbl)	Edmonton Pentanes Plus (\$/Bbl)	Exchange Rate (\$US/\$Cdn) <sup>(2)</sup>
2018 Actual							
Benchmarks <sup>(1)</sup>	68.49	52.34	1.53	27.00	33.65	79.31	0.77
Forecast Benchmarks							
2019	75.27	59.47	1.95	30.27	40.91	75.32	0.77
2020	77.89	62.31	2.44	34.51	50.25	80.00	0.80
2021	82.25	67.45	3.00	38.15	56.88	83.75	0.80
2022	84.79	69.53	3.21	39.64	58.01	85.50	0.80
2023	87.39	71.66	3.30	40.62	59.17	87.29	0.80
2024	89.14	73.10	3.39	41.62	60.36	89.11	0.80
2025	90.92	74.56	3.49	42.64	61.56	90.96	0.80
2026	92.74	76.05	3.58	43.68	62.79	92.86	0.80
2027	94.60	77.57	3.68	44.75	64.05	94.79	0.80
2028	96.49	79.12	3.78	45.83	65.33	96.76	0.80
2029	98.42	80.70	3.88	46.94	66.64	98.77	0.80
Escalated at 2.09	6 per vear thereafter						

Escalated at 2.0% per year thereafter

#### Notes:

(1) As at December 31, 2018.

(2) Exchange rate used to generate the benchmark reference prices in this table.

#### **Reconciliation of Changes in Reserves**

The following table sets forth a reconciliation of our gross reserves as at December 31, 2018, derived from the Sproule Report using forecast prices and cost estimates, reconciled to our gross reserves as at December 31, 2017.

#### RECONCILIATION OF GROSS RESERVES BY PRINCIPAL PRODUCT TYPE FORECAST PRICES AND COSTS

LIGHT AND MEDIUM CRUDE OIL (Mbbls)	NATURAL GAS LIQUIDS (Mbbls)	CONVENTIONAL NATURAL GAS (MMcf)	COALBED METHANE (MMcf)	TOTAL OIL EQUIVALENT (MBOE)
3,372.0	5,943.2	132,900	-	31,465.0
-	-	-	-	-
11.7	650.6	5,873	-	1,641.2
-	-	-	-	-
185.2	2,434.1	6,309	53	3,679.6
-	-	-	-	-
2.0	41.4	658	-	153.1
(188.2)	(55.7)	(1,605)	-	(511.4)
(52.5)	(99.5)	(3,997)	-	(818.1)
(512.5)	(523.4)	(13,489)	(53)	(3,292.8)
2,817.7	8,390.7	126,650	-	32,316.8
	MEDIUM CRUDE OIL (Mbbls) 3,372.0 - 11.7 - 185.2 - 2.0 (188.2) (52.5) (512.5)	MEDIUM CRUDE OIL         NATURAL GAS LIQUIDS           (Mbbls)         (Mbbls)           3,372.0         5,943.2           11.7         650.6           185.2         2,434.1           2.0         41.4           (188.2)         (55.7)           (52.5)         (99.5)           (512.5)         (523.4)	MEDIUM CRUDE OIL         NATURAL GAS LIQUIDS         CONVENTIONAL NATURAL GAS (Mbbls)           (Mbbls)         (Mbbls)         (MMcf)           3,372.0         5,943.2         132,900           -         -         -           11.7         650.6         5,873           -         -         -           11.7         650.6         5,873           -         -         -           185.2         2,434.1         6,309           -         -         -           2.0         41.4         658           (188.2)         (55.7)         (1,605)           (52.5)         (99.5)         (3,997)           (512.5)         (523.4)         (13,489)	MEDIUM CRUDE OIL         NATURAL GAS LIQUIDS         CONVENTIONAL NATURAL GAS         COALBED METHANE           (Mbbls)         (Mbbls)         (MMcf)         (MMcf)           3,372.0         5,943.2         132,900         -           11.7         650.6         5,873         -           11.7         650.6         5,873         -           185.2         2,434.1         6,309         53           2.0         41.4         658         -           (188.2)         (55.7)         (1,605)         -           (52.5)         (99.5)         (3,997)         -           (512.5)         (523.4)         (13,489)         (53)

PROBABLE RESERVES	LIGHT AND MEDIUM CRUDE OIL	NATURAL GAS LIQUIDS	CONVENTIONAL NATURAL GAS	COALBED METHANE	TOTAL OIL EQUIVALENT
	(Mbbls)	(Mbbls)	(MMcf)	(MMcf)	(MBOE)
December 31, 2017	2,959.9	2,935.4	66,623	-	16,999.1
Extensions	-	99.4	888	-	247.3
Infills	3.0	264.7	2,543	-	691.5
Improved Recovery	-	-	-	-	-
Technical Revisions (1)	(443.2)	1,121.1	(2,569)	-	249.7
Discoveries	-	-	-	-	-
Acquisitions (3)	0.4	10.5	167	-	38.7
Dispositions <sup>(3)</sup>	(51.7)	(13.7)	(387)	-	(130.0)
Economic Factors (2)	50.4	(97.7)	(2,192)	-	(412.6)
Production			-		-
December 31, 2018	2,518.8	4,319.7	65,072		17,684.1

PROVED PLUS PROBABLE RESERVES	LIGHT AND MEDIUM CRUDE OIL	NATURAL GAS LIQUIDS	CONVENTIONAL NATURAL GAS	COALBED METHANE	TOTAL OIL EQUIVALENT
	(Mbbls)	(Mbbls)	(MMcf)	(MMcf)	(MBOE)
December 31, 2017	6,331.9	8,878.5	199,522	-	48,464.1
Extensions	-	99.4	888	-	247.3
Infills	14.7	915.3	8,416	-	2,332.7
Improved Recovery	-	-	-	-	-
Technical Revisions (1)	(258.0)	3,555.3	3,742	53	3,929.7
Discoveries	-	-	-	-	-
Acquisitions (3)	2.4	51.9	825	-	191.8
Dispositions (3)	(239.9)	(69.4)	(1,992)	-	(641.3)
Economic Factors (2)	(2.1)	(197.2)	(6,188)	-	(1,230.7)
Production	(512.5)	(523.4)	(13,489)	(53)	(3,292.8)
December 31, 2018	5,336.5	12,710.4	191,723	-	50,000.8

Notes:

(1) Includes technical revisions due to reservoir performance, geological and engineering changes as well as changes of category from probable to proven.

(2) Includes economic revisions due to changes in economic limits and related to price and royalty factor changes.

(3) Includes production attributable to any acquired interests from the acquisition date to effective date of the report and production realized from disposed interests from the opening balance date to the effective date of disposition.

# ADDITIONAL INFORMATION RELATING TO RESERVES DATA

#### **Undeveloped Reserves**

Undeveloped reserves are attributed by Sproule in accordance with standards and procedures contained in the COGE Handbook. Proven undeveloped reserves are generally those reserves tested or indicated by analogy to be productive, infill drilling locations and lands contiguous to production. Probable undeveloped reserves are generally those reserves related to infill wells that have not yet been drilled or wells further away from gathering systems requiring relatively high capital to bring on production. This also includes the probable undeveloped wedge from the proved undeveloped locations.

Petrus currently plans to pursue the development of our proved and probable undeveloped reserves within the next four years through ordinary course capital expenditures. In some cases, it will take longer than four years to develop these reserves due; however, Petrus expects that the large majority of our booked undeveloped projects will be completed within a three year time frame. The timing of the development of such projects is guided by, among other

things, capital constraints and yearly budgeting. There are a number of factors that could result in delayed or cancelled development, including the following: (i) existence of higher priority expenditures; (ii) changing economic conditions (due to pricing, operating and capital expenditure fluctuations); (iii) changing technical conditions (including production anomalies, such as water breakthrough or accelerated depletion); (iv) multi-zone developments (for instance, a prospective formation completion may be delayed until the initial completion is no longer economic); (v) a larger development program may need to be spread out over several years to optimize capital allocation and facility utilization; and (vi) surface access issues (including those relating to land owners, weather conditions and regulatory approvals). See "*Risk Factors – Reserve Estimates*".

#### **Proved Undeveloped Reserves**

The following table discloses, for each product type, the volumes of proved undeveloped reserves that were attributed in each of the most recent three financial years.

Year	Crue	d Medium de Oil bbls)		l Natural Gas Mcf)	0 0 0 0 0 0 0	Methane Mcf)		GLs bbls)
	First Attributed	Cumulative at Year End	First Attributed	Cumulative at Year End	First Attributed	Cumulative at Year End	First Attributed	Cumulative at Year End
2016	166.2	1,948.3	6,237	58,059	-	-	269.4	2,770.1
2017	0.0	1,674.7	5,803	55,193	-	-	365.6	2,942.2
2018	11.7	1474.4	4,996	57,180	-	-	525.0	4,882.4

Proved undeveloped reserves have been assigned in areas where the reserves can be estimated with a high degree of certainty. In most instances, proved undeveloped reserves will be assigned on lands immediately offsetting existing producing wells within the same accumulation or pool. Sproule has assigned 15,886.8 MBOE of proved undeveloped reserves in the Sproule Report with \$191.6 million of associated undiscounted capital, of which \$190.0 million is forecast to be spent in the first three years.

# **Probable Undeveloped Reserves**

The following table discloses, for each product type, the volumes of probable undeveloped reserves that were first attributed in each of the most recent three financial years.

Year	Crue	d Medium de Oil bbls)		al Natural Gas Mcf)		Methane Mcf)		GLs bbls)
	First Attributed	Cumulative at Year End	First Attributed	Cumulative at Year End	First Attributed	Cumulative at Year End	First Attributed	Cumulative at Year End
2016	163.4	2,249.2	7,057	36,063	-	-	312.9	1,550.4
2017	0.0	2,366.6	11,892	44,682	-	-	749.2	2,155.1
2018	3.0	2,068.0	2,886	45,082	-	-	303.8	3,383.1

Probable undeveloped reserves have been assigned in areas where the reserves can be estimated with less certainty. It is equally likely that the actual remaining quantities recovered will be greater or less than the proved plus probable reserves. In most instances probable undeveloped reserves have been assigned on lands in the area with existing producing wells but there is some uncertainty as to whether they are directly analogous to the producing accumulation or pool. Sproule has assigned 12,964.8 MBOE of probable undeveloped reserves in the Sproule Report with \$96.0 million of associated undiscounted capital, of which \$96.0 million is forecast to be spent in the first three years.

# Significant Factors or Uncertainties Affecting Reserves Data

Changes in future commodity prices relative to the forecasts provided under "*Pricing Assumptions*" above could have a negative impact on our reserves and in particular the development of our undeveloped reserves unless future development costs are adjusted in parallel. Other than the foregoing and the factors disclosed or described in the tables above, we expect to fund the development costs of our reserves through a combination of cash flow from operating

activities, availability under the Petrus Credit Facilities and/or and equity issuances. There can be no guarantee that funds will be available or that our Board of Directors will allocate funding to develop all of the reserves attributed in the Sproule Report. Failure to develop those reserves could have a negative impact on our future cash flows from operating activities. Interest or other costs of external funding are not included in our reserves and future net revenue estimates and would reduce reserves and future net revenue to some degree depending upon the funding sources utilized. We do not anticipate that interest or other funding costs would make development of any of our properties uneconomic. We do not anticipate any significant economic factors or significant uncertainties will affect any particular components of our reserves data. However, our reserves can be affected significantly by fluctuations in product pricing, capital expenditures, operating costs, royalty regimes and well performance that are beyond our control. See "*Risk Factors*".

#### **Abandonment and Reclamation Costs**

Abandonment and reclamation costs for all existing wells (i.e. producing, standing, injection etc.) have been forecast by Petrus at the corporate level and abandonment and reclamation costs for the future proposed development wells have been forecast by Sproule as part of the Sproule Report. These abandonment and reclamation costs have been estimated in the Sproule Report and attributed to all properties that have been assigned reserves in the Sproule Report and have been taken into account by Sproule in determining reserves that should be attributed to a property and in determining the aggregated future net revenue therefrom. No allowance by the Sproule Report was made, however, for the abandonment and reclamation of any pipelines or facilities.

Petrus will be liable for its share of ongoing environmental obligations and for the ultimate reclamation of the surface leases, wells, facilities, and pipelines held by it upon abandonment. Ongoing environmental obligations are expected to be funded out of cash flow.

No estimate of salvage value is netted against the estimated cost. Our model for estimating the amount of future abandonment and reclamation expenditures was done on an individual well and facility level. Estimated expenditures for each well and facility are based on internal estimates using public data and management's experience. Each well and facility are assigned an average cost (by commodity type and well depth) for abandonment and reclamation over a 60 year period. The estimated expenditures are based on current regulatory standards and actual abandonment cost history. Timing of expenditures is based on expected well lives. Facility reclamation costs are generally scheduled to begin shortly before the end of the reserve life of our associated reserves and continue beyond the reserve life under the assumption that decommissioning of plant/facilities are generally mobile assets with a long useful life.

We estimate that we will incur total net reclamation and abandonment costs of \$6.0 million, discounted at 10%, to abandon and reclaim all wells (\$28.1 million undiscounted, before tax). Abandonment and reclamation costs undiscounted and expected to be paid over the next three years totals approximately \$1.0 million.

The additional liability associated with pipelines and facility reclamation costs, which were estimated to be \$13.5 million as at December 31, 2018, were not deducted in estimating future net revenue in the Sproule Report.

Additional information related to our estimated share of future environmental and reclamation obligations for the working interest properties (including all abandonment and reclamation costs associated with all existing wells, facilities, pipelines and leases) can be found in Petrus' audited financial statements for the year ended December 31, 2018 and the accompanying management's discussion and analysis, which are available on SEDAR at www.sedar.com.

#### **Future Development Costs**

The table below sets out the total development costs deducted in the estimation in the Sproule Report of future net revenue attributable to our proved reserves and proved plus probable reserves (using forecast prices and costs).

	FORECAST	PRICES AND COSTS
Year	Proved Reserves (\$000s)	Proved Plus Probable Reserves (\$000s)
2019	67,577.7	81,595.9
2020	79,748.3	147,314.6
2021	45,822.1	60,356.0
2022	1,609.0	1,609.0
2023	-	-
2024	-	-
TOTAL UNDISCOUNTED	194,757.1	290,875.5

We have several different sources of funding to consider in order for financing future development costs: internally generated cash flows from operating activities, debt financing, equity financing and asset dispositions. We currently expect to fund future development costs primarily through cash flows from operating activities. We may rely, to some extent, on debt financing by utilizing the available Petrus Credit Facilities or on equity financing by issuing additional Common Shares. The use of debt or equity financing would be dependent on market conditions, the cost of the capital, the desirability of accelerating our capital expenditure program and the availability of financing on favourable terms. The use of proceeds from asset dispositions would be dependent on prevailing commodity and market conditions which impact the ability to dispose of properties on favourable terms.

#### OTHER OIL AND NATURAL GAS INFORMATION

#### **Oil and Natural Gas Wells**

The following table sets forth the number and status of our wells effective December 31, 2018.

	PRODUCING WELLS			NON-PRODUCING WELLS						
	Oi	l	Natura	l Gas	Oil	l	Natural	l Gas	Other Non-l	Producing
	Gross	Net	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Alberta	112	63.8	172	102.9	168	72.8	234	143.2	32	14.4
TOTAL	112	63.8	172	102.9	168	72.8	234	143.2	32	14.4

Notes:

"Gross" wells means the number of wells in which the Corporation has a working interest.

"Net" wells means the aggregate number of wells obtained by multiplying each gross well by the Corporation's percentage working interest therein. Other Non-producing includes wellbores shut-in for economic reasons, wellbores not capable of production and wellbores used for disposal or injection of water.

Of the non-producing wells, 3 gross (0.70 net) were wells drilled in 2018 that were capable of production and had reserves assigned to them.

#### **Properties with no Attributed Reserves**

The following table summarizes, effective December 31, 2018, the gross and net acres of undeveloped properties in which we had an interest and also the number of net acres for which our rights to explore, develop or exploit could expire within one year.

	GROSS ACRES	NET ACRES	NET ACRES EXPIRING WITHIN ONE YEAR
Alberta	283,531	160,869	8,458
TOTAL	283,531	160,869	8,458

Petrus expects that rights to explore, develop and exploit approximately 8,458 net acres of undeveloped land holdings may expire by December 31, 2019. A portion of Petrus' 2019 exploitation and development program may result in extending or eliminating such potential expirations. Petrus closely monitors land expirations as compared to its development program with the strategy of minimizing undeveloped land expirations relating to significant uncertainties that affect the anticipated development or production activities on properties with no contributed reserves.

#### **Forward Contracts**

We are exposed to market risks resulting from fluctuations in commodity prices, foreign exchange rates and interest rates in the normal course of operations. A variety of derivative instruments are used by us to reduce our exposure to fluctuations in commodity prices and foreign exchange rates. We are exposed to losses in the event of default by the counterparties to these derivative instruments. We manage this risk by diversifying our derivative portfolio amongst a number of financially sound counterparties.

We may use certain financial instruments to hedge exposure to commodity price fluctuations on a portion of our crude oil and natural gas production. For further information, see note 10 to our financial statements for the year ended December 31, 2018.

# **Tax Horizon**

Based on Sproule production forecasts, planned capital expenditures and the forecast commodity pricing employed in the Sproule Report, we estimate that we will not be required to pay current income taxes until at least 2024. See "*Risk Factors – Income Taxes*".

#### **Costs Incurred**

The following table summarizes capital expenditures incurred by us during the year ended December 31, 2018.

	PROPERTY ACQ			
	Proved Properties	Unproved Properties	Exploration Costs	Development Costs
TOTAL (\$millions)	22.322	1.635	-	23.957

#### **Drilling Activity**

The following table sets forth the gross and net exploration and development wells drilled by us during the year ended December 31, 2018. All wells were drilled in Canada.

	EXPLORATI	ON WELLS	DEVELOPMENT WELLS		
	Gross	Net	Gross	Net	
Light and Medium Crude Oil	-	-	9	3.75	
Natural Gas	-	-	1	0.50	
Service	-	-	-	-	
Stratigraphic Test	-	-	-	-	
Dry		-	-	-	
TOTAL	-	-	10	4.25	

# **Planned Capital Expenditures**

On January 7, 2019, Petrus announced its planned capital expenditure budget of \$8 to \$10 million (excluding acquisitions and dispositions) for the first quarter of 2019 which was primarily focused on drilling opportunities in its inventory at Ferrier, Alberta. The objectives of the 2019 capital plan will be to increase Petrus' liquids weighting, maintain or reduce current debt levels, maintain or grow production and grow cash flow per share through disciplined capital spending (see "*Development of Our Business – 2018 – Overview of Capital Expenditure Program*").

With the current volatility of commodity prices, we continue to actively monitor our 2019 capital expenditure plans in the context of expected cash flows from operating activities, potential service cost adjustments and portfolio allocation in order to prudently manage and maintain financial flexibility. The Corporation currently plans to drill throughout 2019 within funds flow and repay \$1 to 2 million of debt each quarter.

#### **Production Estimates**

The following table discloses for each product type the total volume of production estimated by Sproule in the Sproule Report for 2019 in the estimates of future net revenue from gross proved and gross proved plus probable reserves disclosed above.

	Light and Medium Crude Oil (Bbls/d)	NGLs (Bbls/d)	Conventional Natural Gas (Mcf/d)	Total Oil Equivalent (BOE/d)
PROVED				
Developed Producing	565.4	2,057.3	27,422	7,193.1
Developed Non-Producing	49.7	42.4	3,494	674.4
Undeveloped	219.2	949.6	8,782	2632.4
TOTAL PROVED	834.2	3,049.4	39,698	10,500.0
PROBABLE	166.9	426.2	4,352	1318.3
TOTAL PROVED PLUS PROBABLE	1,001.1	3,475.6	44,050	11,818.3

# **Production History**

The following table discloses, on a quarterly basis for the year ended December 31, 2018, certain information in respect of our production, product prices received, royalties paid, operating expenses and resulting netback.

	Quarter Ended 2018				Year ended	
	Mar. 31	June 30	Sept. 30	Dec. 31	Dec. 31, 2018	
Average Daily Production (1)						
Light and Medium Crude Oil (Bbls/d)	1,530	1,484	1,243	1,358	1,402	
Natural Gas Liquids (Bbls/d)	1,475	1,241	1,519	1,496	1,433	
Conventional Natural Gas (MMcf/d)	45,543	39,126	33,461	30,480	37,101	
Combined (BOE/d)	10,596	9,246	8,338	7,934	9,019	
Average Net Production Prices Received						
Light and Medium Crude Oil (\$/Bbl)	73.91	75.29	77.24	52.26	69.74	
Natural Gas Liquids (\$/Bbl)	46.50	41.55	45.27	29.01	40.50	
Conventional Natural Gas (\$/Mcf)	2.18	1.24	1.50	1.95	1.73	
Combined (\$/BOE)	26.50	22.92	25.79	21.91	24.40	
Royalties Paid/(Received)						
Light and Medium Crude Oil (\$/Bbl)	12.18	12.69	11.50	8.53	11.27	
Natural Gas Liquids (\$/Bbl)	9.97	7.79	6.99	6.79	7.86	
Conventional Natural Gas (\$/Mcf)	0.40	(0.14)	(0.05)	0.13	0.10	
Combined (\$/BOE)	4.87	2.49	2.80	3.24	3.42	
Production Costs (2)						
Light and Medium Crude Oil (\$/Bbl)	17.33	16.27	18.86	17.60	17.46	
Natural Gas Liquids (\$/Bbl)	9.31	9.71	7.50	7.41	8.41	
Conventional Natural Gas (\$/Mcf)	0.49	0.51	0.52	0.61	0.53	
Combined (\$/BOE)	5.62	5.74	5.93	6.45	5.90	
<b>Operating Netback</b> <sup>(3)</sup>						
Light and Medium Crude Oil (\$/Bbl)	44.41	46.32	46.88	26.12	41.01	
Natural Gas Liquids (\$/Bbl)	27.22	24.04	30.78	14.81	24.23	
Conventional Natural Gas (\$/Mcf)	1.29	0.87	1.03	1.21	1.10	
Combined (\$/BOE)	16.01	14.69	17.06	12.22	15.08	

Notes:

(1) Before the deduction of royalties.

(2) Production costs are composed of direct costs incurred to operate both oil and natural gas wells. A number of assumptions are required to allocate these costs between product types.

(3) Operating Netback is calculated by deducting royalties paid and production costs, including transportation costs, from prices received, excluding the effects of hedging. See "*Non-GAAP Financial Measures*"

#### **Production Volume by Field**

The following table indicates the average daily net production from our fields for the year ended December 31, 2018.

	Light and Medium Crude Oil (Bbls/d)	NGLs (Bbls/d)	Conventional Natural Gas (Mcf/d)	Total Oil Equivalent (BOE/d)	Percentage (%)
Alberta					
Central Alberta	411	180	6,735	1,714	19%
Ferrier	808	1,242	26,745	6,508	72%
Foothills <sup>(1)</sup>	183	11	3,621	797	9%
TOTAL	1,402	1,433	37,101	9,019	100%

# CAPITAL STRUCTURE

#### **Share Capital**

We are authorized to issue an unlimited number of Common Shares and an unlimited number of Preferred Shares. A description of our share capital is set forth below. For a complete description of our share capital, reference should be made to our articles, a copy of which has been filed on our SEDAR profile at *www.sedar.com*.

#### **Common Shares**

The holders of Common Shares are entitled to one vote at all meetings of our shareholders except at meetings of which only holders of a specified class of shares are entitled to vote. The holders of Common Shares are entitled to receive, subject to the prior rights and privileges attaching to any other class of our shares, such dividends as may be declared by us. Holders of Common Shares are entitled upon any liquidation, dissolution or winding-up of Petrus, subject to the prior rights and privileges attaching to any other class of our shares, to receive the remaining property and assets of the Corporation.

#### **Preferred Shares**

The Preferred Shares are issuable in series and the designation of, and the rights or privileges, restrictions and conditions attached to any series of Preferred Shares are to be established by our Board of Directors prior to the issuance thereof. The Preferred Shares have a preference over the Common Shares and any of our classes of shares ranking junior to the Preferred Shares with respect to the payment of dividends and the distribution of our assets in the event of liquidation, dissolution or winding-up of us or any other distribution of our assets among our shareholders for the purpose of winding-up our affairs. No series of Preferred Shares has been designated to date and there are no Preferred Shares outstanding.

#### Stock Options

As at December 31, 2018, there were 3,082,880 Stock Options outstanding (the "**Outstanding Options**"), of which 443,700 were exercisable. Each Outstanding Option currently entitles the holder to acquire one Common Share at a price ranging from \$0.77 to \$16.00. The weighted average remaining life of the Outstanding Options is 1.11 years from December 31, 2018.

#### DSUs

As at December 31, 2018, there were 382,796 DSUs outstanding (the "**Outstanding DSUs**"). Each Outstanding DSU currently entitles the holder thereof to, upon redemption of the DSU (at Petrus' sole direction): (i) a cash payment equal to the weighted average of the prices at which the Petrus Shares trade on the TSX for the five (5) trading days immediately preceding the date of the redemption of such DSU: (ii) a number of Common Shares equal to the number of DSUs redeemed; or (iii) a combination of cash and Common Shares, in each case, in amounts calculated as set forth above.

#### **RSUs**

As at December 31, 2018, there were no RSUs outstanding (the "**Outstanding RSUs**"). Each Outstanding RSU currently entitles the holder thereof, upon settlement of the RSU, to an amount equal to the weighted average of the prices at which the Petrus Shares trade on the TSX for the five (5) trading days immediately preceding the date of the settlement of such RSU, payable at Petrus' sole discretion in cash or Common Shares or a combination thereof.

# **DIVIDEND POLICY**

#### **Dividends and Dividend Policy**

No dividends have been declared or paid on the Common Shares or Old Petrus Shares since incorporation. Any decision to pay dividends on the Common Shares will be made by the Board of Directors on the basis of the Corporation's earnings, financial requirements and other conditions existing at such future time. See "*Risk Factors – Substantial Capital Requirements*".

Other than as detailed below, there are no restrictions in our articles or elsewhere which could prevent us from paying dividends. It is not contemplated that any dividends will be paid on the Common Shares in the immediate future, as it is anticipated that all available funds will be invested to finance the growth of our business. The Board of Directors will determine if, and when, dividends will be declared and paid in the future from funds properly applicable to the payment of dividends based on our financial position at the relevant time. Any decision to pay dividends on the Common Shares will be made by the directors on the basis of Petrus' earnings, financial requirements and other factors existing at such future time, including commodity prices, production levels, capital expenditure requirements, debt service requirements, operating costs, royalty burdens, foreign exchange rates and the satisfaction of the liquidity and solvency tests imposed by the ABCA for the declared and paid.

Under the terms of the Petrus Credit Facilities, the Corporation may not, without the prior written consent of a majority of its lenders, pay dividends or capital distributions in the event that such payment would result in a breach of the provisions of the Petrus Credit Facilities.

#### MARKET FOR OUR SECURITIES

The Common Shares trade on the TSX under the symbol "PRQ". The following table sets forth the price range and trading volume of the Common Shares on the TSX for the periods indicated.

	Price Ra		
Period	Low	High	Trading Volume
2018			
January	1.40	1.94	694,300
February	1.21	1.39	1,644,300
March	1.07	1.25	531,800
April	1.04	1.24	375,800
May	1.11	1.55	819,900
June	1.01	1.42	771,900
July	1.01	1.15	251,400
August	0.77	1.06	845,200
September	0.90	1.05	548,000
October	0.79	1.12	1,137,100
November	0.68	0.84	1,066,000
December	0.47	0.80	958,000
2019			
January	0.51	0.70	716,600
February	0.46	0.53	1,802,400
March (Mar $1 - 13$ )	\$0.44	\$0.47	292,050

#### **Prior Sales**

During the year ended December 31, 2018, we granted an aggregate of 1,208,880 Options to acquire an aggregate of 1,208,880 Common Shares with a weighted average exercise price of \$1.14, and 296,104 DSUs at a deemed value of \$0.77 per DSU.

# **DIRECTORS AND OFFICERS**

The name, municipality of residence, principal occupation for the prior five years and position with us of each of our directors and officers as of the date hereof are as follows:

Name and Residence	Position	Principal Occupation During Previous Five Years
Neil Korchinski Alberta, Canada	President and Chief Executive Officer and a Director (since November 7, 2016, formerly Vice President Engineering and Chief Operating Officer of Old Petrus (August, 2011 to February 2016))	Mr. Korchinski was Vice President Engineering and Chief Operating Officer of Petrus from February 2, 2016 to November 7, 2016 and held that position at Old Petrus from August 8, 2011 to February 2, 2016.
Patrick Arnell <sup>(1)(2)(3)</sup> Alberta, Canada	Director (since November 25, 2015, previously a director of Old Petrus (August, 2011 to February 2016))	Mr. Arnell was a director of Old Petrus from August 3, 2011 to February 2, 2016. Mr. Arnell is an independent businessman and is currently also the Chairman and Chief Executive Officer of Orix Investments Inc., a private investment company headquartered in Calgary, Alberta.
Donald Cormack <sup>(1)(2)(3)</sup> Alberta, Canada	Director (since November 25, 2015, previously a director of Old Petrus (October, 2014 to February 2016))	Mr. Cormack was a director of Old Petrus from October 8, 2014 to February 2, 2016. Mr. Cormack is a corporate director and he currently sits on the board of directors of other private entities.
Donald Gray <sup>(2)(3)</sup> Arizona, United States	Director (since November 25, 2015, previously a director of Old Petrus (December, 2010 to February 2016))	Mr. Gray is a private investor and Chairman of Petrus. He was director and the Chairman of Old Petrus from December 13, 2010 to February 2, 2016. Mr. Gray is a director and Chairman of Peyto Exploration & Development Corp. and Gear Energy Ltd, both TSX-listed oil and natural gas companies.
Stephen White <sup>(1)(2)(3)</sup> Alberta, Canada	Director (since February 2, 2016)	Mr. White is a retired business executive. In addition to his roles with the Corporation, he serves on the boards of directors and audit committees of several private corporations and is a member of a strategic advisory board of a New York based, energy focused, private equity fund.
Cheree Stephenson Alberta, Canada	Vice President, Finance and Chief Financial Officer (since November 25, 2015, formerly Chief Financial Officer of Old Petrus (August, 2011 to February 2016))	Ms. Stephenson is the Vice President Finance and Chief Financial Officer of Petrus and held the same position at Old Petrus from August 8, 2011 to February 2, 2016.
Brett Booth Alberta, Canada	Vice President, Land (since January 23, 2017)	Mr. Booth was Land Manager of Petrus from February 2, 2016 to January 23, 2017 and held that position at Old Petrus from December 1, 2011 to February 2, 2016.
Ross Keilly Alberta, Canada	Vice President, Exploration (since January 23, 2017)	Mr. Keilly was Senior Geologist of Petrus from February 2, 2016 to January 23, 2017 and held that position in Old Petrus from March 15, 2012 to February 2, 2016.
Marcus Schlegel Alberta, Canada	Vice President, Engineering (since January 23, 2017)	Mr. Schlegel was Exploitation Manager of Petrus from February 2, 2016 to January 23, 2017 and held that position at Old Petrus from July 9, 2014 to February 2, 2016. Previous to his time at Old Petrus, Mr. Schlegel worked as an Exploitation Engineer for CanEra Energy Corp. from July 2012 to July 2014.

# Notes:

- (1) Member of the Audit Committee.
- (2) Member of the Reserves Committee.
- (3) Member of the Compensation Committee.
  (4) The committees of the Board of Directors are constituted in compliance with NI 52-110 (as defined below) and National Instrument 58-101 – Disclosure of Corporate Governance Practices.

As a group, our directors and executive officers beneficially own, control or direct, directly or indirectly, 7.974 million Common Shares, representing approximately 16.1% of the outstanding Common Shares. Each above listed director will continue to hold office until the next annual general meeting of the Corporation or until a successor is duly elected or appointed in accordance with the ABCA, unless their office is earlier vacated.

#### **Corporate Cease Trade Orders, Bankruptcies or Penalties or Sanctions**

To our knowledge, none of our directors or executive officers (nor any personal holding company of any of such persons) is, as of the date of this Annual Information Form, or was within ten years before the date of this Annual Information Form, a director, chief executive officer or chief financial officer of any company (including us), that was subject to a cease trade order (including a management cease trade order), an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation, in each case that was in effect for a period of more than thirty consecutive days (collectively, an "**Order**") that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, or was subject to an Order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer or chief financial officer or chief financial officer.

Other than as set out below, to our knowledge, none of our directors or executive officers (nor any personal holding company of any of such persons), or Shareholder holding a sufficient number of our securities to affect materially the control of us is, as of the date of this Annual Information Form, or has been within the ten years before the date of this Annual Information Form, or has been within the ten years before the date of this Annual Information Form, or has been within the ten years before the date of this Annual Information Form, a director or executive officer of any company (including us) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets.

Mr. Stephen H. White was a director of Lignol Energy Corporation ("**Lignol**"), a biofuels technology company listed on the TSX Venture Exchange. On August 22, 2014, a secured creditor of Lignol appointed a receiver over the assets and undertaking of Lignol.

Mr. Donald Cormack was a director of Walton Ontario Land 1 Corporation and Walton Edgemont Development Corporation ("**Walton Entities**"), registered entities (both Class 2 Reporting Issuers) engaged in property development, in Ontario and Alberta respectively. Mr. Cormack resigned as a director of Walton on April 13, 2017. Two weeks after Mr. Cormack's resignation, the Walton Entities filed for creditor protection under the *Companies Creditors' Arrangement Act* on April 28, 2017.

To our knowledge, none of our directors or executive officers (nor any personal holding company of any of such persons), or Shareholders holding a sufficient number of our securities to affect materially the control of us is, has, within the ten years before the date of this Annual Information Form, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or Shareholder.

To our knowledge, none of our directors or executive officers (nor any personal holding company of any of such persons), or Shareholders holding a sufficient number of our securities to affect materially the control of us, has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority or any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

# **Conflicts of Interest**

Our directors and officers may, from time to time, be involved with the business and operations of other oil and natural gas issuers, in which case a conflict may arise. See "*Risk Factors – Conflicts of Interest*".

Circumstances may arise where members of our Board of Directors serve as directors or officers of corporations which are in competition to our interests. No assurances can be given that opportunities identified by such board members will be provided to us.

The ABCA provides that in the event a director has an interest in a contract or proposed contract or agreement, the director shall disclose his interest in such contract or agreement and shall refrain from voting on any matter in respect of such contract or agreement unless otherwise provided under the ABCA. To the extent that conflicts of interests arise, such conflicts will be resolved in accordance with the provisions of the ABCA.

#### AUDIT COMMITTEE

The Audit Committee is comprised of Messrs. Cormack, Arnell and White. Mr. Cormack is the Chairman of the Audit Committee. The Audit Committee operates under a written charter that sets out its responsibilities and composition requirements. A copy of the charter is attached to this Annual Information Form as Schedule "A".

The following chart sets out the assessment, within the meaning of National Instrument 52-110 – Audit Committees ("**NI** 52-110"), of each audit committee member's independence, financial literacy and relevant educational background and experience supporting such financial literacy.

Name, Province and Country of Residence	Independent	Financially Literate	Relevant Education and Experience
Mr. Donald Cormack (Chair)	Yes	Yes	Mr. Cormack was a partner with PricewaterhouseCoopers LLP from 1997 until his retirement in the summer of 2012, including as Calgary audit practice leader from 1997 to 2007. He has extensive financial accounting and reporting experience with both private and public companies of all sizes covering regulatory compliance, risk management, acquisitions, corporate restructuring, internal controls and governance in Canada and the U.S. Mr. Cormack is a corporate director and he currently sits on the board of directors of other private entities. He is a Chartered Professional Accountant, a graduate of the Institute of Corporate Directors Program and has a Bachelor of Commerce degree from the University of Saskatchewan.
Mr. Patrick Arnell	Yes	Yes	Mr. Arnell is currently the Chairman and Chief Executive Officer of Orix Investments Inc., a private investment company headquartered in Calgary, Alberta. Since 2005, he has been an early stage investor in several successful oil and gas enterprises as well as a founding shareholder and Chairman of Rangeland Industrial Service Ltd.; and, prior thereto, President and majority owner of Rayton Packaging Inc. from 1992 to 2005.
Mr. Stephen White	Yes	Yes	Mr. White is a retired business executive. In addition to his roles with the Corporation, he serves on the boards of directors and audit committees of several private corporations and is a member of a strategic advisory board of a New York based, energy focused, private equity fund. He was President and Chief Financial Officer of Fort Chicago Energy Management Ltd., the general partner of

Name, Province and Country of Residence	Independent	Financially Literate	Relevant Education and Experience
			Fort Chicago Energy Partners L.P., from its inception in 1997 until January 1, 2003 when he assumed the role of President and Chief Executive Officer, the position he held until his retirement as President and Chief Executive Officer of Veresen Inc. effective November 2012

#### **Auditor's Fees**

The table below summarizes the fees billed by Ernst & Young LLP for the years ended December 31, 2018 and December 31, 2017, respectively.

Year	Audit Fees (1)	Audit-Related Fees (2)	Tax Fees (3)	All Other Fees <sup>(4)</sup>
2018	\$207,000	\$Nil	\$5,550	\$Nil
2017	\$135,000	\$83,750	\$8,130	\$Nil

Notes:

(1) Audit fees include fees billed regarding the annual audit of the financial statements.

(2) Audit-related fees include amounts billed for assurance related services that are reasonably related to the performance of the audit of financial statements that are not reported under "Audit fees".

(3) Fees in connection with preparation of Canadian tax returns.

(4) Other fees charged by the auditors, including other non-audit products and services.

# **INDUSTRY CONDITIONS**

Companies carrying on business in the crude oil and natural gas sector in Canada are subject to extensive controls and regulations imposed through legislation of the federal government and the provincial governments where the companies have assets or operations. While these regulations do not affect the Corporation's operations in any manner that is materially different than the manner in which they affect other similarly-sized industry participants with similar assets and operations, investors should consider such regulations carefully. Although governmental legislation is a matter of public record, the Corporation is unable to predict what additional legislation or amendments governments may enact in the future.

The Corporation holds interests in crude oil and natural gas properties, along with related assets, primarily in the Canadian province of Alberta. The Corporation's assets and operations are regulated by administrative agencies deriving authority from underlying legislation enacted by the applicable level of government. Regulated aspects of the Corporation's upstream crude oil and natural gas business include all manner of activities associated with the exploration for and production of crude oil and natural gas, including, among other matters: (i) permits for the drilling of wells; (ii) technical drilling and well requirements; (iii) permitted locations and access of operation sites; (iv) operating standards regarding conservation of produced substances and avoidance of waste, such as restricting flaring and venting; (v) minimizing environmental impacts; (vi) storage, injection and disposal of substances associated with production operations; and (vii) the abandonment and reclamation of impacted sites. In order to conduct crude oil and natural gas operations, and remain in good standing with the applicable federal or provincial regulatory scheme, producers must comply with applicable legislation, regulations, orders, directives and other directions (all of which are subject to governmental oversight, review and revision, from time to time). Compliance in this regard can be costly and a breach of the same may result in fines or other sanctions. The discussion below outlines certain pertinent conditions and regulations that impact the crude oil and natural gas industry in Western Canada.

#### Pricing and Marketing in Canada

#### Crude Oil

Producers of crude oil are entitled to negotiate sales contracts directly with crude oil purchasers. As a result, macroeconomic and microeconomic market forces determine the price of crude oil. Worldwide supply and demand factors are the primary determinant of crude oil prices; however, regional market and transportation issues also influence prices. The specific price depends, in part, on crude oil quality, prices of competing fuels, distance to market, availability of transportation, value of refined products, supply/demand balance and contractual terms of sale.

#### Natural Gas

Negotiations between buyers and sellers determines the price of natural gas sold in intra-provincial, interprovincial and international trade. The price received by a natural gas producer depends, in part, on the price of competing natural gas supplies and other fuels, natural gas quality, distance to market, availability of transportation, length of contract term, weather conditions, supply/demand balance and other contractual terms. Spot and future prices can also be influenced by supply and demand fundamentals on various trading platforms.

#### Natural Gas Liquids

The pricing of condensates and other NGLs such as ethane, butane and propane sold in intra-provincial, interprovincial and international trade is determined by negotiation between buyers and sellers. Such prices depend, in part, on the quality of the NGLs, price of competing chemical stock, distance to market, access to downstream transportation, length of contract term, supply/demand balance and other contractual terms.

# **Exports from Canada**

Crude oil, natural gas and NGLs exports from Canada are subject to the *National Energy Board Act* (Canada) (the "**NEB Act**") and the *National Energy Board Act Part VI (Oil and Gas) Regulation* (the "**Part VI Regulation**"). The NEB Act and the Part VI Regulation authorize crude oil, natural gas and NGLs exports under either short-term orders or long-term licences. To obtain a crude oil export licence, a mandatory public hearing with the National Energy Board (the "**NEB**") is required. There is no longer a public hearing requirement for the export of natural gas and NGLs. Instead, the NEB uses a written process that includes a public comment period for impacted persons. Following the comment period, the NEB completes its assessment of the application and either approves or denies the application. For natural gas, the maximum duration of an export licence is 40 years and, for crude oil and other gas substances (e.g. NGLs), the maximum term is 25 years. In addition to NEB approval, all crude oil, natural gas and NGLs licences require the approval of the cabinet of the Canadian federal government ("**Cabinet**").

Orders from the NEB provide a short-term alternative to export licences and may be issued more expediently, since they do not require a public hearing or approval from Cabinet. Orders are issued pursuant to the Part VI Regulation for up to one or two years depending on the substance, with the exception of natural gas (other than NGLs) for which an order may be issued for up to twenty years for quantities not exceeding 30,000 m<sup>3</sup> per day.

As to price, exporters are free to negotiate prices and other terms with purchasers, provided that the export contracts continue to meet certain criteria prescribed by the NEB and the federal government. The Corporation does not directly enter into contracts to export its production outside of Canada.

On February 8, 2018, the Government of Canada introduced Bill C-69, draft legislation that, if enacted, will replace the NEB with the Canadian Energy Regulator ("**CER**"). The CER will take on the NEB's responsibilities with respect to the export of crude oil, natural gas and NGLs from Canada. However, it is not proposed that the legislative regime relating to exports of crude oil, natural gas and NGLs exports from Canada will substantively change under the new regime as currently drafted.

As discussed in more detail below, one major constraint to the export of crude oil, natural gas and NGLs outside of Canada is the deficit of overall pipeline and other transportation capacity to transport production from Western Canada

to the United States and other international markets. Although certain pipeline and other transportation projects are underway, many contemplated projects have been cancelled or delayed due to regulatory hurdles, court challenges and economic and other socio-political factors. The transportation capacity deficit is not likely to be resolved quickly. Major pipeline and other transportation infrastructure projects typically require a significant length of time to complete once all regulatory and other hurdles have been cleared. In addition, production of crude oil, natural gas and NGLs in Canada is expected to continue to increase, which may further exacerbate the transportation capacity deficit.

### **Transportation Constraints and Market Access**

Producers negotiate with pipeline operators (or other transport providers) to transport their products to market on a firm or interruptible basis. Transportation availability is highly variable across different areas and regions. This variability can determine the nature of transportation commitments available, the number of potential customers that can be reached in a cost-effective manner and the price received. Due to growing production and a lack of new and expanded pipeline and rail infrastructure capacity, producers in Western Canada have experienced low commodity pricing relative to other markets in the last several years.

Under the Canadian constitution, interprovincial and international pipelines fall within the federal government's jurisdiction and require a regulatory review and approval by Cabinet. However, recent years have seen a perceived lack of policy and regulatory certainty at a federal level. Although the current federal government introduced Bill C-69 to amend the current federal approval processes, it is uncertain when the new legislation will be brought into force and whether any changes will be made in the interim. It is also uncertain whether any new approval process adopted by the federal government will result in a more efficient approval process. The lack of regulatory certainty is likely to have an influence on investment decisions for major projects. Even when projects are approved on a federal level, such projects often face further delays due to interference by provincial and municipal governments, as well as court challenges related to issues such as indigenous title, the government's duty to consult and accommodate indigenous peoples and the sufficiency of the relevant environmental review processes. Such political and legal opposition creates further uncertainty. In addition, export pipelines from Canada to the United States face additional uncertainty as such pipelines require approvals of several levels of government in the United States.

In the face of this regulatory uncertainty, the Canadian crude oil and natural gas industry has experienced significant difficulty expanding the existing network of transportation infrastructure for crude oil, natural gas and NGLs, including pipelines, rail, trucks and marine transport. Improved access to global markets, especially the Midwest United States and export shipping terminals on the west coast of Canada, could help to alleviate the downward pressures affecting commodity prices. Several proposals have been announced to increase pipeline capacity out of Western Canada to reach Eastern Canada, the United States and international markets via export terminals. While certain projects are proceeding, the regulatory approval process and other economic and socio-political factors related to transportation and export infrastructure has led to the delay, suspension or cancellation of many pipeline projects or their cancellation altogether.

With respect to the current state of the transportation and exportation of crude oil from Western Canada to domestic and international markets, the Enbridge Line 3 Expansion from Hardisty, Alberta, to Superior, Wisconsin, formerly expected to be in-service in late 2019, experienced a construction permitting setback and is now expected to be inservice in the latter half of 2020.

The proposed Trans Mountain Pipeline expansion received Cabinet approval in November 2016. Following a period of sustained political opposition in British Columbia, the federal government entered into an agreement with Kinder Morgan Cochin ULC in May 2018 to purchase the shares and units of the entities that own and operate the Trans Mountain Pipeline system. The shareholders subsequently voted to approve the transaction in August 2018. However, the Trans Mountain Pipeline expansion experienced a setback when, in August 2018, the Federal Court of Appeal identified deficiencies in the NEB's environmental assessment and the Government's indigenous consultations. The Court quashed the accompanying certificate of public convenience and necessity and directed Cabinet to correct these deficiencies. Following the Court's direction, Cabinet ordered the NEB to reconsider its recommendation in light of the Federal Court of Appeal decision, including the environmental effects of project-related marine shipping. On February 22, 2019, the NEB delivered an updated report to Cabinet, recommending that Cabinet approve the pipeline expansion, subject to 156 conditions and 16 new recommendations, notwithstanding the fact that project-related marine shipping may have a significant adverse effect on the marine environment. While Cabinet has three months to

consider the NEB's report, it may extend this deadline to accommodate a new round of indigenous consultation, upon completion of which it will decide whether to approve or deny the pipeline expansion.

While it was expected that construction on the Keystone XL Pipeline would commence in the first half of 2019, preconstruction work was halted in late 2018 when a U.S. Federal Court Judge determined the underlying environmental review was inadequate. This decision has been appealed.

Finally, Bill C-48 continues to advance through the federal legislative process. If enacted, Bill C-48 will impose a moratorium on tanker traffic transporting certain crude oil and NGLs products from British Columbia's north coast. See "*Industry Conditions – Regulatory Authorities and Environmental Regulation – Federal*".

The Government of Alberta has also sought to alleviate these transportation constraints by pursuing different transportation modalities and creating new markets. On November 28, 2018, the Government of Alberta announced that Alberta had started negotiations for investment in new rail capacity to address the historically high price differential. On February 19, 2019, the Government of Alberta announced that it would lease 4,400 rail cars capable of transporting 120,000 bbls/day of crude oil out of the province. The Alberta Petroleum Marketing Commission will purchase crude oil from producers and market it, using the expanded rail capacity to transport the marketed oil to purchasers. The Government expects the first railcars to be in service by July 2019 and believes this strategy will: (i) narrow the crude oil price gap by up to \$4 per barrel; and (ii) provide junior producers with a more affordable option to move their crude oil to market.

On December 11, 2018, the Government of Alberta announced a Request for Expressions of Interest to create new refining capacity or expand existing capacity. Little is known about this strategy, but the deadline for interested parties to submit Expressions of Interest was February 8, 2019, and an internal governmental committee is currently reviewing such submissions.

Natural gas prices in Alberta and British Columbia have also been constrained in recent years due to increasing North American supply, limited access to markets and limited storage capacity. While companies that secure firm access to transport their natural gas production out of Western Canada may be able to access more markets and obtain better pricing, other companies may be forced to accept spot pricing in Western Canada for their natural gas, which in the last several years has generally been depressed (at times producers have received negative pricing for their natural gas production). Required repairs or upgrades to existing pipeline systems have also led to further reduced capacity and apportionment of firm access, which in Western Canada may be further exacerbated by natural gas storage limitations. Additionally, while a number of liquefied natural gas export plants have been proposed for the west coast of Canada, government decision-making, regulatory uncertainty, opposition from environmental and indigenous groups, and changing market conditions, have resulted in the cancellation or delay of many of these projects. In October 2018, the proponents of the LNG Canada liquefied natural gas export terminal announced a positive final investment decision to proceed with the project.

### Curtailment

On December 2, 2018, the Government of Alberta announced that, commencing January 1, 2019, it would mandate a short-term reduction in provincial crude oil and crude bitumen production. As contemplated in the *Curtailment Rules* (Alberta), the Government of Alberta will, on a monthly basis, direct crude oil producers producing more than 10,000 bbls/d to curtail their production according to a pre-determined formula that apportions production limits proportionately amongst those operators subject to a curtailment order. The first curtailment order took effect on January 1, 2019, limiting province-wide production of crude oil and crude bitumen to 3.56 million bbls/d—a reduction of approximately 8.7% of total daily average crude oil production in Alberta during December 2018. The Government of Alberta indicated that it expected the curtailment rate to gradually drop over the course of 2019. As a result of decreasing price differentials and volumes of crude oil and crude bitumen in storage, the Government of Alberta announced on January 30, 2019, that it would ease the mandatory production curtailment beginning February 1, 2019, increasing the allowable production cap by 75,000 bbls/d to a maximum output of approximately 3.63 million bbls/d. The Corporation is not subject to a curtailment order.

#### The North American Free Trade Agreement and Other Trade Agreements

The North American Free Trade Agreement ("**NAFTA**") among the governments of Canada, the United States and Mexico came into force on January 1, 1994. Under the terms of NAFTA's Article 605, a proportionality clause prevents Canada from implementing policies that limit exports to the United States and Mexico, relative to the total supply produced in Canada. Canada remains free to determine whether exports of energy resources to the United States or Mexico will be allowed, provided that any export restrictions do not: (i) reduce the proportion of energy resources exported relative to the total supply of goods of Canada as compared to the proportion prevailing in the most recent 36 month period; (ii) impose an export price higher than the domestic price (subject to an exception with respect to certain measures which only restrict the volume of exports); and (iii) disrupt normal channels of supply. Further, all three signatory countries are prohibited from imposing a minimum or maximum price requirement on exports (where any other form of quantitative restriction is prohibited) and imports (except as permitted in the enforcement of countervailing and anti-dumping orders and undertakings). NAFTA also requires energy regulators to ensure the orderly and equitable implementation of any regulatory changes and to ensure that the application of such changes will cause minimal disruption to contractual arrangements and avoid undue interference with pricing, marketing and distribution arrangements.

On November 30, 2018, U.S. President Donald Trump, Prime Minister Trudeau, and outgoing Mexican President Enrique Pena Nieto signed an authorization for a new trade deal that will replace NAFTA, referred to as the United States-Mexico-Canada Agreement ("USMCA") However, NAFTA remains the North American trade agreement currently in force until the legislative bodies of the three signatory countries ratify the USMCA. Amid political uncertainty in Canada, Mexico, and the United States it is unclear when the end of the NAFTA era will be. As the United States remains by far Canada's largest trade partner and the largest international market for the export of crude oil, natural gas and NGLs from Canada the implementation of the final version ratified version of the USMCA could have an impact on Western Canada's crude oil and natural gas industry at large, including the Corporation's business.

As discussed above, at the end of 2018 the Government of Alberta announced curtailment of Alberta's crude oil and bitumen production for 2019. Curtailment complies with NAFTA's Article 605, under which Canada must make available a consistent proportion of the crude oil and bitumen produced to the other NAFTA signatories. As a result of the proportionality rule, reducing Canadian supply reduced the required offering under NAFTA, with the result that the amount of crude oil and bitumen that Canada is required to offer, which Canadian crude oil is at depressed prices, may be reduced. It is not clear whether the USMCA will come into force before the Government of Alberta's curtailment order is repealed automatically on December 31, 2019.

The USMCA does not contain the proportionality rules of NAFTA's Article 605. The elimination of the proportionality clause removes a barrier in Canada's transition to a more diversified export portfolio. While diversification depends on the construction of infrastructure allowing more Canadian production to reach Eastern Canada, Asia, and Europe, the USMCA may allow for greater export diversification than currently exists under NAFTA.

Canada has also pursued a number of other international free trade agreements with other countries around the world. As a result, a number of free trade or similar agreements are in force between Canada and certain other countries while in other circumstances Canada has been unsuccessful in its efforts. Canada and the European Union recently agreed to the Comprehensive Economic and Trade Agreement ("**CETA**"), which provides for duty-free, quota-free market access for Canadian crude oil and natural gas products to the European Union. Although CETA remains subject to ratification by certain national legislatures in the European Union, provisional application of CETA commenced on September 21, 2017. In addition, Canada and ten other countries recently concluded discussions and agreed on the draft text of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership ("**CPTPP**"), which is intended to allow for preferential market access among the countries that are parties to the CPTPP. On December 30, 2018 the CPTPP came into force among the first six countries to ratify the agreement – Canada, Australia, Japan, Mexico, New Zealand, and Singapore. While it is uncertain what effect CETA, CPTPP or any other trade agreements will have on the crude oil and natural gas industry in Canada, the lack of available infrastructure for the offshore export of crude oil and natural gas may limit the ability of Canadian crude oil and natural gas producers to benefit from such trade agreements.

#### Land Tenure

The respective provincial governments (i.e. the Crown), predominantly own the mineral rights to crude oil and natural gas located in Western Canada, with the exception of Manitoba (which only owns 20% of the mineral rights). Provincial governments grant rights to explore for and produce crude oil and natural gas pursuant to leases, licences and permits for varying terms, and on conditions set forth in provincial legislation, including requirements to perform specific work or make payments. The provincial governments in Western Canada's provinces conduct regular land sales where crude oil and natural gas companies bid for leases to explore for and produce crude oil and natural gas pursuant to mineral rights owned by the respective provincial governments. The leases generally have a fixed term; however, a lease may generally be continued after the initial term where certain minimum thresholds of production have been reached, all lease rental payments have been paid on time and other conditions are satisfied.

To develop crude oil and natural gas resources, it is necessary for the mineral estate owner to have access to the surface lands as well. Each province has developed its own process for obtaining surface access to conduct operations that operators must follow throughout the lifespan of a well, including notification requirements and providing compensation for affected persons for lost land use and surface damage.

Each of the provinces of Western Canada have implemented legislation providing for the reversion to the Crown of mineral rights to deep, non-productive geological formations at the conclusion of the primary term of a lease or licence. Additionally, the provinces of Alberta and British Columbia have shallow rights reversion for shallow, non-productive geological formations for new leases and licences.

In addition to Crown ownership of the rights to crude oil and natural gas, private ownership of crude oil and natural gas (i.e. freehold mineral lands) also exists in Western Canada. In the provinces of Alberta, British Columbia, Saskatchewan and Manitoba approximately 19%, 6%, 20% and 80%, respectively, of the mineral rights are owned by private freehold owners. Rights to explore for and produce such crude oil and natural gas are granted by a lease or other contract on such terms and conditions as may be negotiated between the owner of such mineral rights and crude oil and natural gas explorers and producers.

An additional category of mineral rights ownership includes ownership by the Canadian federal government of some legacy mineral lands and within indigenous reservations designated under the *Indian Act* (Canada). Indian Oil and Gas Canada ("**IOGC**"), which is a federal government agency, manages subsurface and surface leases, in consultation with the applicable indigenous peoples, for exploration and production of crude oil and natural gas on indigenous reservations.

#### **Royalties and Incentives**

#### General

Each province has legislation and regulations that govern royalties, production rates and other matters. The royalty regime in a given province is a significant factor in the profitability of oil sands projects and crude oil, natural gas and NGLs production. Royalties payable on production from lands where the Crown does not hold the mineral rights are determined by negotiation between the mineral freehold owner and the lessee, although production from such lands is subject to certain provincial taxes and royalties. Royalties from production on Crown lands are determined by governmental regulation and are generally calculated as a percentage of the value of gross production. The rate of royalties payable generally depends in part on prescribed reference prices, well productivity, geographical location, field discovery date, method of recovery and the type or quality of the petroleum substance produced.

Occasionally the governments of Western Canada's provinces create incentive programs for exploration and development. Such programs often provide for royalty rate reductions, royalty holidays or royalty tax credits and are often introduced when commodity prices are low to encourage exploration and development activity. In addition, such programs may be introduced to encourage producers to undertake initiatives using new technologies that may enhance or improve recovery of crude oil, natural gas and NGLs.

In addition, the federal government may from time to time provide incentives to the oil and gas industry. In November of 2018, the federal government announced its plans to implement an accelerated investment incentive, which will provide oil and gas businesses with eligible Canadian development expenses and Canadian oil and gas property expenses with a first year deduction of one and a half times the deduction that is otherwise available. The federal government also announced in late 2018 that it will make \$1.6 billion available to the oil and natural gas industry in light of worsening commodity price differentials. The aid package, however, is mostly in the form of loans and is earmarked for crude oil and natural gas projects related to economic diversification as well as direct funding for clean growth crude oil and natural gas projects.

Producers and working interest owners of crude oil and natural gas rights may also carve out additional royalties or royalty-like interests through non-public transactions, which include the creation of instruments such as overriding royalties, net profits interests and net carried interests.

#### Alberta

In Alberta, the provincial government royalty rates apply to Crown-owned mineral rights. In 2016, Alberta adopted a modernized Alberta royalty framework (the "**Modernized Framework**") that applies to all wells drilled after December 31, 2016. The previous royalty framework (the "**Old Framework**") will continue to apply to wells drilled prior to January 1, 2017 for a period of ten years ending on December 31, 2026. After the expiry of this ten-year period, these older wells will become subject to the Modernized Framework.

The Modernized Framework applies to all hydrocarbons other than oil sands which will remain subject to their existing royalty regime. Royalties on production from non-oil sands wells under the Modernized Framework are determined on a "revenue-minus-costs" basis with the cost component based on a Drilling and Completion Cost Allowance formula for each well, depending on its vertical depth and/or horizontal length. The formula is based on the industry's average drilling and completion costs as determined by the Alberta Energy Regulator (the "**AER**") on an annual basis.

Producers pay a flat royalty rate of 5% 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 gross revenues from the well equals the Drilling and Completion Cost Allowance for the well set by the AER. After payout, producers pay an increased post-payout royalty on revenues of between 5% and 40% for crude oil and pentanes and 5% and 36% for methane, ethane, propane and butane, all determined by reference to the then current commodity prices of the various hydrocarbons. 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 is adjusted downward towards a minimum of 5% as the mature well's production declines. As the Modernized Framework uses deemed drilling and completion costs in calculating the royalty and not the actual drilling and completion Cost Allowance and, accordingly, they continue to pay the lower 5% royalty rate for a period of time after their wells achieve actual payout.

The Old Framework is applicable to all conventional crude oil and natural gas wells drilled prior to January 1, 2017 and bitumen production. Subject to certain available incentives, effective from the January 2011 production month, royalty rates for conventional crude oil production under the Old Framework range from a base rate of 0% to a cap of 40%. Subject to certain available incentives, effective from the January 2011 production month, royalty rates for natural gas production under the Old Framework range from a base rate of 5% to a cap of 36%. The Old Framework also includes a natural gas royalty formula which provides for a reduction based on the measured depth of the well below 2,000 metres deep, as well as the acid gas content of the produced gas. Under the Old Framework, the royalty rate applicable to NGLs is a flat rate of 40% for pentanes and 30% for butanes and propane. Currently, producers of crude oil and natural gas from Crown lands in Alberta are required to pay annual rental payments, at a rate of \$3.50 per hectare, and make monthly royalty payments in respect of crude oil and natural gas produced.

The Government of Alberta has from time to time implemented drilling credits, incentives or transitional royalty programs to encourage crude oil and natural gas development and new drilling. In addition, the Government of Alberta has implemented certain initiatives intended to accelerate technological development and facilitate the development of unconventional resources, including as applied to coalbed methane wells, shale gas wells and horizontal crude oil and natural gas wells.

Freehold mineral taxes are levied for production from freehold mineral lands on an annual basis on calendar year production. Freehold mineral taxes are calculated using a tax formula that takes into consideration, among other things, the amount of production, the hours of production, the value of each unit of production, the tax rate and the percentages that the owners hold in the title. On average, in Alberta the tax levied is 4% of revenues reported from freehold mineral title properties. The freehold mineral taxes would be in addition to any royalty or other payment paid to the owner of such freehold mineral rights, which are established through private negotiation.

### **Regulatory Authorities and Environmental Regulation**

#### General

The Canadian crude oil and natural gas industry is currently subject to environmental regulation under a variety of Canadian federal, provincial, territorial and municipal laws and regulations, all of which are subject to governmental review and revision from time to time. Such regulations provide for, among other things, restrictions and prohibitions on the spill, release or emission of various substances produced in association with certain crude oil and natural gas industry operations, such as sulphur dioxide and nitrous oxide. The regulatory regimes set out the requirements with respect to oilfield waste handling and storage, habitat protection and the satisfactory operation, maintenance, abandonment and reclamation of well, facility and pipeline sites. Compliance with such regulations can require significant expenditures and a breach of such requirements may result in suspension or revocation of necessary licences and authorizations, civil liability and the imposition of material fines and penalties. In addition to these specific, known requirements, future changes to environmental legislation, including anticipated legislation for air pollution and greenhouse gas ("**GHG**") emissions, may impose further requirements on operators and other companies in the crude oil and natural gas industry.

#### Federal

Canadian environmental regulation is the responsibility of both the federal and provincial governments. Where there is a direct conflict between federal and provincial environmental legislation in relation to the same matter, the federal law will prevail. However, such conflicts are uncommon. The federal government has primary jurisdiction over federal works, undertakings and federally regulated industries such as railways, aviation and interprovincial transport including interprovincial pipelines.

On June 20, 2016, the federal government launched a review of current environmental and regulatory processes. On February 8, 2018, the Government of Canada introduced draft legislation to overhaul the existing environmental assessment process and replace the NEB with the CER. Pursuant to the draft legislation, the Impact Assessment Agency of Canada (the "Agency") would replace the Canadian Environmental Assessment Agency. It appears that additional categories of projects may be included within the new impact assessment process, such as large-scale wind power facilities and in-situ oilsands facilities. The revamped approval process for applicable major developments will have specific legislated timelines at each stage of the formal impact assessment process. The Agency's process would focus on: (i) early engagement by proponents to engage the Agency and all stakeholders such as the public and indigenous groups prior to the formal impact assessment process; (ii) potentially increased public participation where the project undergoes a panel review; (iii) providing analysis of the potential impacts and effects of a project without making recommendations, to support a public-interest approach to decision-making, with cost-benefit determinations and approvals made by the Minister of Environment and Climate Change or the Cabinet; (iv) analyzing further specified factors for projects such as alternatives to the project and social and indigenous issues in addition to health, environmental and economic impacts; and (v) overseeing an expanded follow-up, monitoring and enforcement process with increased involvement of indigenous peoples and communities. As to the proposed CER, many of its activities would be similar to the NEB, albeit with a different structure and the notable exception that the CER would no longer have primary responsibility in the consideration of the new major projects, instead focusing on the lifecycle regulation (e.g. overseeing construction, tolls and tariffs, operations and eventual winding down) of approved projects, while providing for expanded participation by communities and indigenous peoples. It is unclear when the new regulatory scheme will come into force or whether any amendments will be made prior to coming into force. Until then, the federal government's interim principles released on January 27, 2016, will continue to guide decision-making authorities for projects currently undergoing environmental assessment. The eventual effects of the proposed regulatory scheme on proponents of major projects remains unclear.

On May 12, 2017, the federal government introduced the *Oil Tanker Moratorium Act* in Parliament. This legislation is aimed at providing coastal protection in northern British Columbia by prohibiting crude oil tankers carrying more than 12,500 metric tonnes of crude oil or persistent crude oil products from stopping, loading, or unloading crude oil in that area. Parliament is still considering the bill, which passed second reading on October 4, 2017. If implemented, the legislation may prevent the building of pipelines to, and export terminals located on, the portion of the British Columbia coast subject to the moratorium and, as a result, negatively affect the ability of producers to access global markets.

#### Alberta

The AER is the single regulator responsible for all energy resource development in Alberta. It derives its authority from the *Responsible Energy Development Act* and a number of related Acts including the *Oil and Gas Conservation Act* (the "**OGCA**"), the *Oil Sands Conservation Act*, the *Pipeline Act*, and the *Environmental Protection and Enhancement Act*. The AER is responsible for ensuring the safe, efficient, orderly and environmentally responsible development of hydrocarbon resources including allocating and conserving water resources, managing public lands, and protecting the environment. The AER's responsibilities exclude the functions of the Alberta Utilities Commission and the Surface Rights Board, as well as Alberta Energy's responsibility for mineral tenure. The objective behind a single regulator is an enhanced regulatory regime that is intended to be efficient, attractive to business and investors and effective in supporting public safety, environmental management and resource conservation while respecting the rights of landowners.

The Government of Alberta relies on regional planning to accomplish its responsible resource development goals. Its approach to natural resource management provides for engagement and consultation with stakeholders and the public and examines the cumulative impacts of development on the environment and communities by incorporating the management of all resources, including energy, minerals, land, air, water and biodiversity. While the AER is the primary regulator for energy development, several other governmental departments and agencies may be involved in land use issues, including Alberta Environment and Parks, Alberta Energy, the Policy Management Office, the Aboriginal Consultation Office and the Land Use Secretariat.

The Government of Alberta's land-use policy for surface land in Alberta sets out an approach to manage public and private land use and natural resource development in a manner that is consistent with the long-term economic, environmental and social goals of the province. It calls for the development of seven region-specific land-use plans in order to manage the combined impacts of existing and future land use within a specific region and the incorporation of a cumulative effects management approach into such plans. As a result, several regional plans have been implemented and others are in the process of being implemented. These regional plans may affect further development and operations in such regions.

#### Liability Management Rating Program

#### Alberta

The AER administers the licensee Liability Management Rating Program (the "AB LMR Program"). The AB LMR Program is a liability management program governing most conventional upstream crude oil and natural gas wells, facilities and pipelines. It consists of three distinct programs: the Licensee Liability Rating Program (the "AB LLR Program"), the Oilfield Waste Liability Program (the "AB OWL Program") and the Large Facility Liability Management Program (the "AB LFP"). At its core, the AER uses the AB LMR Program to aid in determining the ability of licensees to manage the abandonment and reclamation obligations associated with the licensee's assets. If a licensee's deemed liabilities in the AB LLR Program requires the licensee to provide the AER with a security deposit and may restrict the licensee's ability to transfer licenses. This ratio of a licensee's assets to liabilities across the three programs is referred to as the licensee's liability management rating ("LMR"). The AER assesses the LMR of all licensees on a monthly basis and posts the ratings on the AER's public website. Where the AER determines that a security deposit is required, the failure to post any required amounts may result in the initiation of enforcement action by the AER.

Complementing the AB LMR Program, Alberta's OGCA establishes an orphan fund (the "**Orphan Fund**") to help pay the costs to suspend, abandon, remediate and reclaim a well, facility or pipeline included in the AB LLR Program and the AB OWL Program if a licensee or working interest participant ("**WIP**") becomes insolvent or is unable to meet its obligations. Licensees in the AB LLR Program and AB OWL Program fund the Orphan Fund through a levy administered by the AER. A separate orphan levy applies to persons holding licences subject to the AB LFP. Collectively, these programs are designed to minimize the risk to the Orphan Fund posed by the unfunded liabilities of licensees and to prevent the taxpayers of Alberta from incurring costs to suspend, abandon, remediate and reclaim wells, facilities or pipelines.

In *Redwater Energy Corporation (Re)* ("**Redwater**"), the Court of Queen's Bench of Alberta found that there was an operational conflict between the abandonment and reclamation provisions of the provincial OGCA, including the AB LLR Program, and the federal *Bankruptcy and Insolvency Act* (the "**BIA**"). This ruling meant that receivers and trustees of insolvent entities have the right to renounce assets within insolvency proceedings, and was affirmed by a majority of the Alberta Court of Appeal. On January 31, 2019, the Supreme Court of Canada overturned the lower courts' decisions, holding that there is no operational conflict between the abandonment and reclamation provisions contained in the provincial OGCA, the liability management regime administered by the AER and the federal bankruptcy and insolvency regime. As a result, receivers and trustees can no longer avoid the AER's legislated authority to impose abandonment orders against licensees or to require a licensee to pay a security deposit before approving a transfer when such a licensee is subject to formal insolvency proceedings. This means that insolvent estates can no longer disclaim assets of a bankrupt licensee that have reached the end of their productive lives and represent a liability and deal with a company's valuable assets for the benefit of a company's creditors, without first satisfying abandonment and reclamation obligations.

In response to the lower courts' decisions in Redwater, the AER issued several bulletins and interim rule changes to govern the AER's administration of its licensing and liability management programs pending a final decision from the Supreme Court of Canada. The AER amended its licensing and liability management programs pending a final decision from the Supreme Court of Canada. The AER amended it's *Directive 067: Eligibility Requirements for Acquiring and Holding Energy Licences and Approvals*, which deals with licencee eligibility to operate wells and facilities, to require the provision of extensive corporate governance and shareholder information, including whether any director and officer was a director or officer of an energy company that has been subject to insolvency proceedings in the last five years. All transfers of well, facility and pipeline licences in the province are subject to AER approval. As a condition of transferring existing AER licences, approvals and permits, all transfers are now assessed on a nonroutine basis and the AER now requires all transferees to demonstrate that they have an LMR of 2.0 or higher immediately following the transfer, or to otherwise prove to the satisfaction of the AER that it can meet its abandonment and reclamation obligations. The AER may make further rule changes at any time. While the Supreme Court of Canada's Redwater decision alleviates some of the concerns that the AER's rule changes were intended to address, it is unclear how or if the AER will respond.

The AER has also implemented the Inactive Well Compliance Program (the "**IWCP**") to address the growing inventory of inactive wells in Alberta and to increase the AER's surveillance and compliance efforts under *Directive 013: Suspension Requirements for Wells* ("**Directive 013**"). The IWCP applies to all inactive wells that are noncompliant with Directive 013 as of April 1, 2015. The objective is to bring all inactive noncompliant wells under the IWCP into compliance with the requirements of Directive 013 within five years. As of April 1, 2015, each licensee is required to bring 20% of its inactive wells into compliance every year, either by reactivating or by suspending the wells in accordance with Directive 013 or by abandoning them in accordance with *Directive 020: Well Abandonment*. The list of current wells subject to the IWCP is available on the AER's Digital Data Submission system. The AER has announced that from April 1, 2015 to April 1, 2016, the number of noncompliant wells subject to the IWCP fell from 25,792 to 17,470, with 76% of licensees operating in the province having met their annual quota. From April 1, 2016 to April 1, 2017, this number fell from 17,470 to 12,375 noncompliant wells, with 81% of licensees operating in the province having met their annual quota. The IWCP completed its third year on March 31, 2018 but the AER has not yet released its third annual report.

As part of its strategy to encourage the decommissioning of inactive or marginal oil and gas infrastructure, the AER announced a voluntary area-based closure ("**ABC**") program in 2018. The ABC program is designed to reduce the cost of abandonment and reclamation operations while enabling participants to meet their liability reduction targets. The Corporation is not participating in the voluntary ABC program.

#### **Climate Change Regulation**

Climate change regulation at both the federal and provincial level has the potential to significantly affect the regulation of the crude oil and natural gas industry in Canada.

In general, there is some uncertainty with regard to the impacts of federal or provincial climate change and environmental laws and regulations, as it is currently not possible to predict the extent of future requirements. Any new laws and regulations, or additional requirements to existing laws and regulations, could have a material impact on the Corporation's operations and cash flow.

#### Federal

Canada has been a signatory to the United Nations Framework Convention on Climate Change (the "**UNFCCC**") since 1992. Since its inception, the UNFCCC has instigated numerous policy experiments with respect to climate governance. On April 22, 2016, 197 countries signed the Paris Agreement, committing to prevent global temperatures from rising more than 2° Celsius above pre-industrial levels and to pursue efforts to limit this rise to no more than 1.5° Celsius. As of January 1, 2019, 185 of the 197 parties to the convention have ratified the Paris Agreement. In December 2018, the United Nations annual Conference of the Parties took place in Katowice, Poland. The Conference concluded with the attendees reiterating their commitment to the targets set out in the Paris Agreement and establishing a transparency framework related to, among other matters, emissions and climate finance reporting.

Following the Paris Agreement and its ratification in Canada, the Government of Canada pledged to cut its emissions by 30% from 2005 levels by 2030. Further, on December 9, 2016, the Government of Canada released the Pan-Canadian Framework on Clean Growth and Climate Change (the "**Framework**"). The Framework provided for a carbon-pricing strategy, with a carbon tax starting at \$10/tonne, increasing annually until it reaches \$50/tonne in 2022. A draft legislative proposal for the federal carbon pricing system was released on January 15, 2018. This system would apply in provinces and territories that request it and in those that do not have a carbon pricing system in place that meets the federal standards in 2018. Seven provinces and territories have introduced carbon-pricing systems in place that would meet federal requirements (Alberta, British Columbia, Quebec, Prince Edward Island, Nova Scotia, Newfoundland and Labrador, and the Northwest Territories). The federal carbon-pricing regime will take effect in Saskatchewan, Manitoba, Ontario and New Brunswick in April 2019; it will take effect in the Yukon, and Nunavut in July 2019. Saskatchewan and Ontario have challenged the constitutionality of the federal government's pricing regime; New Brunswick has intervened in Saskatchewan's constitutional challenge. In October 2018, the federal government announced an alternative pricing scheme for large electricity generators designed to incentivize a reduction in emissions intensity, rather than encouraging a reduction in generation rates.

On April 26, 2018, the federal government passed the *Regulations Respecting Reduction in the Release of Methane and Certain Volatile Organic Compounds (Upstream Oil and Gas Sector)* (the "**Federal Methane Regulations**"). The Federal Methane Regulations seek to reduce emissions of methane from the crude oil and natural gas sector, but will not come into force until January 1, 2020. By introducing a number of new control measures, the Federal Methane Regulations aim to reduce unintentional leaks and intentional venting of methane, as well as ensuring that crude oil and natural gas operations use low-emission equipment and processes. Among other things, the Federal Methane Regulations limit how much methane upstream oil and gas facilities are permitted to vent. These facilities would need to capture the gas and either re-use it, re-inject it, send it to a sales pipeline, or route it to a flare. In addition, in provinces other than Alberta and British Columbia (which already regulate such activities), well completions by hydraulic fracturing would be required to conserve or destroy gas instead of venting. The federal government anticipates that these actions will reduce annual GHG emissions by about 20 megatonnes by 2030.

#### Alberta

On November 22, 2015, the Government of Alberta introduced its Climate Leadership Plan (the "**CLP**"). The CLP has four areas of focus: implementing a carbon price on GHG emissions, phasing out coal-generated electricity and developing renewable energy, legislating an oil sands emission limit, and introducing a new methane emissions reduction plan. The Government of Alberta has since introduced new legislation to give effect to these initiatives. The *Climate Leadership Act* came into force on January 1, 2017 and enabled a carbon levy that increased from \$20 to \$30 per tonne on January 1, 2018. While the levy is anticipated to increase again in 2021 in line with the federal legislation,

the Government of Alberta has announced it will not proceed with the scheduled 2021 increase unless the expansion to the Trans Mountain Pipeline proceeds. On December 14, 2016, the *Oil Sands Emissions Limit Act* came into force, establishing an annual 100 megatonne limit for GHG emissions from all oil sands sites, excluding some attributable to upgraders, the electric energy portion of cogeneration and other prescribed emissions.

The *Carbon Competitiveness Incentives Regulation* (the "**CCIR**"), which replaces the *Specified Gas Emitters Regulation*, came into effect on January 1, 2018. Unlike the previous regulation, which set emission reduction requirements, the CCIR imposes an output-based benchmark on competitors in the same emitting industry. The aim is to reduce annual GHG emissions by 20 megatonnes by 2020 and 50 megatonnes by 2030, and targets facilities that emit more than 100,000 tonnes of GHGs per year and mandates quarterly and final reporting requirements. The CCIR compliance obligations will be reduced by 50% and 25% for 2018 and 2019, respectively, with no reduction for 2020 onward. In addition to the industry-specific benchmarks, each benchmark will decrease annually at a rate of 1%, beginning in 2020. The Government of Alberta intends for this strategy to align with the federal Framework.

The Government of Alberta also signaled its intention through its CLP to implement regulations that would lower annual methane emissions by 45% by 2025. Regulations are planned to take effect in 2020 to ensure the 2025 target is met.

Alberta was also the first jurisdiction in North America to direct dedicated funding to implement carbon capture and storage technology across industrial sectors. Alberta has committed \$1.24 billion over 15 years to fund two large-scale carbon capture and storage projects that will begin commercializing the technology on the scale needed to be successful. On December 2, 2010, the Government of Alberta passed the *Carbon Capture and Storage Statutes Amendment Act, 2010.* It deemed the pore space underlying all land in Alberta to be, and to have always been the property of the Crown and provided for the assumption of long-term liability for carbon sequestration projects by the Crown, subject to the satisfaction of certain conditions.

### Accountability and Transparency

In 2015, the federal government's *Extractive Sector Transparency Measures Act* (the "**ESTMA**") came into effect, which imposed mandatory reporting requirements on certain entities engaged in the "commercial development of oil, gas or minerals", including exploration, extraction and holding permits. All companies subject to ESTMA must report payments over CAD\$100,000 made to any level of a Canadian or foreign government (including indigenous groups), including royalty payments, taxes (other than consumption taxes and personal income taxes), fees, production entitlements, bonuses, dividends (other than ordinary dividends paid to shareholders), infrastructure improvement payments and other prescribed categories of payments.

### **RISK FACTORS**

Investors should carefully consider the risk factors set out below and consider all other information contained herein and in the Corporation's other public filings before making an investment decision. The risks set out below are not an exhaustive list and should not be taken as a complete summary or description of all the risks associated with the Corporation's business and the oil and natural gas business generally.

#### **Exploration, Development and Production Risks**

# The Corporation's future performance may be affected by the financial, operational, environmental and safety risks associated with the exploration, development and production of oil and natural gas

Oil and natural gas operations involve many risks that even a combination of experience, knowledge and careful evaluation may not be able to overcome. The long-term commercial success of the Corporation depends on its ability to find, acquire, develop and commercially produce oil and natural gas reserves. Without the continual addition of new reserves, the Corporation's existing reserves, and the production from them, will decline over time as the Corporation produces from such reserves. A future increase in the Corporation's reserves will depend on both the ability of the Corporation to explore and develop its existing properties and its ability to select and acquire suitable producing properties or prospects. There is no assurance that the Corporation will be able to continue to find

satisfactory properties to acquire or participate in. Moreover, management of the Corporation may determine that current markets, terms of acquisition, participation or pricing conditions make potential acquisitions or participation uneconomic. There is also no assurance that the Corporation will discover or acquire further commercial quantities of oil and natural gas.

Future oil and natural gas exploration may involve unprofitable efforts from dry wells or from wells that are productive but do not produce sufficient petroleum substances to return a profit after drilling, completing (including hydraulic fracturing), operating and other costs. Completion of a well does not ensure a profit on the investment or recovery of drilling, completion and operating costs.

Drilling hazards, environmental damage and various field operating conditions could greatly increase the cost of operations and adversely affect the production from successful wells. Field operating conditions include, but are not limited to, delays in obtaining governmental approvals or consents, shut-ins of wells resulting from extreme weather conditions, insufficient storage or transportation capacity or geological and mechanical conditions. While diligent well supervision, effective maintenance operations and the development of enhanced oil recovery technologies can contribute to maximizing production rates over time, it is not possible to eliminate production delays and declines from normal field operating conditions, which can negatively affect revenue and cash flow levels to varying degrees.

Oil and natural gas exploration, development and production operations are subject to all the risks and hazards typically associated with such operations, including, but not limited to, fire, explosion, blowouts, cratering, sour gas releases, spills and other environmental hazards. These typical risks and hazards could result in substantial damage to oil and natural gas wells, production facilities, other property and the environment and cause personal injury or threaten wildlife. Particularly, the Corporation may explore for and produce sour gas in certain areas. An unintentional leak of sour gas could result in personal injury, loss of life or damage to property and may necessitate an evacuation of populated areas, all of which could result in liability to the Corporation.

Oil and natural gas production operations are also subject to geological and seismic risks, including encountering unexpected formations or pressures, premature decline of reservoirs and the invasion of water into producing formations. Losses resulting from the occurrence of any of these risks may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

As is standard industry practice, the Corporation is not fully insured against all risks, nor are all risks insurable. Although the Corporation maintains liability insurance in an amount that it considers consistent with industry practice, liabilities associated with certain risks could exceed policy limits or not be covered. See "*Risk Factors – Insurance*". In either event, the Corporation could incur significant costs.

### Weakness in the Oil and Natural Gas Industry

# Weakness and volatility in the market conditions for the oil and natural gas industry may affect the value of the Corporation's reserves, restrict its cash flow and its ability to access capital to fund the development of it properties

Recent market events and conditions, including global excess oil and natural gas supply, recent actions taken by the Organization of the Petroleum Exporting Countries ("**OPEC**"), slowing growth in China and emerging economies, market volatility and disruptions in Asia, weakening global relationships, isolationist trade policies, increased U.S. shale production, sovereign debt levels and political upheavals in various countries have caused significant weakness and volatility in commodity prices. See "*Risk Factors – Political Uncertainty*". These events and conditions have caused a significant decrease in the valuation of oil and natural gas companies and a decrease in confidence in the oil and natural gas industry. These difficulties have been exacerbated in Canada by political and other actions resulting in uncertainty surrounding regulatory, tax, royalty changes and environmental regulation. See "*Risk Factors – Regulatory Authorities and Environmental Regulation*" and "*Risk Factors – Climate Change Regulation*". In addition, the inability to get the necessary approvals to build pipelines, liquefied natural gas plants and other facilities to provide better access to markets for the oil and natural gas industry in Western Canada has led to additional downward price pressure on oil and natural gas produced in Western Canada and uncertainty and reduced confidence in the oil and natural gas industry in Western Canada. See "*Industry Conditions – Transportation Constraints and Market Access*".

Lower commodity prices may also affect the volume and value of the Corporation's reserves, rendering certain reserves uneconomic. In addition, lower commodity prices restrict the Corporation's cash flow resulting in less funds from operations being available to fund the Corporation's capital expenditure budget. Consequently, the Corporation may not be able to replace its production with additional reserves and both the Corporation's production and reserves could be reduced on a year-over-year basis. See "*Risk Factors – Reserves Estimates*". Any decrease in value of the Corporation's reserves may reduce the borrowing base under its credit facilities, which, depending on the level of the Corporation's indebtedness, could result in the Corporation having to repay a portion of its indebtedness. See "*Risk Factors – Credit Facilities*". In addition to possibly resulting in a decrease in the value of the Corporation's infrastructure and facilities, all of which could also have the effect of requiring a write down of the carrying value of the Corporation's oil and natural gas assets on its balance sheet and the recognition of an impairment charge in its income statement. Given the current market conditions and the lack of confidence in the Canadian oil and natural gas industry, the Corporation may have difficulty raising additional funds or if it is able to do so, it may be on unfavourable and highly dilutive terms. See "*Risk Factors – Additional Funding Requirements*".

#### **Prices, Markets and Marketing**

# Various factors may adversely impact the marketability of oil and natural gas, affecting net production revenue, production volumes and development and exploration activities

Numerous factors beyond the Corporation's control do, and will continue to, affect the marketability and price of oil and natural gas acquired, produced, or discovered by the Corporation. The Corporation's ability to market its oil and natural gas may depend upon its ability to acquire capacity on pipelines that deliver natural gas to commercial markets or contract for the delivery of crude oil by rail. See "*Industry Conditions – Transportation Constraints and Marketing*" and "*Risk Factors – Weakness in the Oil and natural gas Industry*". Deliverability uncertainties related to the distance the Corporation's reserves are from pipelines, railway lines, processing and storage facilities; operational problems affecting pipelines, railway lines and processing and storage facilities; and government regulation relating to prices, taxes, royalties, land tenure, allowable production, the export of oil and natural gas and many other aspects of the oil and natural gas business may also affect the Corporation.

Prices for oil and natural gas are subject to large fluctuations in response to relatively minor changes in the supply of and demand for oil and natural gas, market uncertainty and a variety of additional factors beyond the control of the Corporation. These factors include economic and political conditions in the United States, Canada, Europe, China and emerging markets, the actions of OPEC and other oil and natural gas exporting nations, governmental regulation, political stability in the Middle East, Northern Africa and elsewhere, the foreign supply and demand of oil and natural gas, risks of supply disruption, the price of foreign imports and the availability of alternative fuel sources. Prices for oil and natural gas are also subject to the availability of foreign markets and the Corporation's ability to access such markets. A material decline in prices could result in a reduction of the Corporation's net production revenue. The economics of producing from some wells may change because of lower prices, which could result in reduced production of oil or natural gas and a reduction in the volumes and the value of the Corporation's reserves. The Corporation might also elect not to produce from certain wells at lower prices.

All these factors could result in a material decrease in the Corporation's expected net production revenue and a reduction in its oil and natural gas production, development and exploration activities. Any substantial and extended decline in the price of oil and natural gas would have an adverse effect on the Corporation's carrying value of its reserves, borrowing capacity, revenues, profitability and cash flows from operations and may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

Oil and natural gas prices are expected to remain volatile for the near future because of market uncertainties over the supply and the demand of these commodities due to the current state of the world economies, increased growth of shale oil production in the United States, OPEC actions, political uncertainties, sanctions imposed on certain oil producing nations by other countries and ongoing credit and liquidity concerns. Volatile oil and natural gas prices make it difficult to estimate the value of producing properties for acquisitions and often cause disruption in the market for oil and natural gas producing properties, as buyers and sellers have difficulty agreeing on such value. Price volatility also makes it difficult to budget for, and project the return on, acquisitions and development and exploitation projects.

#### Market Price of Common Shares

# The trading price of the Common Shares may be adversely affected by factors related and unrelated to the oil and natural gas industry

The trading price of securities of oil and natural gas issuers is subject to substantial volatility often based on factors related and unrelated to the financial performance or prospects of the issuers involved. Factors unrelated to the Corporation's performance could include macroeconomic developments nationally, within North America or globally, domestic and global commodity prices, or current perceptions of the oil and natural gas market. In recent years, the volatility of commodities has increased due, in part, to the implementation of computerized trading and the decrease of discretionary commodity trading. In addition, in certain jurisdictions, institutions, including government sponsored entities, have determined to decrease their ownership in oil and natural gas entities which may impact the liquidity of certain securities and may put downward pressure on the trading price of those securities. Similarly, the market price of the Common Shares could be subject to significant fluctuations in response to variations in the Corporation's operating results, financial condition, liquidity and other internal factors. Accordingly, the price at which the Common Shares will trade cannot be accurately predicted.

#### Failure to Realize Anticipated Benefits of Acquisitions and Dispositions

# The anticipated benefits of acquisitions may not be achieved and the Corporation may dispose of non-core assets for less than their carrying value on the financial statements as a result of weak market conditions

The Corporation considers acquisitions and dispositions of businesses and assets in the ordinary course of business. Achieving the benefits of acquisitions depends on successfully consolidating functions and integrating operations and procedures in a timely and efficient manner and the Corporation's ability to realize the anticipated growth opportunities and synergies from combining the acquired businesses and operations with those of the Corporation. The integration of acquired businesses and assets may require substantial management effort, time and resources diverting management's focus from other strategic opportunities and operational matters. Management continually assesses the value and contribution of services provided by third parties and the resources required to provide such services. In this regard, non-core assets may be periodically disposed of so the Corporation can focus its efforts and resources more efficiently. Depending on the state of the market for such non-core assets, certain non-core assets of the Corporation may realize less on disposition than their carrying value on the financial statements of the Corporation.

### **Political Uncertainty**

# The Corporation's business may be adversely affected by recent political and social events and decisions made in Canada, the United States, Europe and elsewhere

In the last several years, the United States and certain European countries have experienced significant political events that have cast uncertainty on global financial and economic markets. Since the 2016 U.S. presidential election, the American administration has begun taking steps to implement certain of its promises made during the campaign. The administration has withdrawn the United States from the Trans-Pacific Partnership and Congress has passed sweeping tax reform, which, among other things, significantly reduces U.S. corporate tax rates. This may affect competitiveness of other jurisdictions, including Canada. In addition, the North American Free Trade Agreement has been renegotiated and on November 30, 2018, Canada, the U.S. and Mexico signed the Canada–United States–Mexico Agreement which will replace NAFTA once ratified by the three signatory countries. See "*Industry Conditions - The North American Trade Agreement and Other Trade Agreements*". The U.S. administration has also taken action with respect to reduction of regulation, which may also affect relative competitiveness of other jurisdictions. It is unclear exactly what other actions the U.S. administration will implement, and if implemented, how these actions may impact Canada and in particular the oil and natural gas industry. Any actions taken by the current U.S. administration may have a negative impact on the Canadian economy and on the businesses, financial conditions, results of operations and the valuation of Canadian oil and natural gas companies, including the Corporation.

In addition to the political disruption in the United States, the citizens of the United Kingdom voted to withdraw from the European Union and the Government of the United Kingdom has taken steps to implement such withdrawal. The terms of the United Kingdom's exit from the European Union and whether it will occur at all remains to be determined. Some European countries have also experienced the rise of anti-establishment political parties and public protests held against open-door immigration policies, trade and globalization. To the extent that certain political actions taken in North America, Europe and elsewhere in the world result in a marked decrease in free trade, access to personnel and freedom of movement, it could have an adverse effect on the Corporation's ability to market its products internationally, increase costs for goods and services required for the Corporation's operations, reduce access to skilled labour and negatively impact the Corporation's business, operations, financial conditions and the market value of the Common Shares.

A change in federal, provincial or municipal governments in Canada may have an impact on the directions taken by such governments on matters that may impact the oil and natural gas industry including the balance between economic development and environmental policy such as the potential impact of the recent change of government in British Columbia and announcements and actions by the government of British Columbia that may impact the completion of the Trans-Mountain Pipeline project, liquefied natural gas facilities and other infrastructure projects.

### **Operational Dependence**

#### The successful operation of a portion of the Corporation's properties is dependent on third parties

Other companies operate some of the assets in which the Corporation has an interest. The Corporation has limited ability to exercise influence over the operation of those assets or their associated costs, which could adversely affect the Corporation's financial performance. The Corporation's return on assets operated by others depends upon a number of factors that may be outside of the Corporation's control, including, but not limited to, the timing and amount of capital expenditures, the operator's expertise and financial resources, the approval of other participants, the selection of technology and risk management practices.

In addition, due to the current low and volatile commodity prices, many companies, including companies that may operate some of the assets in which the Corporation has an interest, may be in financial difficulty, which could impact their ability to fund and pursue capital expenditures, carry out their operations in a safe and effective manner and satisfy regulatory requirements with respect to abandonment and reclamation obligations. If companies that operate some of the assets in which the Corporation has an interest fail to satisfy regulatory requirements with respect to abandonment and reclamation obligations. If companies that operate some of the assets in which the Corporation has an interest fail to satisfy regulatory requirements with respect to abandonment and reclamation obligations and to seek reimbursement from such companies. To the extent that any of such companies go bankrupt, become insolvent or make a proposal or institute any proceedings relating to bankruptcy or insolvency, it could result in such assets being shut-in, the Corporation potentially becoming subject to additional liabilities relating to such assets and the Corporation having difficulty collecting revenue due from such operators or recovering amounts owing to the Corporation from such operators for their share of abandonment and reclamation obligations. Any of these factors could have a material adverse affect on the Corporation's financial and operational results. See "*Industry Conditions – Liability Management Rating Program*".

#### **Project Risks**

# The success of the Corporation's operations may be negatively impacted by factors outside of its control resulting in operational delays and cost overruns

The Corporation manages a variety of small and large projects in the conduct of its business. Project interruptions may delay expected revenues from operations. Significant project cost overruns could make a project uneconomic. The Corporation's ability to execute projects and market oil and natural gas depends upon numerous factors beyond the Corporation's control, including:

- the availability of processing capacity;
- the availability and proximity of pipeline capacity;
- the availability of storage capacity;

- the availability of, and the ability to acquire, water supplies needed for drilling, hydraulic fracturing, and waterfloods or the Corporation's ability to dispose of water used or removed from strata at a reasonable cost and in accordance with applicable environmental regulations;
- the effects of inclement weather;
- the availability of drilling and related equipment;
- unexpected cost increases;
- accidental events;
- currency fluctuations;
- regulatory changes;
- the availability and productivity of skilled labour; and
- the regulation of the oil and natural gas industry by various levels of government and governmental agencies.

Because of these factors, the Corporation could be unable to execute projects on time, on budget, or at all.

### Gathering and Processing Facilities, Pipeline Systems and Rail

# Lack of capacity and/or regulatory constraints on gathering and processing facilities, pipeline systems and railway lines may have a negative impact on the Corporation's ability to produce and sell its oil and natural gas

The Corporation delivers its products through gathering and processing facilities, pipeline systems and, in certain circumstances, by rail. The amount of oil and natural gas that the Corporation can produce and sell is subject to the accessibility, availability, proximity and capacity of these gathering and processing facilities, pipeline systems and railway lines. Notwithstanding the Government of Alberta's plans to purchase 7,000 rail cars and the implementation of production curtailment in Alberta, the ongoing lack of availability of capacity in any of the gathering and processing facilities, pipeline systems and railway lines could result in the Corporation's inability to realize the full economic potential of its production, or in a reduction of the price offered for the Corporation's production. The lack of firm pipeline capacity continues to affect the oil and natural gas industry and limits the ability to transport produced oil and natural gas to market. See "Industry Conditions - Transportation Constraints and Market Access". In addition, the pro-rationing of capacity on inter-provincial pipeline systems continues to affect the ability to export oil and natural gas. Unexpected shut downs or curtailment of capacity of pipelines for maintenance or integrity work or because of actions taken by regulators could also affect the Corporation's production, operations and financial results. As a result, producers are increasingly turning to rail lines as an alternative means of transportation. In recent years, the volume of crude oil shipped by rail in North America has increased dramatically. Any significant change in market factors or other conditions affecting these infrastructure systems and facilities, as well as any delays or uncertainty in constructing new infrastructure systems and facilities could harm the Corporation's business and, in turn, the Corporation's financial condition, operations and cash flows. Announcements and actions taken by the federal government and the provincial governments of British Columbia, Alberta and Quebec relating to approval of infrastructure projects may continue to intensify, leading to increased challenges to interprovincial and international infrastructure projects moving forward. In addition, while the federal government has introduced Bill C-69 to overhaul the existing environmental assessment process and replace the NEB with a new regulatory agency, the impact of the new proposed regulatory scheme on proponents and the timing for receipt of approvals of major projects remains unclear.

Following major accidents in Lac-Megantic, Quebec and North Dakota, the Transportation Safety Board of Canada and the U.S. National Transportation Board have recommended additional regulations for railway tank cars carrying crude oil. In June 2015, as a result of these recommendations, the Government of Canada passed the *Safe and Accountable Rail Act* which increased insurance obligations on the shipment of crude oil by rail and imposed a per tonne levy of \$1.65 on crude oil shipped by rail to compensate victims and for environmental cleanup in the event of a railway accident. In addition to this legislation, new regulations have implemented the TC-117 standard for all rail tank cars carrying flammable liquids, which formalized the commitment to retrofit, and eventually phase out DOT-111 tank cars carrying crude oil. The increased regulation of rail transportation may reduce the ability of rail transportation to alleviate pipeline constraints and adds additional costs to the transportation of crude oil by rail. On July 13, 2016, the Minister of Transport (Canada) issued Protective Direction No. 38, which directed that the shipping

of crude oil on DOT-111 tank cars end by November 1, 2016. Tank cars entering Canada from the United States will be monitored to ensure they are compliant with Protective Direction No. 38.

A portion of the Corporation's production may, from time to time, be processed through facilities owned by third parties and over which the Corporation does not have control. From time to time, these facilities may discontinue or decrease operations either as a result of normal servicing requirements or as a result of unexpected events. A discontinuation or decrease of operations could have a materially adverse effect on the Corporation's ability to process its production and deliver the same to market. Midstream and pipeline companies may take actions to maximize their return on investment, which may in turn adversely affect producers and shippers, especially when combined with a regulatory framework that may not always align with the interests of particular shippers.

### Competition

# The Corporation competes with other oil and natural gas companies, some of which have greater financial and operational resources

The petroleum industry is competitive in all of its phases. The Corporation competes with numerous other entities in the exploration, development, production and marketing of oil and natural gas. The Corporation's competitors include oil and natural gas companies that have substantially greater financial resources, staff and facilities than those of the Corporation. Some of these companies not only explore for, develop and produce oil and natural gas, but also carry on refining operations and market oil and natural gas on an international basis. As a result of these complementary activities, some of these competitors may have greater and more diverse competitive resources to draw on than the Corporation. The Corporation's ability to increase its reserves in the future will depend not only on its ability to explore and develop its present properties, but also on its ability to select and acquire other suitable producing properties or prospects for exploratory drilling. Competitive factors in the distribution and marketing of oil and natural gas include price, process, and reliability of delivery and storage.

#### **Cost of New Technologies**

# The Corporation's ability to successfully implement new technologies into its operations in a timely and efficient manner will affect its ability to compete

The petroleum industry is characterized by rapid and significant technological advancements and introductions of new products and services utilizing new technologies. Other companies may have greater financial, technical and personnel resources that allow them to implement and benefit from technological advantages. There can be no assurance that the Corporation will be able to respond to such competitive pressures and implement such technologies on a timely basis, or at an acceptable cost. If the Corporation does implement such technologies, there is no assurance that the Corporation will do so successfully. One or more of the technologies currently utilized by the Corporation or implemented in the future may become obsolete. In such case, the Corporation's business, financial condition and results of operations could also be affected adversely and materially. If the Corporation is unable to utilize the most advanced commercially available technology, or is unsuccessful in implementing certain technologies, its business, financial condition and results of operations could also be adversely affected in a material way.

#### **Alternatives to and Changing Demand for Petroleum Products**

# Changes to the demand for oil and natural gas products and the rise of petroleum alternatives may negatively affect the Corporation's financial condition, results of operations and cash flow

Full conservation measures, alternative fuel requirements, increasing consumer demand for alternatives to oil and natural gas and technological advances in fuel economy and renewable energy generation devices could reduce the demand for oil, natural gas and liquid hydrocarbons. Recently, certain jurisdictions have implemented policies or incentives to decrease the use of fossil fuels and encourage the use of renewable fuel alternatives, which may lessen the demand for petroleum products and put downward pressure on commodity prices. In addition, advancements in energy efficient products have a similar effect on the demand for oil and natural gas products. The Corporation cannot predict the impact of changing demand for oil and natural gas products, and any major changes may have a material

adverse effect on the Corporation's business, financial condition, results of operations and cash flow by decreasing the Corporation's profitability, increasing its costs, limiting its access to capital and decreasing the value of its assets.

#### Regulatory

# Modification to current, or implementation of additional, regulations may reduce the demand for oil and natural gas and/or increase the Corporation's costs and/or delay planned operations

Various levels of governments impose extensive controls and regulations on oil and natural gas operations (including exploration, development, production, pricing, marketing, transportation and infrastructure). Governments may regulate or intervene with respect to exploration and production activities, prices, taxes, royalties, the exportation of oil and natural gas and infrastructure projects. Amendments to these controls and regulations may occur, from time to time, in response to economic or political conditions. The implementation of new regulations or the modification of existing regulations affecting the oil and natural gas industry could reduce demand for crude oil and natural gas and increase the Corporation's costs, either of which may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects. Further, the ongoing third party challenges to regulatory decisions or orders has reduced the efficiency of the regulatory regime, as the implementation of the decisions and orders has been delayed resulting in uncertainty and interruption to business of the oil and natural gas industry. Recently, the federal government and certain provincial governments have taken steps to initiate protocols and regulations to limit the release of methane from oil and natural gas operations. Such draft regulations and protocols may require additional expenditures or otherwise negatively impact the Corporation's operations, which may affect the Corporation's profitability. See "Industry Conditions - Regulatory Authorities and Environmental Regulation -Climate Change Regulations". Also, in response to widening pricing differentials, the Government of Alberta implemented production curtailment. See "Industry Conditions - Curtailment". Also see "Risk Factors - Liability Management".

In order to conduct oil and natural gas operations, the Corporation will require regulatory permits, licenses, registrations, approvals and authorizations from various governmental authorities at the municipal, provincial and federal level. There can be no assurance that the Corporation will be able to obtain all of the permits, licenses, registrations, approvals and authorizations that may be required to conduct operations that it may wish to undertake. In addition, certain federal legislation such as the *Competition Act* and the *Investment Canada Act* could negatively affect the Corporation's business, financial condition and the market value of the Common Shares or its assets, particularly when undertaking, or attempting to undertake, acquisition or disposition activity. See "Industry Conditions – Regulatory Authorities and Environmental Regulation – Liability Management Rating Programs".

#### **Royalty Regimes**

#### Changes to royalty regimes may negatively impact the Corporation's cash flows

There can be no assurance that the governments in the jurisdictions in which the Corporation has assets will not adopt new royalty regimes, or modify the existing royalty regimes, which may have an impact on the economics of the Corporation's projects. An increase in royalties would reduce the Corporation's earnings and could make future capital investments, or the Corporation's operations, less economic. On January 29, 2016, the Government of Alberta adopted a new royalty regime which took effect on January 1, 2017. See "*Industry Conditions - Royalties and Incentives*".

### **Hydraulic Fracturing**

# Implementation of new regulations on hydraulic fracturing may lead to operational delays, increased costs and/or decreased production volumes, adversely affecting the Corporation's financial position

Hydraulic fracturing involves the injection of water, sand and small amounts of additives under pressure into rock formations to stimulate the production of oil and natural gas. Specifically, hydraulic fracturing enables the production of commercial quantities of oil and natural gas from reservoirs that were previously unproductive. Any new laws, regulations or permitting requirements regarding hydraulic fracturing could lead to operational delays, increased operating costs, third party or governmental claims, and could increase the Corporation's costs of compliance and

doing business, as well as delay the development of oil and natural gas resources from shale formations, which are not commercial without the use of hydraulic fracturing. Restrictions on hydraulic fracturing could also reduce the amount of oil and natural gas that the Corporation is ultimately able to produce from its reserves.

### Waterflood

# Regulatory water use restrictions and/or limited access to water or other fluids may impact the Corporation's production volumes from its waterflood

The Corporation undertakes or intends to undertake certain waterflooding programs, which involve the injection of water or other liquids into an oil reservoir to increase production from the reservoir and to decrease production declines. To undertake such waterflooding activities the Corporation needs to have access to sufficient volumes of water, or other liquids, to pump into the reservoir to increase the pressure in the reservoir. There is no certainty that the Corporation will have access to the required volumes of water. In addition, in certain areas there may be restrictions on water use for activities such as waterflooding. If the Corporation is unable to access such water it may not be able to undertake waterflooding activities, which may reduce the amount of oil and natural gas that the Corporation is ultimately able to produce from its reservoirs. In addition, the Corporation may undertake certain waterflood programs that ultimately prove unsuccessful in increasing production from the reservoir and as a result have a negative impact on the Corporation's results of operations.

### **Disposal of Fluids Used in Operations**

# Regulations regarding the disposal of fluids used in the Corporation's operations may increase its costs of compliance or subject it to regulatory penalties or litigation

The safe disposal of the hydraulic fracturing fluids (including the additives) and water recovered from oil and natural gas wells is subject to ongoing regulatory review by the federal and provincial governments, including its effect on fresh water supplies and the ability of such water to be recycled, amongst other things. While it is difficult to predict the impact of any regulations that may be enacted in response to such review, the implementation of stricter regulations may increase the Corporation's costs of compliance.

#### Environmental

# Compliance with environmental regulations requires the dedication of a portion of the Corporation's financial and operational resources

All phases of the oil and natural gas business present environmental risks and hazards and are subject to environmental regulation pursuant to a variety of federal, provincial and local laws and regulations. Environmental legislation provides for, among other things, restrictions and prohibitions on the spill, release or emission of various substances produced in association with oil and natural gas industry operations. In addition, such legislation sets out the requirements with respect to oilfield waste handling and storage, habitat protection and the satisfactory operation, maintenance, abandonment and reclamation of well and facility sites.

Compliance with environmental legislation can require significant expenditures and a breach of applicable environmental legislation may result in the imposition of fines and penalties, some of which may be material. Environmental legislation is evolving in a manner expected to result in stricter standards and enforcement, larger fines and liability and potentially increased capital expenditures and operating costs. The discharge of oil, natural gas or other pollutants into the air, soil or water may give rise to liabilities to governments and third parties and may require the Corporation to incur costs to remedy such discharge. Although the Corporation believes that it will be in material compliance with current applicable environmental legislation, no assurance can be given that environmental compliance requirements will not result in a curtailment of production or a material increase in the costs of production, development or exploration activities or otherwise have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

#### **Carbon Pricing Risk**

# Taxes on carbon emissions affect the demand for oil and natural gas, the Corporation's operating expenses and may impair the Corporation's ability to compete

The majority of countries across the globe have agreed to reduce their carbon emissions in accordance with the Paris Agreement. See "Industry Conditions – Regulatory Authorities and Environmental Regulation – Climate Change Regulation". In Canada, the federal and certain provincial governments have implemented legislation aimed at incentivizing the use of alternative fuels and in turn reducing carbon emissions. The taxes placed on carbon emissions may have the effect of decreasing the demand for oil and natural gas products and at the same time, increasing the Corporation's operating expenses, each of which may have a material adverse effect on the Corporation's profitability and financial condition. Further, the imposition of carbon taxes puts the Corporation at a disadvantage with its counterparts who operate in jurisdictions where there are less costly carbon regulations.

#### **Liability Management**

# Liability management programs enacted by regulators in the western provinces may prevent or interfere with the Corporation's ability to acquire properties or require a substantial cash deposit with the regulator

Alberta, Saskatchewan and British Columbia have developed liability management programs designed to prevent taxpayers from incurring costs associated with suspension, abandonment, remediation and reclamation of wells, facilities and pipelines in the event that a licensee or permit holder is unable to satisfy its regulatory obligations. These programs involve an assessment of the ratio of a licensee's deemed assets to deemed liabilities. If a licensee's deemed liabilities exceed its deemed assets, a security deposit is generally required. Changes to the required ratio of the Corporation's deemed assets to deemed liabilities, or other changes to the requirements of liability management programs, may result in significant increases to the Corporation's compliance obligations. In addition, the liability management regime may prevent or interfere with the Corporation's ability to acquire or dispose of assets, as both the vendor and the purchaser of oil and natural gas assets must be in compliance with the liability management programs (both before and after the transfer of the assets) for the applicable regulatory agency to allow for the transfer of such assets. This is of particular concern to junior oil and natural gas companies that may be disproportionately affected by price instability. The impact and consequences of the Supreme Court of Canada's decision in the Redwater case on the AER's rules and policies, lending practices in the crude oil and natural gas sector and on the nature and determination of secured lenders to take enforcement proceedings will no doubt evolve as the consequences of the decsision are evaluated and considered by regulators, lenders and receivers/trustees. See "Industry Conditions -Regulatory Authorities and Environmental Regulation – Liability Management Rating Programs".

#### **Climate Change**

# Compliance with greenhouse gas emissions regulations may result in increased operational costs to the Corporation

The Corporation's exploration and production facilities and other operations and activities emit greenhouse gases ("GHG") which may require the Corporation to comply with greenhouse gas emissions legislation at the provincial or federal level. Climate change policy is evolving at regional, national and international levels, and political and economic events may significantly affect the scope and timing of climate change measures that are ultimately put in place. As a signatory to the UNFCCC and a signatory to the Paris Agreement, which was ratified in Canada on October 3, 2016, the Government of Canada pledged to cut its GHG emissions by 30 per cent from 2005 levels by 2030. One of the pertinent policies announced to date by the Government of Canada to reduce GHG emission is the planned implementation of a nation-wide price on carbon emissions. The federal carbon levy goes into effect on April 1, 2019 and will affect provinces which have not implemented their own carbon taxes, cap-and-trade systems or other plans for carbon pricing, namely Ontario, Manitoba, Saskatchewan and New Brunswick. The federal carbon levy will be at an initial rate of \$20 per tonne. Provincially, the Government of Alberta has already implemented a carbon levy on almost all sources of GHG emissions, now at a rate of \$30 per tonne. The implementation of the federal carbon levy is currently subject to constitutional challenges submitted by the provinces of Saskatchewan and Ontario, which are supported by the province of New Brunswick. The direct or indirect costs of compliance with GHG-related regulations may have a material adverse effect on the Corporation's business, financial condition, results of operations and

prospects. Some of the Corporation's significant facilities may ultimately be subject to future regional, provincial and/or federal climate change regulations to manage GHG emissions.

Concerns about climate change have resulted in a number of environmental activists and members of the public opposing the continued exploitation and development of fossil fuels. Historically, political and legal opposition to the fossil fuel industry focused on public opinion and the regulatory process. More recently, however, there has been a movement to more directly hold governments and oil and natural gas companies responsible for climate change through climate litigation. In November 2018, ENvironment JEUnesse, a Quebec advocacy group, applied to the Quebec Superior Court to certify a class action against the Government of Canada for climate related matters. In January 2019, the City of Victoria became the first municipality in Canada to endorse a class action lawsuit against oil and natural gas producers for climate-related harms. See "*Risk Factors – Non-Governmental Organizations and Eco and Eco-Terrorism Risks*" and "*Risk Factors – Reputational Risk Associated with the Corporation's Operations*".

Given the evolving nature of the debate related to climate change and the control of GHG and resulting requirements, it is expected that current and future climate change regulations will have the affect of increasing the Corporation's operating expenses and in the long-term reducing the demand for oil and natural gas production, resulting in a decrease in the Corporation's profitability and a reduction in the value of its assets or asset write-offs. See "*Industry Conditions* – *Regulatory Authorities and Environmental Regulation* – *Climate Change Regulation*".

In addition, there has been public discussion that climate change may be associated with extreme weather conditions and increased volatility in seasonal temperatures. Extreme weather could interfere with the Corporation's production and increase the Corporation's costs. At this time, the Corporation is unable to determine the extent to which climate change may lead to increased storm or weather hazards affecting its operations.

### Variations in Foreign Exchange Rates and Interest Rates

#### Variations in foreign exchange rates and interest rates could adversely affect the Corporation's financial condition

World oil and natural gas prices are quoted in United States dollars. The Canadian/United States dollar exchange rate, which fluctuates over time, consequently affects the price received by Canadian producers of oil and natural gas. Material increases in the value of the Canadian dollar relative to the United States dollar will negatively affect the Corporation's production revenues. Accordingly, exchange rates between Canada and the United States could affect the future value of the Corporation's reserves as determined by independent evaluators. Although a low value of the Canadian dollar may positively affect the price the Corporation receives for its oil and natural gas production, it could also result in an increase in the price for certain goods used for the Corporation's operations, which may have a negative impact on the Corporation's financial results.

To the extent that the Corporation engages in risk management activities related to foreign exchange rates, there is a credit risk associated with counterparties with which the Corporation may contract.

An increase in interest rates could result in a significant increase in the amount the Corporation pays to service debt, resulting in a reduced amount available to fund its exploration and development activities, and if applicable, the cash available for dividends. Such an increase could also negatively impact the market price of the Common Shares.

### **Substantial Capital Requirements**

# The Corporation's access to capital may be limited or restricted as a result of factors related and unrelated to it, impacting its ability to conduct future operations and acquire and develop reserves

The Corporation anticipates making substantial capital expenditures for the acquisition, exploration, development and production of oil and natural gas reserves in the future. As future capital expenditures will be financed out of cash generated from operations, borrowings and possible future equity sales, the Corporation's ability to do so is dependent on, among other factors:

• the overall state of the capital markets;

- the Corporation's credit rating (if applicable);
- commodity prices;
- interest rates;
- royalty rates;
- tax burden due to current and future tax laws; and
- investor appetite for investments in the energy industry and the Corporation's securities in particular.

Further, if the Corporation's revenues or reserves decline, it may not have access to the capital necessary to undertake or complete future drilling programs. The conditions in, or affecting, the oil and natural gas industry have negatively impacted the ability of oil and natural gas companies, including the Corporation, to access additional financing and/or the cost thereof. There can be no assurance that debt or equity financing, or cash generated by operations will be available or sufficient to meet these requirements or for other corporate purposes or, if debt or equity financing is available, that it will be on terms acceptable to the Corporation. The Corporation may be required to seek additional equity financing on terms that are highly dilutive to existing shareholders. The inability of the Corporation to access sufficient capital for its operations could have a material adverse effect on the Corporation's business financial condition, results of operations and prospects.

### **Additional Funding Requirements**

# The Corporation may require additional financing from time to time to fund the acquisition, exploration and development of properties and its ability to obtain such financing in a timely fashion and on acceptable terms may be negatively impacted by the current economic and global market volatility

The Corporation's cash flow from its reserves may not be sufficient to fund its ongoing activities at all times and, from time to time, the Corporation may require additional financing in order to carry out its oil and natural gas acquisition, exploration and development activities. Failure to obtain financing on a timely basis could cause the Corporation to forfeit its interest in certain properties, miss certain acquisition opportunities and reduce or terminate its operations. Due to the conditions in the oil and natural gas industry and/or global economic and political volatility, the Corporation may, from time to time, have restricted access to capital and increased borrowing costs. The current conditions in the oil and natural gas industry impacted the ability of oil and natural gas companies to access, or the cost of, additional financing.

As a result of global economic and political volatility, the Corporation may, from time to time, have restricted access to capital and increased borrowing costs. Failure to obtain suitable financing on a timely basis could cause the Corporation to forfeit its interest in certain properties, miss certain acquisition opportunities and reduce or terminate its operations. If the Corporation's revenues from its reserves decrease as a result of lower oil and natural gas prices or otherwise, it will affect the Corporation's ability to expend the necessary capital to replace its reserves or to maintain its production. To the extent that external sources of capital become limited, unavailable or available on onerous terms, the Corporation's ability to make capital investments and maintain existing assets may be impaired, and its assets, liabilities, business, financial condition and results of operations may be affected materially and adversely as a result. In addition, the future development of the Corporation's petroleum properties may require additional financing and there are no assurances that such financing will be available or, if available, will be available upon acceptable terms. Alternatively, any available financing may be highly dilutive to existing shareholders. Failure to obtain any financing necessary for the Corporation's capital expenditure plans may result in a delay in development or production on the Corporation's properties.

#### **Credit Facility Arrangements**

# Failing to comply with covenants under the Petrus Credit Facilities could result in restricted access to capital or being required to repay all amounts owing thereunder

The Petrus Credit Facilities and the amount authorized thereunder is dependent on the borrowing base determined by our lenders. We are required to comply with covenants under the Petrus Credit Facilities which may, in certain cases, include certain financial ratio tests, which from time to time either affect the availability, or price, of additional funding and in the event that we do not comply with these covenants, Petrus' access to capital could be restricted or repayment

could be required. Events beyond the Corporation's control may contribute to a failure to comply with such covenants. Such a failure to comply with covenants could result in default under the Petrus Credit Facilities, which could result in the Corporation being required to repay amounts owing thereunder. The acceleration of our indebtedness under one agreement may permit acceleration of indebtedness under other agreements that contain cross default or cross-acceleration provisions. In addition, the Petrus Credit Facilities may impose operating and financial restrictions on us that could include restrictions on, the payment of dividends, repurchase or making of other distributions with respect to our securities, incurring of additional indebtedness, the provision of guarantees, the assumption of loans, making of capital expenditures, entering into of amalgamations, mergers, take-over bids or disposition of assets, among others.

The Corporation's lenders use the Corporation's reserves, commodity prices, applicable discount rate and other factors to periodically determine the Corporation's borrowing base. Commodity prices continue to be depressed and have fallen dramatically since 2014, and while prices have recently increased they remain volatile as a result of various factors including limited egress options for Western Canadian oil and natural gas producers, actions taken to limit OPEC and non-OPEC production and increasing production by US shale producers. Depressed commodity prices could reduce the Corporation's borrowing base, reducing the funds available to the Corporation under the credit facility. This could result in the requirement to repay a portion, or all, of the Corporation's indebtedness.

The impact of the Supreme Court of Canada's decision in the Redwater case on lending practices in the crude oil and natural gas sector and actions taken by secured creditors and receivers/trustees of insolvent borrowers has not yet been determined but could affect lending practices as secured creditors will be subject to prior satisfaction of abandonment and restoration claims which may not be capable of quantification at the time credit is advanced. See "Industry Conditions – Regulatory Authorities and Environmental Regulation – Liability Management Rating Programs".

If our lenders require repayment of all or portion of the amounts outstanding under the Petrus Credit Facilities for any reason, including for a default of a covenant or the reduction of a borrowing base, there is no certainty that we would be in a position to make such repayment. Even if we are able to obtain new financing in order to make any required repayment under the Petrus Credit Facilities, it may not be on commercially reasonable terms or terms that are acceptable to us. If we are unable to repay amounts owing under the Petrus Credit Facilities, the lenders could proceed to foreclose or otherwise realize upon the collateral granted to them to secure the indebtedness.

#### **Issuance of Debt**

# Increased debt levels may impair the Corporation's ability to borrow additional capital on a timely basis to fund opportunities as they arise

From time to time, the Corporation may enter into transactions to acquire assets or shares of other entities. These transactions may be financed in whole, or in part, with debt, which may increase the Corporation's debt levels above industry standards for oil and natural gas companies of similar size. Depending on future exploration and development plans, the Corporation may require additional debt financing that may not be available or, if available, may not be available on favourable terms. Neither the Corporation's articles nor its by-laws limit the amount of indebtedness that the Corporation may incur. The level of the Corporation's indebtedness from time to time could impair the Corporation's ability to obtain additional financing on a timely basis to take advantage of business opportunities that may arise.

#### Hedging

#### Hedging activities expose the Corporation to the risk of financial loss and counter-party risk

From time to time, the Corporation may enter into agreements to receive fixed prices on its oil and natural gas production to offset the risk of revenue losses if commodity prices decline. However, to the extent that the Corporation engages in price risk management activities to protect itself from commodity price declines, it may also be prevented from realizing the full benefits of price increases above the levels of the derivative instruments used to manage price risk. In addition, the Corporation's hedging arrangements may expose it to the risk of financial loss in certain circumstances, including instances in which:

- production falls short of the hedged volumes or prices fall significantly lower than projected;
- there is a widening of price-basis differentials between delivery points for production and the delivery point assumed in the hedge arrangement;
- the counterparties to the hedging arrangements or other price risk management contracts fail to perform under those arrangements; or
- a sudden unexpected event materially impacts oil and natural gas prices.

Similarly, from time to time, the Corporation may enter into agreements to fix the exchange rate of Canadian to United States dollars or other currencies in order to offset the risk of revenue losses if the Canadian dollar increases in value compared to other currencies. However, if the Canadian dollar declines in value compared to such fixed currencies, the Corporation will not benefit from the fluctuating exchange rate.

# Availability and Cost of Material and Equipment

# Restrictions on the availability and cost of materials and equipment may impede the Corporation's exploration, development and operating activities

Oil and natural gas exploration, development and operating activities are dependent on the availability and cost of specialized materials and equipment (typically leased from third parties) in the areas where such activities are conducted. The availability of such material and equipment is limited. An increase in demand or cost, or a decrease in the availability of such materials and equipment may impede the Corporation's exploration, development and operating activities.

# The Corporation requires a Skilled Workforce

# An inability to recruit and retain a skilled workforce may negatively impact the Corporation

The operations and management of the Corporation require the recruitment and retention of a skilled workforce, including engineers, technical personnel and other professionals. The loss of key members of such workforce, or a substantial portion of the workforce as a whole, could result in the failure to implement the Corporation's business plans. The Corporation competes with other companies in the oil and natural gas industry, as well as other industries, for this skilled workforce. A decline in market conditions has led increasing numbers of skilled personnel to seek employment in other industries. If the Corporation is unable to: (i) retain current employees; and/or (ii) recruit new employees with the requisite knowledge and experience, the Corporation could be negatively impacted. In addition, the Corporation could experience increased costs to retain and recruit these professionals.

### Title to and Right to Produce from Assets

### Defects in the title or rights to produce the Corporation's properties may result in a financial loss

The Corporation's actual title to and interest in its properties, and its right to produce and sell the oil and natural gas therefrom, may vary from the Corporation's records. In addition, there may be valid legal challenges or legislative changes that affect the Corporation's title to and right to produce from its oil and natural gas properties, which could impair the Corporation's activities and result in a reduction of the revenue received by the Corporation.

If a defect exists in the chain of title or in the Corporation's right to produce, or a legal challenge or legislative change arises, it is possible that the Corporation may lose all, or a portion of, the properties to which the title defect relates and/or its right to produce from such properties. This may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

### **Reserves Estimates**

# The Corporation's estimated reserves are based on numerous factors and assumptions which may prove incorrect and which may affect the Corporation

There are numerous uncertainties inherent in estimating reserves, and the future cash flows attributed to such reserves. The reserves and associated cash flow information set forth in this document are estimates only. Generally, estimates of economically recoverable oil and natural gas reserves (including the breakdown of reserves by product type) and the future net cash flows from such estimated reserves are based upon a number of variable factors and assumptions, such as:

- historical production from properties;
- production rates;
- ultimate reserve recovery;
- timing and amount of capital expenditures;
- marketability of oil and natural gas;
- royalty rates; and
- the assumed effects of regulation by governmental agencies and future operating costs (all of which may vary materially from actual results).

For those reasons, estimates of the economically recoverable oil and natural gas reserves attributable to any particular group of properties, classification of such reserves based on risk of recovery and estimates of future net revenues associated with reserves prepared by different engineers, or by the same engineers at different times may vary. The Corporation's actual production, revenues, taxes and development and operating expenditures with respect to its reserves will vary from estimates and such variations could be material.

The estimation of proved reserves that may be developed and produced in the future is often based upon volumetric calculations and upon analogy to similar types of reserves rather than actual production history. Recovery factors and drainage areas are often estimated by experience and analogy to similar producing pools. Estimates based on these methods are generally less reliable than those based on actual production history. Subsequent evaluation of the same reserves based upon production history and production practices will result in variations in the estimated reserves and such variations could be material.

In accordance with applicable securities laws, the Corporation's independent reserves evaluator has used forecast prices and costs in estimating the reserves and future net cash flows as summarized herein. Actual future net cash flows will be affected by other factors, such as actual production levels, supply and demand for oil and natural gas, curtailments or increases in consumption by oil and natural gas purchasers, changes in governmental regulation or taxation and the impact of inflation on costs.

Actual production and cash flows derived from the Corporation's oil and natural gas reserves will vary from the estimates contained in the reserve evaluation, and such variations could be material. The reserve evaluation is based in part on the assumed success of activities the Corporation intends to undertake in future years. The reserves and estimated cash flows to be derived therefrom and contained in the reserve evaluation will be reduced to the extent that such activities do not achieve the level of success assumed in the reserve evaluation. The reserve evaluation is effective as of a specific effective date and, except as may be specifically stated, has not been updated and therefore does not reflect changes in the Corporation's reserves since that date.

#### Insurance

# Not all risks of conducting oil and natural gas opportunities are insurable and the occurrence of an uninsurable event may have a materially adverse effect on the Corporation

The Corporation's involvement in the exploration for and development of oil and natural gas properties may result in the Corporation becoming subject to liability for pollution, blowouts, leaks of sour gas, property damage, personal injury or other hazards. Although the Corporation maintains insurance in accordance with industry standards to address certain of these risks, such insurance has limitations on liability and may not be sufficient to cover the full extent of such liabilities. In addition, certain risks are not, in all circumstances, insurable or, in certain circumstances, the Corporation may elect not to obtain insurance to deal with specific risks due to the high premiums associated with such insurance or other reasons. The payment of any uninsured liabilities would reduce the funds available to the Corporation. The occurrence of a significant event that the Corporation is not fully insured against, or the insolvency

of the insurer of such event, may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

#### **Geopolitical Risks**

#### Global political events may adversely affect commodity prices which in turn affect the Corporation's cash flow

Political changes in North America and political instability in the Middle East and elsewhere may cause disruptions in the supply of oil that affects the marketability and price of oil and natural gas acquired or discovered by the Corporation. Conflicts, or conversely peaceful developments, arising outside of Canada, including changes in political regimes or parties in power, may have a significant impact on the price of oil and natural gas. Any particular event could result in a material decline in prices and result in a reduction of the Corporation's net production revenue.

#### Non-Governmental Organizations and Eco-Terrorism Risks

#### The Corporation's properties may be subject to action by non-governmental organizations or terrorist attack

The oil and natural gas exploration, development and operating activities conducted by the Corporation may, at times, be subject to public opposition. Such public opposition could expose the Corporation to the risk of higher costs, delays or even project cancellations due to increased pressure on governments and regulators by special interest groups including Aboriginal groups, landowners, environmental interest groups (including those opposed to oil and natural gas production operations) and other non-governmental organizations, blockades, legal or regulatory actions or challenges, increased regulatory oversight, reduced support of the federal, provincial or municipal governments, delays in, challenges to, or the revocation of regulatory approvals, permits and/or licenses, and direct legal challenges, including the possibility of climate-related litigation. There is no guarantee that the Corporation will be able to satisfy the concerns of the special interest groups and non-governmental organizations and attempting to address such concerns may require the Corporation to incur significant and unanticipated capital and operating expenditures.

In addition, the Corporation's oil and natural gas properties, wells and facilities could be the subject of a terrorist attack. If any of the Corporation's properties, wells or facilities are the subject of terrorist attack it may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects. The Corporation does not have insurance to protect against the risk from terrorism.

#### **Reputational Risk Associated with the Corporation's Operations**

#### The Corporation relies on its reputation to continue its operations and to attract and retain investors and employees

The Corporation's business, operations or financial condition may be negatively impacted as a result of any negative public opinion towards the Corporation or as a result of any negative sentiment toward, or in respect of, the Corporation's reputation with stakeholders, special interest groups, political leadership, the media or other entities. Public opinion may be influenced by certain media and special interest groups' negative portrayal of the industry in which the Corporation operates as well as their opposition to certain oil and natural gas projects. Potential impacts of negative public opinion or reputational issues may include delays or interruptions in operations, legal or regulatory actions or challenges, blockades, increased regulatory oversight, reduced support for, delays in, challenges to, or the revocation of regulatory approvals, permits and/or licenses and increased costs and/or cost overruns. The Corporation's reputation and public opinion could also be impacted by the actions and activities of other companies operating in the oil and natural gas industry, particularly other producers, over which the Corporation has no control. Similarly, the Corporation's reputation could be impacted by negative publicity related to loss of life, injury or damage to property and environmental damage caused by the Corporation's operations. In addition, if the Corporation develops a reputation of having an unsafe work site, it may impact the ability of the Corporation to attract and retain the necessary skilled employees and consultants to operate its business. Opposition from special interest groups opposed to oil and natural gas development and the possibility of climate related litigation against governments and fossil fuel companies may impact the Corporation's reputation. See "Risk Factors - Climate Change".

Reputational risk cannot be managed in isolation from other forms of risk. Credit, market, operational, insurance, regulatory and legal risks, among others, must all be managed effectively to safeguard the Corporation's reputation. Damage to the Corporation's reputation could result in negative investor sentiment towards the Corporation, which may result in limiting the Corporation's access to capital, increasing the cost of capital, and decreasing the price and liquidity of the Corporation's securities.

### **Changing Investor Sentiment**

# Changing investor sentiment towards the oil and natural gas industry may impact the Corporation's access to, and cost of, capital

A number of factors, including the concerns of the effects of the use of fossil fuels on climate change, the impact of oil and natural gas operations on the environment, environmental damage relating to spills of petroleum products during transportation and indigenous rights, have affected certain investors' sentiments towards investing in the oil and natural gas industry. As a result of these concerns, some institutional, retail and public investors have announced that they no longer are willing to fund or invest in oil and natural gas properties or companies, or are reducing the amount thereof over time. In addition, certain institutional investors are requesting that issuers develop and implement more robust social, environmental and governance policies and practices. Developing and implementing such policies and employees of the Corporation. Failing to implement the policies and practices, as requested by institutional investors, may result in such investors reducing their investment in the Corporation, or not investing in the Corporation at all. Any reduction in the investor base interested or willing to invest in the oil and natural gas industry and more specifically, the Corporation, may result in limiting the Corporation's access to capital, increasing the cost of capital, and decreasing the price and liquidity of the Corporation's securities even if the Corporation's operating results, underlying asset values or prospects have not changed. Additionally, these factors, as well as other related factors, may cause a decrease in the value of the Corporation's asset which may result in an impairment change.

#### Dilution

### The Corporation may issue additional Common Shares, diluting current Shareholders

The Corporation may make future acquisitions or enter into financings or other transactions involving the issuance of securities of the Corporation, which may be dilutive to Shareholders.

#### **Management of Growth**

#### The Corporation may not be able to effectively manage the growth of its business

The Corporation may be subject to growth related risks including capacity constraints and pressure on its internal systems and controls. The ability of the Corporation to manage growth effectively will require it to continue to implement and improve its operational and financial systems and to expand, train and manage its employee base. If the Corporation is unable to deal with this growth, it may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

#### **Expiration of Licenses and Leases**

# The Corporation, or its working interest partners, may fail to meet the requirements of a licence or lease, causing its termination or expiry

The Corporation's properties are held in the form of licences and leases and working interests in licences and leases. If the Corporation, or the holder of the licence or lease, fails to meet the specific requirement of a licence or lease, the licence or lease may terminate or expire. There can be no assurance that any of the obligations required to maintain each licence or lease will be met. The termination or expiration of the Corporation's licences or leases or the working interests relating to a licence or lease may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects.

#### Dividends

#### The Corporation does not pay dividends and there is no assurance that it will do so in the future

The Corporation has not paid any dividends on the outstanding Common Shares. Payment of dividends in the future will be dependent on, among other things, cash flow, results of operations, financial condition of the Corporation, the need for funds to finance ongoing operations and other considerations, as the Board considers relevant.

#### Litigation

# The Corporation may be involved in litigation in the course of its normal operations and the outcome of the litigation may adversely affect the Corporation and its reputation

In the normal course of the Corporation's operations, it 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. Potential litigation may develop in relation to personal injuries (including resulting from exposure to hazardous substances, property damage, property taxes, land and access rights, environmental issues, including claims relating to contamination or natural resource damages and contract disputes). The outcome with respect to outstanding, pending or future proceedings cannot be predicted with certainty and may be determined adversely to the Corporation and could have a material adverse effect on the Corporation's assets, liabilities, business, financial condition and results of operations. Even if the Corporation prevails in any such legal proceedings, the proceedings could be costly and time-consuming and may divert the attention of management and key personnel from business operations, which could have an adverse affect on the Corporation's financial condition.

#### **Aboriginal Claims**

#### Aboriginal claims may affect the Corporation

Aboriginal peoples have claimed aboriginal title and rights in portions of Western Canada. The Corporation is not aware that any claims have been made in respect of its properties and assets. However, if a claim arose and was successful, such claim may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects. In addition, the process of addressing such claims, regardless of the outcome, is expensive and time consuming and could result in delays which could have a material adverse effect on the Corporation's business and financial results.

#### **Breach of Confidentiality**

# Breach of confidentiality by a third party could impact the Corporation's competitive advantage or put it at risk of litigation

While discussing potential business relationships or other transactions with third parties, the Corporation may disclose confidential information relating to its business, operations or affairs. Although confidentiality agreements are generally signed by third parties prior to the disclosure of any confidential information, a breach could put the Corporation at competitive risk and may cause significant damage to its business. The harm to the Corporation's business from a breach of confidentiality cannot presently be quantified, but may be material and may not be compensable in damages. There is no assurance that, in the event of a breach of confidentiality, the Corporation will be able to obtain equitable remedies, such as injunctive relief, from a court of competent jurisdiction in a timely manner, if at all, in order to prevent or mitigate any damage to its business that such a breach of confidentiality may cause.

#### **Income Taxes**

#### Taxation authorities may reassess the Corporation's tax returns

The Corporation files all required income tax returns and believes that it is in full compliance with the provisions of the *Tax Act* and all other applicable provincial tax legislation. However, such returns are subject to reassessment by the applicable taxation authority. In the event of a successful reassessment of the Corporation, whether by recharacterization of exploration and development expenditures or otherwise, such reassessment may have an impact on current and future taxes payable.

Income tax laws relating to the oil and natural gas industry, such as the treatment of resource taxation or dividends, may in the future be changed or interpreted in a manner that adversely affects the Corporation. Furthermore, tax authorities having jurisdiction over the Corporation may disagree with how the Corporation calculates its income for tax purposes or could change administrative practices to the Corporation's detriment.

### **Seasonality and Extreme Weather Conditions**

# Oil and natural gas operations are subject to seasonal and extreme weather conditions and the Corporation may experience significant operational delays as a result

The level of activity in the Canadian oil and natural gas industry is influenced by seasonal weather patterns. Wet weather and spring thaw may make the ground unstable. Consequently, municipalities and provincial transportation departments enforce road bans that restrict the movement of rigs and other heavy equipment, thereby reducing activity levels. Roads bans and other restrictions generally result in a reduction of drilling and exploratory activities and may also result in the shut-in of some of the Corporation's production if not otherwise tied-in. Certain oil and natural gas producing areas are located in areas that are inaccessible other than during the winter months because the ground surrounding the sites in these areas consists of muskeg. In addition, extreme cold weather, heavy snowfall and heavy rainfall may restrict the Corporation's ability to access its properties, cause operational difficulties including damage to machinery or contribute to personnel injury because of dangerous working conditions.

### **Third Party Credit Risk**

#### The Corporation is exposed to credit risk of third party operators or partners of properties in which it has an interest

The Corporation may be exposed to third party credit risk through its contractual arrangements with its current or future joint venture partners, marketers of its petroleum and natural gas production and other parties. In addition, the Corporation may be exposed to third party credit risk from operators of properties in which the Corporation has a working or royalty interest. In the event such entities fail to meet their contractual obligations to the Corporation, such failures may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects. In addition, poor credit conditions in the industry, generally, and of the Corporation's joint venture partners may affect a joint venture partner's willingness to participate in the Corporation finds a suitable alternative partner. To the extent that any of such third parties go bankrupt, become insolvent or make a proposal or institute any proceedings relating to bankruptcy or insolvency, it could result in the Corporation being unable to collect all or a portion of any money owing from such parties. Any of these factors could materially adversely affect the Corporation's financial and operation's financial and operations.

#### **Conflicts of Interest**

# Conflicts of interest may arise for the Corporation's directors and officers who are also involved with other industry participants

Certain directors or officers of the Corporation may also be directors or officers of other oil and natural gas companies and as such may, in certain circumstances, have a conflict of interest. Conflicts of interest, if any, will be subject to and governed by procedures prescribed by the ABCA which require a director or officer of a corporation who is a party to, 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 to disclose his or her interest and, in the case of directors, to refrain from voting on any matter in respect of such contract unless otherwise permitted under the ABCA. See "*Directors and Officers – Conflicts of Interest*".

#### **Reliance on Key Personnel**

#### Loss of key personnel would negatively impact the Corporation's operations

The Corporation's success depends in large measure on certain key personnel. Losing the services of such key personnel could have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects. The Corporation does not have any key personnel insurance in effect. The contributions of the existing management team to the immediate and near term operations of the Corporation are likely to be of central importance. In addition, the competition for qualified personnel in the oil and natural gas industry is intense and there can be no assurance that the Corporation will be able to continue to attract and retain all personnel necessary for the development and operation of its business. Investors must rely upon the ability, expertise, judgment, discretion, integrity and good faith of the management of the Corporation.

#### Information Technology Systems and Cyber-Security

# Breaches of the Corporation's cyber-security and loss of, or access to, electronic data may adversely impact the Corporation's operations and financial position

The Corporation has become increasingly dependent upon the availability, capacity, reliability and security of our information technology infrastructure and our ability to expand and continually update this infrastructure, to conduct daily operations. The Corporation depends on various information technology systems to estimate reserve quantities, process and record financial data, manage our land base, manage financial resources, analyze seismic information, administer our contracts with our operators and lessees and communicate with employees and third-party partners.

Further, the Corporation is subject to a variety of information technology and system risks as a part of its normal course operations, including potential breakdown, invasion, virus, cyber-attack, cyber-fraud, security breach, and destruction or interruption of the Corporation's information technology systems by third parties or insiders. Unauthorized access to these systems by employees or third parties could lead to corruption or exposure of confidential, fiduciary or proprietary information, interruption to communications or operations or disruption to our business activities or our competitive position. In addition, cyber phishing attempts, in which a malicious party attempts to obtain sensitive information such as usernames, passwords, and credit card details (and money) by disguising as a trustworthy entity in an electronic communication, have become more widespread and sophisticated in recent years. If the Corporation becomes a victim to a cyber phishing attack it could result in a loss or theft of the Corporation's financial resources or critical data and information, or could result in a loss of control of the Corporation's technological infrastructure or financial resources. The Corporation's employees are often the targets of such cyber phishing attacks, as they are and will continue to be targeted by parties using fraudulent "spoof" emails to misappropriate information or to introduce viruses or other malware through "Trojan horse" programs to the Corporation's computers. These emails appear to be legitimate emails, but direct recipients to fake websites operated by the sender of the email or request recipients to send a password or other confidential information through email or to download malware.

The Corporation maintains policies and procedures that address and implement employee protocols with respect to electronic communications and electronic devices and conducts annual cyber-security risk assessments. The Corporation also employs encryption protection of its offsite confidential information, all computers and other electronic devices are password protected. Despite the Corporation's efforts to mitigate such cyber phishing attacks through education and training, cyber phishing activities remain a serious problem that may damage its information technology infrastructure. The Corporation applies technical and process controls in line with industry-accepted standards to protect its information, assets and systems, including a written incident response plan for responding to a cyber-security incident. However, these controls may not adequately prevent cyber-security breaches. Disruption of critical information technology services, or breaches of information security, could have a negative effect on our performance and earnings, as well as on our reputation, and any damages sustained may not be adequately covered by the Corporation's current insurance coverage, or at all. The significance of any such event is difficult to quantify, but may in certain circumstances be material and could have a material adverse effect on the Corporation's business, financial condition and results of operations.

#### Social Media

# The Corporation faces compliance and supervisory challenges in respect of the use of social media as a means of communicating with clients and the general public

Increasingly, social media is used as a vehicle to carry out cyber phishing attacks. Information posted on social media sites, for business or personal purposes, may be used by attackers to gain entry into the Corporation's systems and obtain confidential information. The Corporation has policies to restrict its employees social media content. Despite these efforts, as social media continues to grow in influence and access to social media platforms becomes increasingly prevalent, there are significant risks that the Corporation may not be able to properly regulate social media use and preserve adequate records of business activities and client communications conducted through the use of social media platforms.

#### **Expansion into New Activities**

#### Expanding the Corporation's business exposes it to new risks and uncertainties

The operations and expertise of the Corporation's management is currently focused primarily on oil and natural gas production, exploration and development in the Western Canada Sedimentary Basin. In the future, the Corporation may acquire or move into new industry related activities or new geographical areas and may acquire different energy related assets; as a result, the Corporation may face unexpected risks or, alternatively, its exposure to one or more existing risk factors may be significantly increased, which may in turn result in the Corporation's future operational and financial conditions being adversely affected.

### **Forward-Looking Information**

#### Forward-Looking Information May Prove Inaccurate

Shareholders and prospective investors are cautioned not to place undue reliance on the Corporation's forward-looking information. By its nature, forward-looking information involves numerous assumptions, known and unknown risks and uncertainties, of both a general and specific nature, that could cause actual results to differ materially from those suggested by the forward-looking information or contribute to the possibility that predictions, forecasts or projections will prove to be materially inaccurate.

Additional information on the risks, assumption and uncertainties are found under the heading "Special Note Regarding Forward-Looking Statements" of this Annual Information Form.

#### LEGAL PROCEEDINGS

There are no legal proceedings involving claims for damages for which the potential exposure is more than 10% of our current assets to which we are or was a party or in respect of which any of our properties are or were subject during the year ended December 31, 2018, nor are there any such proceedings known to us to be contemplated.

During the year ended December 31, 2018 there were: (i) no penalties or sanctions imposed against us by a court relating to securities legislation or by a securities regulatory authority; (ii) no other penalties or sanctions imposed by a court or regulatory body against us that we believe would likely be considered important to a reasonable investor in making an investment decision; and (iii) no settlement agreements entered into by us with a court relating to securities legislation or with a securities regulatory authority.

# INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Except as set forth under "*Agreements with NGP*", there were no material interests, direct or indirect, of directors and officers of Petrus, any shareholder who beneficially owns more than 10% of the Common Shares, or any known associate or affiliate of such persons in any transaction completed within three years before the date of this Annual Information Form, or in any proposed transaction which has materially affected or would materially affect Petrus.

There were no material interests, direct or indirect, of directors and officers of Petrus, any shareholder who beneficially owns more than 10% of the Common Shares, or any known associate or affiliate of such persons in any transaction completed within three years before the date of this Annual Information Form, or in any proposed transaction which has materially affected or would materially affect Petrus.

#### AUDITOR, TRANSFER AGENT AND REGISTRAR

Our auditor is Ernst & Young LLP, Chartered Professional Accountants. Ernst & Young LLP has been our auditor since November 25, 2015. Ernst & Young LLP were the auditors of Old Petrus from November 9, 2011 to February 2, 2016.

Our transfer agent and registrar for the Common Shares is Computershare Trust Company of Canada at its principal offices in Calgary, Alberta and Toronto, Ontario.

#### MATERIAL CONTRACTS

Other than the Petrus Credit Facilities, the Petrus Term Loan and contracts entered in the ordinary course of business, the only material contracts entered into by us within our most recently completed financial year, or before the most recently completed financial year but which are still material an in effect, are set forth below:

#### Agreements with NGP

#### **Nomination Rights Agreement**

Petrus entered into a nomination rights agreement (the "**Nomination Rights Agreement**") upon completion of the Arrangement in connection with the termination of the Old Petrus Shareholders' Agreement.

Such agreement provides that, as long as NGP owns: (i) at least 20% of the outstanding Common Shares (on a nondiluted basis), we will include two nominees of NGP; or (ii) at least 10% but not more than 20% of the outstanding Common Shares (on a non-diluted basis), we will include one nominee of NGP, among the nominees for election to the Board of Directors at each meeting of Shareholders at which directors are to be elected.

Additionally, such agreement provides that for a period of two years following the date of such agreement, we shall not do any of the following without the approval of NGP in its capacity as a shareholder:

- (a) create, grant, issue, or modify any incentive security or any related plan or instrument; or
- (b) enter into, modify or terminate any existing employment agreement, non competition agreement, or similar agreement with any executive officer.

The Nomination Rights Agreement shall terminate upon agreement between NGP and Petrus or upon NGP holding less than 10% of the Common Shares (on a non-diluted basis).

A copy of the Nomination Rights Agreement has been filed on our SEDAR profile at www.sedar.com.

#### **Registration Rights Agreement**

The following is a description of certain provisions of our registration rights agreement (the "**Registration Rights Agreement**") dated February 2, 2016, pursuant to which we granted certain rights to NGP and to our officers at the time of entering into of the Registration Rights Agreement. The following description of certain provisions of the Registration Rights Agreement is a summary only, is not comprehensive and is qualified in its entirety by reference to the full text of the Registration Rights Agreement, a copy of which has been filed on our SEDAR profile at *www.sedar.com*.

#### Demand Rights

The Registration Rights Agreement provides that at any time after we become a reporting issuer in any province or territory of Canada, NGP has the right, subject to certain limitations, to request that we file all necessary documents, including a prospectus in Canada or, in certain circumstances, a registration statement in the United States, to distribute to the public all or any portion of the Registrable Securities (as defined below) held by NGP. We must use our commercially reasonable efforts to file a preliminary prospectus or registration statement, as applicable, within 90 days of receipt of a notice from NGP of exercise of such a demand right.

Pursuant to the Registration Rights Agreement, the other parties (other than Petrus) to the Registration Rights Agreement (the "**Other Holders**") shall be notified of NGP's demand request and each of the Other Holders and Petrus may elect to participate in such an offering (through an issuance of Common Shares from treasury in the case of Petrus). The rights of NGP to participate in a distribution or registration pursuant to the foregoing demand rights may be limited to the extent that the underwriter for the distribution or registration determines that market or other relevant factors require a limitation of the number of Registrable Securities to be sold by NGP. To the extent that the underwriter imposes such a limitation, NGP may participate to the exclusion of other participants.

Subject to certain exceptions, NGP shall not be entitled to demand more than three demand requests in total under the Registration Rights Agreement. Further, the Registrable Securities proposed to be distributed under an underwritten offering must have a fair market value of at least \$5,000,000 or be all of NGP's remaining holdings of Registrable Securities.

### Piggyback Rights

The Registration Rights Agreement provides that NGP and the Other Holders have the right, subject to certain limitations, to include some or all of the Registrable Securities held by them in any distribution of Registrable Securities (whether a distribution from treasury or from other securityholders) qualified for distribution under applicable securities laws by way of a prospectus in Canada or, in certain circumstances, by way of a registration statement in the United States.

The rights of NGP and the Other Holders to participate in a distribution or registration pursuant to the foregoing piggyback rights may be limited to the extent that the underwriter for the distribution or registration determines that market or other relevant factors require a limitation of the number of Registrable Securities to be sold by NGP and the Other Holders.

As long as NGP owns at least 10% of the equity interest in Petrus, we shall not grant any piggyback rights or similar rights to any person unless such rights are expressly made subject to the prior right of NGP and the Other Holders in the Registration Rights Agreement.

#### Additional Terms

We are responsible for all fees and expenses incurred in connection with the exercise by NGP of any of its rights under the Registration Rights Agreement other than, except in limited circumstances, the expenses of counsel or other advisors of NGP and the Other Holders. In addition, each of NGP and the Other Holders exercising its rights shall pay the underwriting discounts, commissions and similar fees and transfer taxes applicable to their respective Registrable Securities.

Pursuant to the Registration Rights Agreement, we are obliged to indemnify NGP and the Other Holders exercising its rights under the Registration Rights Agreement for losses arising out of any violation by Petrus of applicable securities laws, any untrue statement or alleged untrue statement of a material fact contained in any prospectus or registration statement of ours, or any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make any statement therein not misleading (excluding any information provided by NGP or the Other Holders), and any breach by us of the Registration Rights Agreement. Pursuant to the Registration Rights Agreement is obliged to severally indemnify Petrus for losses arising out of any untrue statement of material fact made by it

contained in any prospectus or registration statement of ours, or any omission of a material fact required to be stated therein or necessary to make any statement therein not misleading.

The Registration Rights Agreement will terminate at such time as NGP no longer holds any Registrable Securities.

Under the Registration Rights Agreement, "**Registrable Securities**" means the Common Shares held by NGP and/or the Other Holders immediately prior to the date that NGP first becomes entitled to exercise demand rights pursuant to the Registration Rights Agreement; provided, however, that, in connection with any U.S. initial public offering or Canadian initial public offering, Registrable Securities shall be deemed to include all Common Shares held by NGP and/or the Other Holders at such time; *provided, further*, that a Registrable Security shall cease to be a Registrable Security upon the earlier of the time (a) a registration statement covering such Registrable Security has been declared effective by the U.S. Securities Act and such Registrable Security has been sold or disposed of pursuant to such effective registration statement, or (b) such Registrable Security has been disposed of pursuant to any section of Rule 144 (or any similar provision then in force) or Regulation S under the U.S. Securities Act.

#### **INTERESTS OF EXPERTS**

As of December 31, 2018, no person or company whose profession or business gives authority to a statement made by such person or company and who is named as having prepared or certified a report, valuation, statement or opinion described or included in a filing, or referred to in a filing, made under NI 51-102 by us during, or related to, our most recently completed financial year other than Sproule, our independent engineering evaluator, and Ernst & Young LLP, our independent auditor.

Reserve estimates contained in this Annual Information Form are derived from reserve reports prepared by Sproule. To our knowledge, no registered or beneficial interests, direct or indirect, in any securities or other property of Petrus or of one of our associates or affiliates: (i) were held by Sproule when Sproule prepared the report, valuation, statement or opinion in question, or (ii) are to be received by Sproule. Sproule did not, nor is any director, officer or employee of Sproule expected to be elected, appointed or employed as a director, officer or employee of Petrus or of any associate or affiliate thereof.

Petrus' auditors are Ernst & Young LLP, Chartered Professional Accountants, who have prepared independent auditors' reports dated March 7, 2018 and March 7, 2018 in respect of Petrus' financial statements as at December 31, 2017 and 2016 respectively, and for the years then ended and who reviewed the financial statements for the three and nine months ended September 30, 2018. Ernst & Young LLP is independent in accordance with the Chartered Professional Accountants of Alberta Rules of Professional Conduct.

As at the date hereof, the partners and associates of Burnet, Duckworth & Palmer LLP, as a group, owned, directly or indirectly, less than 1% of the outstanding Common Shares.

#### ADDITIONAL INFORMATION

Additional information relating to us can be found on our SEDAR profile at *www.sedar.com*. Additional information, including directors' and officers' remuneration and indebtedness, principal holders of our securities and securities authorized for issuance under equity compensation plans will be contained in our information circular and proxy statement for our annual general meeting of shareholders to be held on May 7, 2019. Additional financial information is contained in our financial statements and the related management's discussion and analysis for the year ended December 31, 2018.

### SCHEDULE "A"

### MANDATE OF THE AUDIT COMMITTEE OF THE BOARD OF DIRECTORS

# I. PURPOSE

The primary function of the audit committee (the "Audit Committee") of the board of directors (the "Board of Directors" or "Board") of Petrus Resources Ltd. ("Petrus" or the "Corporation") is to assist in fulfilling the Board's responsibilities by reviewing: (a) the financial reports and other financial information provided by Petrus to any governmental body or the public; (b) Petrus' systems of internal controls regarding finance, accounting, legal compliance and ethics that management and the Board have established; and (c) Petrus' auditing, accounting and financial reporting processes generally. Consistent with this function, the Audit Committee should endeavour to encourage continuous improvement of, and should endeavour to foster adherence to, the Corporation's policies, procedures and practices at all levels. In performing its duties, the external auditor of the Corporation is to report directly to the Audit Committee.

### II. OBJECTIVES

The Audit Committee's primary objectives are:

1. to assist the Board to meet its responsibilities (especially for accountability) in respect of the preparation and disclosure of the financial statements of the Corporation and related matters;

2. to provide better communication between directors and external auditors;

3. to assist the Board's oversight of the auditor's qualifications and independence;

4. to assist the Board's oversight of the credibility, integrity and objectivity of financial reports;

5. to strengthen the role of the outside directors by facilitating discussions between directors on the Audit Committee, management and external auditors;

6. to assist the Board's oversight of the Corporation's compliance with legal and regulatory requirements; and

7. to review the risks that may affect Petrus and the risk management policies and procedures of the Corporation.

### **III. COMPOSITION**

The Audit Committee shall be comprised of three or more directors as determined by the Board of Directors, none of whom are members of management of Petrus, except as otherwise permitted in National Instrument 52-110 ("**NI 52-110**"), all of whom are "independent" and "financially literate" (as such terms are defined in NI 52-110). Audit Committee members may enhance their familiarity with finance and accounting by participating in educational programs conducted by the Corporation or an outside consultant. In addition, at least one member of the Audit Committee must have accounting or related financial management expertise, as the Corporation's Board of Directors interprets such qualification in its business judgment.

The members of the Audit Committee shall be appointed by the Board of Directors by resolution and remain as members of the Audit Committee until their successors are duly appointed. Unless a Chair is elected by the full Board of Directors, the members of the Audit Committee may designate a Chair by majority vote of the full Audit Committee membership.

# IV. MEETINGS

The Audit Committee shall meet at least four times annually, or more frequently as circumstances dictate. As part of its job to foster open communication, the Audit Committee should meet at least annually with management, internal auditors (if any) and the independent auditors to discuss any matters that the Audit Committee or each of these groups

believe should be discussed privately. In addition, the Audit Committee or at least its Chair should meet with the independent auditors and management quarterly to review the Corporation's financial statements and MD&A consistent with Section V.4 below. The Audit Committee should also meet with management and independent auditors on an annual basis to review and discuss annual financial statements and the management's discussion and analysis of financial conditions and results of operations.

A quorum for meetings of the Audit Committee shall be a majority of its members, and the rules for calling, holding, conducting and adjourning meetings of the Audit Committee shall be the same as those governing the Board.

# V. RESPONSIBILITIES AND DUTIES

To fulfill its responsibilities and duties, the Audit Committee shall endeavour to:

# Documents/Reports Review

1. Review and, if deemed appropriate, update this Mandate, at least annually, as conditions dictate.

2. Review and recommend to the Board the organization's annual and interim financial statements, MD&A, earnings press releases and review any reports or other financial information submitted to any governmental body or the public, including any certification, report, opinion or review rendered by the independent auditors.

3. Review the reports to management prepared by the independent auditors and management's responses.

4. Review with financial management and the independent auditors the quarterly financial statements prior to their filing or prior to the release of earnings.

5. Review significant findings during the year, including the status of previous significant audit recommendations.

6. Periodically assess the adequacy of procedures for the review of corporate disclosure that is derived or extracted from the financial statements.

7. Periodically discuss guidelines and policies to govern the processes by which the Chief Executive Officer and senior management assess and manage the Corporation's exposure to risk.

8. Report to the Board any issues that arise with respect to the quality or integrity of the Corporation's financial statements, compliance with legal or regulatory requirements, performance and independence of the Corporation's auditors, or performance of the internal audit function.

9. Reviewing any inquiry or investigation by governmental or professional authorities respecting any independent audits carried out on the Corporation and any steps to deal with any such issues.

# Independent Auditors

10. Recommend to the Board the external auditors to be nominated for appointment by the shareholders.

11. Approve the compensation of the external auditors.

12. On an annual basis, the Audit Committee should review and discuss with the auditors all significant relationships the auditors have with the Corporation to determine the auditors' independence.

13. Review and, as appropriate, resolve any material disagreements between management and the independent auditors and review, consider and make a recommendation to the Board regarding any proposed discharge of the auditors when circumstances warrant.

14. When there is to be a change in auditors, review the issues related to the change and the information to be included in the required notice to securities regulators of such change.

15. Periodically consult with the independent auditors, without the presence of management, about internal controls and the fullness and accuracy of the organization's financial statements.

16. Periodically assess the Corporation's internal controls, including Corporation's risk management processes.

17. Review the audit scope and plan of the independent auditor.

18. Oversee 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 Petrus.

19. Pre-approve the completion of any non-audit services by the external auditors and, with the assistance of the auditors, determine which non-audit services the external auditor is prohibited from providing. The Audit Committee may delegate to one or more members of the Audit Committee authority to pre-approve non-audit services in satisfaction of this requirement and if such delegation occurs, the pre-approval of non-audit services by the Audit Committee member to whom authority has been delegated must be presented to the Audit Committee at its first scheduled meeting following such pre-approval. The Audit Committee shall be entitled to adopt specific policies and procedures for the engagement of non-audit services if:

- (a) the pre-approval policies and procedures are detailed as to the particular service;
- (b) the Audit Committee is informed of each non-audit service; and
- (c) the procedures do not include delegation of the Audit Committee's responsibilities to management.

The Audit Committee will satisfy the pre-approval requirement set forth in this paragraph if:

- (d) the aggregate amount of all non-audit services that were not pre-approved is reasonably expected to constitute no more than 5% of the total amount of fees paid by Petrus and its subsidiary entities to the auditors during the fiscal year in which the services are provided;
- (e) Petrus or a subsidiary entity, as the case may be, did not recognize the services as non-audit services at the time of the engagement; and
- (f) the services are promptly brought to the attention of the Audit Committee and approved, prior to completion of the audit, by the Audit Committee or by one or more of its members to whom authority to grant such approvals has been delegated by the Audit Committee.

### **Financial Reporting Processes**

20. In consultation with the independent auditors, annually review the organization's financial reporting processes and the quality and appropriateness of the Corporation's accounting principles as applied in its financial reporting.

21. Consider and approve, if appropriate, major changes to the Corporation's auditing and accounting principles and practices as suggested by the independent auditors or management.

22. Review risk management policies and procedures of Petrus (i.e. litigation and insurance).

### **Process Improvement**

23. Request reporting to the Audit Committee by each of management and the independent auditors of any significant judgments made in the management's preparation of the financial statements and the view of each group as to appropriateness of such judgments.

24. Following completion of the annual audit, review separately with each of management and the independent auditors any significant difficulties encountered during the course of the audit, including any restrictions on the scope of work or access to required information.

25. Review any significant disagreements among management and the independent auditors in connection with the preparation of the financial statements.

26. Review with the independent auditors and management the extent to which changes or improvements in financial or accounting practices, as approved by the Audit Committee, have been implemented. (This review may be conducted at an appropriate time subsequent to implementation of changes or improvements, as decided by the Audit Committee.)

27. Conduct and authorize investigations into any matters brought to the Audit Committee's attention and within the Audit Committee's scope of responsibilities. The Audit Committee shall be empowered to retain and to approve compensation for any independent counsel and other professionals to assist in the conduct of any investigation.

- 28. Review the systems that identify and manage principal business risks.
- 29. Assist with the establishment of a procedure for:
  - (a) the receipt, retention and treatment of complaints received by the Corporation regarding accounting, internal accounting controls or auditing matters; and
  - (b) the confidential, anonymous submission by employees of Petrus of concerns regarding questionable accounting matters, auditing matters and matters set forth in Petrus' Code of Business Conduct and Ethics,

which procedure shall be set forth in a "Whistle Blower Policy" to be adopted by the Board in connection with such matters.

### Ethical and Legal Compliance

30. Assist with the establishment of a Code of Business Conduct and Ethics and ensure that management has established a system to enforce same.

31. Review management's monitoring of the Corporation's compliance with the Code of Business Conduct and Ethics.

32. In consultation with the auditors, consider the review system established by management regarding the Corporation's financial statements, reports and other financial information disseminated to governmental organizations and the public in the context of the applicable legal requirements.

33. On at least an annual basis, review with the Corporation's auditors or counsel, as appropriate, any legal matters that could have a significant impact on the organization's financial statements, the Corporation's compliance with applicable laws and regulations and inquiries received from regulators or government agencies.

#### Other

34. Perform any other activities consistent with this Mandate, Petrus' by-laws and governing law, as the Audit Committee or the Board of Directors deems necessary or appropriate.

35. In connection with the performance of its responsibilities as set forth above, the Audit Committee shall have the authority to engage outside advisors and to pay outside auditors and advisors.

### Standards of Liability

Nothing contained in this mandate is intended to expand applicable standards of liability under statutory, regulatory, common law or any other legal requirements for the Board or members of its Committees. The purposes and responsibilities outlined in this mandate and accompanying Board materials are meant to serve as guidelines rather than inflexible rules and the Board may adopt such additional procedures and standards as it deems necessary from time to time to fulfill its responsibilities.

#### SCHEDULE "B"

### REPORT ON RESERVES DATA BY INDEPENDENT QUALIFIED RESERVES EVALUATOR (FORM 51-101 F2)

To the Board of Directors of Petrus Resources Ltd. (the "Corporation"):

- 1. We have evaluated the Corporation's reserves data as at December 31, 2018. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2018, estimated using forecast prices and costs.
- 2. The reserves data are the responsibility of the Corporation's management. Our responsibility is to express an opinion on the reserves data based on our evaluation.

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).

- 3. 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.
- 4. 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 Corporation evaluated for the year ended December 31, 2018, and identifies the respective portions thereof that we have audited, evaluated and reviewed and reported on to the Corporation's management and Board of Directors:

			Net Present Value of Future Net Revenue Before Income Tax Expenses (10% Discount Rate)			
Independent Qualified Reserves Evaluator or Auditor	Effective Date of Evaluation Report	Location of Reserves (Country)	Audited (M\$)	Evaluated (M\$)	Reviewed (M\$)	Total (M\$)
Sproule Associates Limited	December 31, 2018	Canada	Nil	507,132	Nil	507,132

- 5. 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.
- 6. We have no responsibility to update our report referred to in paragraph 5 for events and circumstances occurring after the effective date of our report, entitled "*Evaluation of the P&NG Reserves of Petrus Resources Ltd. (as of December 31, 2018)*".
- 7. 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:

Sproule Associates Limited Calgary, Alberta Canada

March 13, 2019

(signed) by "Paul B. Jung"

Paul B. Jung, P. Eng. Project Leader, Senior Petroleum Engineer

(signed) by "Weldon Dueck" Weldon D. Dueck, P. Eng. Senior Petroleum Engineer

(signed) by "*Tamara Warren*" Tamara Warren, P. Eng. Petroleum Engineer

(signed) by "Ian Kirkland" Ian K. Kirkland, P. Geol. Senior Geologist

(signed) by "Alec Kovaltchouk" Alec Kovaltchouk, P. Geo.

Vice President, Geosciences

(signed) by "Cameron P. Six" Cameron P. Six, P. Eng. President and Chief Executive Officer

### SCHEDULE "C"

### REPORT OF MANAGEMENT AND DIRECTORS ON OIL AND GAS DISCLOSURE (FORM 51-101 F3)

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

An independent qualified reserves evaluator has evaluated and reviewed Petrus' reserves data. The report of the independent qualified reserves evaluator is presented in Schedule "B" to the Annual Information Form of Petrus for the year ended December 31, 2018 (the "**AIF**").

The reserves committee (the "**Reserves Committee**") of the board of directors of Petrus (the "**Board of Directors**") has:

- reviewed Petrus' procedures for providing information to the independent qualified reserves evaluator, Sproule Associates Limited ("Sproule");
- met with Sproule to determine whether any restrictions affected the ability of Sproule to report without reservation; and
- reviewed the reserves data with management and with Sproule.

The Reserves Committee has reviewed Petrus' procedures for assembling and reporting other information associated with oil and natural gas activities and has reviewed that information with management. The Board of Directors has, on the recommendation of the Reserves Committee, approved:

- the content and filing with securities regulatory authorities of Form 51-101F1, incorporated into the AIF, containing reserves data and other oil and natural gas information;
- the filing of Form 51-101F2, which is the report of Sproule on the reserves data; and
- the content and filing of this report.

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

(signed) "Neil Korchinski"	(signed) "Cheree Stephenson"			
Neil Korchinski	Cheree Stephenson			
President & Chief Executive Officer	Vice President, Finance & Chief Financial Officer			
<i>(signed) "Donald Gray"</i> Donald Gray Director & Chairman of the Reserves Committee	(signed) "Stephen White" Stephen White Director			

March 13, 2019