ANNUAL INFORMATION FORM

For the year ended
December 31, 2017

February 22, 2018

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CONVENTIONS

Throughout this Annual Information Form, the terms "Perpetual", the "Corporation" or the "Company" refer to Perpetual Energy Inc. and its wholly-owned subsidiaries. Certain terms used but not defined herein are defined in National Instrument 51-101 – *Standards of Disclosure for Oil and Gas Activities* ("**NI 51-101**"), CSA Notice 51-324 – *Glossary to NI 51-101 Standards of Disclosure for Oil and Gas Activities* ("**CSA 51-324**") and in the Canadian Oil and Gas Evaluation Handbook Volume I (the "**COGE Handbook**"). Unless otherwise specified, information in this Annual Information Form is as at the end of the Corporation's most recently completed financial year, being December 31, 2017. All dollar amounts herein are in Canadian dollars, unless otherwise stated. Words importing the singular also include the plural, and *vice versa*, and words importing one gender include all genders. See "*Abbreviations*", "*Selected Conversions*" and "*Forward Looking information*".

CORPORATE STRUCTURE

Perpetual is a Canadian corporation headquartered in Calgary, Alberta. Perpetual is engaged in the exploration, development and marketing of oil and natural gas based energy in Alberta, Canada. The Company operates a diversified asset portfolio that includes liquids-rich gas in the Alberta Deep Basin, conventional heavy oil producing properties, shallow gas and undeveloped bitumen resource properties.

Name, Address and Incorporation

On April 26, 2010, Perpetual was incorporated under the *Business Corporations Act* (Alberta) (the "**ABCA**") under the name "Perpetual Energy Inc." through the corporate conversion of Paramount Energy Trust. Paramount Energy Trust was a dividend paying natural gas production and development business formed in 2002 through a spinoff from Paramount Resources Ltd. On June 30, 2010 Perpetual amalgamated with its then wholly-owned subsidiaries. On March 24, 2016, the Company amended its articles of incorporation to consolidate the issued and outstanding common shares (the "**Common Shares**") on a twenty-for-one basis.

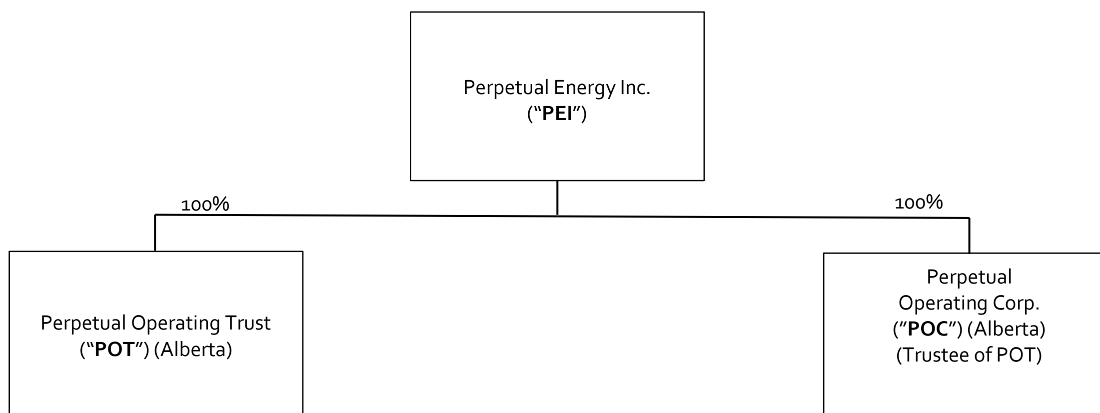
Perpetual's head office and registered office is located at Suite 3200, 605 – 5th Avenue S.W., Calgary, Alberta, T2P 3H5.

Employees

At December 31, 2017, Perpetual had 54 permanent employees and 8 hourly consultants located in its Calgary office and 15 permanent employees and 8 hourly consultants in various field locations.

Inter-Corporate Relationships

The following diagram illustrates the inter-corporate relationship between Perpetual and its material subsidiaries, the percentage of votes attached to all voting securities of the subsidiaries beneficially owned, or controlled or directed, directly or indirectly, by Perpetual and the jurisdiction of incorporation or formation of the subsidiaries.



GENERAL DEVELOPMENT OF THE BUSINESS

Three Year History

The general development of Perpetual's business over the last three completed financial years is described below.

2015

In April 2015, Perpetual swapped its joint interest share in its West Edson asset located in west central Alberta with Tourmaline Oil Corp. ("**TOU**" or "**Tourmaline**") in exchange for 6.75 million TOU shares having a then current market value of approximately $258.7 million based on the closing price of the TOU shares on the Toronto Stock Exchange on April 1, 2015. The transaction included all joint interest lands Perpetual held with Tourmaline in West Edson, together with the associated wells and infrastructure (the "**West Edson Property**"). Based on the Company's third party engineering report prepared by McDaniel and Associates Consultants Ltd. ("**McDaniel**"), as at December 31, 2014, the disposition included 7.2 MMboe of recognized proved plus probable developed natural gas and natural gas liquids reserves as well as 16.8 MMboe of proved plus probable undeveloped reserves. Also included in the transaction were 9,600 net acres of undeveloped lands not currently assigned reserves at year-end 2014. Perpetual's production from the West Edson Property was approximately 5,750 boe/d.

In April 2015, Perpetual also completed the sale of certain fee simple lands in east central Alberta, and a working interest in related seismic data, for gross proceeds of $21 million. The disposition included 206,712 net acres (207,770 gross) of fee simple lands, approximately 163.1 Mboe of reserves (90 percent gas) associated with royalty interests, as well as the assignment of a 75 percent ownership interest in 1,013 square km of 3D proprietary seismic and 3,917 km of 2D proprietary seismic.

On December 31, 2015, Perpetual issued an aggregate of approximately 228.9 million Common Shares to the holders of the outstanding 7.00% Convertible Unsecured Debentures (the "**7.00% Debentures**") as repayment of the $34.9 million principal amount on maturity, pursuant to the terms of the 7.00% Debentures. All accrued and unpaid interest on the 7.00% Debentures was paid in cash at December 31, 2015.

2016

In January 2016, Perpetual completed a common share rights offering which generated $25 million in gross proceeds. Perpetual issued an aggregate of 665.4 million (33.3 million post-consolidation) Common Shares on completion of the rights offering.

Several transactions in 2016 combined to materially reduce debt and focus the Company's operations. In March 2016, a 37 section undeveloped oil sands lease portfolio was sold for $6.1 million, with the Company retaining a one percent gross over-riding royalty on future production. During the second quarter of 2016, $114.1 million of the 2018 Senior Notes and $100.3 million of the 2019 Senior Notes were exchanged for 4.4 million TOU shares and cancelled. In May 2016, Perpetual completed the sale of its 30 percent partnership interest in Warwick Gas Storage LP ("**WGS LP**") for $19.7 million and received a net dividend of $0.5 million at closing. The transaction included the gas storage reservoir and facility as well as 9,207 net acres of surrounding lands and associated wells and infrastructure with net production of 470 Mcf/d.

On October 1, 2016, the Company completed the strategic disposition of a large percentage of its high liability mature shallow gas properties in east central and northeast Alberta (the "**Shallow Gas Properties**") for nominal proceeds. The transaction included all of Perpetual's shallow gas assets and liabilities in eastern Alberta, specifically excluding heavy oil and natural gas assets in the Mannville and Panny areas and other bitumen leases in northeast Alberta. Pursuant to the transaction, Perpetual increased its Licensee Liability Management Ratings ("**LMR**") as defined by the Alberta Energy Regulator ("**AER**") to over 4.2 through the disposition of all of the decommissioning obligations associated with the Shallow Gas Properties and despite the loss of close to 35.5 MMcf/d of production, Perpetual's cash flow from operations was positively impacted. Furthermore, through gas marketing arrangements related to the transaction, the Company effectively retained full natural gas price upside exposure on the forecast base production from the Shallow Gas Properties (33,611 GJ/d) should natural gas prices at the Alberta trading hub, Alberta Energy Company ("**AECO**") exceed $2.81/GJ through August 2018, with no operating exposure or future capital spending commitments. For the same volumes and term, arrangements were made to provide the purchaser a floor price of $2.58/GJ. Included in the transaction was 82.1 Bcfe of proved plus probable working interest reserves based on the Company's third party engineering report prepared by McDaniel at year-end 2015, $128.0 million in discounted decommissioning obligations and 353,777 net acres of undeveloped lands not assigned reserves at year-end 2015.

2017

During 2017, several financing transactions were completed that established a foundation to support significant growth in production and adjusted funds flow:

- On January 23, 2017, Perpetual issued $17.4 million of 8.75% unsecured senior notes due January 23, 2022 (the "**2022 Senior Notes**") in exchange for $8.4 million of 8.75% unsecured senior notes due March 15, 2018 (the "**2018 Senior Notes**") and $9.0 million unsecured senior notes due July 23, 2019 (the "**2019 Senior Notes**" and collectively the "**Senior Notes**").

- On March 14, 2017, Perpetual completed a $45 million senior secured, second lien term loan facility with a four year term and an 8.1% interest rate (the "**Term Loan**") and for no additional consideration, issued 5.4 million warrants to purchase Common Shares to the lender. Concurrent with the establishment of the Term Loan, Perpetual also issued on a private placement basis, equity units consisting of 5.1 million Common Shares and 1.1 million additional warrants for gross proceeds of $9 million.

- On April 17, 2017, Perpetual completed the early repayment of all of its outstanding 2018 Senior Notes of which $27.1 million were repaid for cash and $0.5 million were exchanged for new 2022 Senior Notes at the election of the notes holder.

- During 2017, Perpetual increased the borrowing limit under its reserve based revolving credit facility to $65 million and extended its maturity until May 2019 (the "**Credit Facility**").

In 2017, the business focused primarily on development and production growth of the Company's East Edson liquids-rich natural gas asset in West Central Alberta. Thirteen horizontal wells were drilled and the Company's owned and operated West Wolf Lake facility was expanded to bring area working interest processing capacity to 78 MMcf/d plus associated natural gas liquids ("**NGL**").

Recent Developments

The Company's capital plan for 2018 shifts its focus on exploration and development of heavy oil in the Mannville area of Eastern Alberta and has curtailed development of its East Edson property.

Significant Acquisitions

Perpetual 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.

DESCRIPTION OF THE BUSINESS

General

Perpetual is an oil and natural gas exploration, production and marketing company headquartered in Calgary, Alberta. Perpetual operates a diversified asset portfolio, including liquids-rich natural gas assets in the deep basin of west central Alberta, heavy oil and shallow natural gas assets in eastern Alberta, with longer term opportunities through undeveloped oil sands leases in northern Alberta.

Employees

At December 31, 2017, Perpetual had 54 permanent employees and 8 hourly consultants located in its Calgary office and 15 permanent employees and 8 hourly consultants in various field locations.

Business Plan

Perpetual's business plan is focused on growing production, reserves, cash flow and value through exploration and development, the application of innovative technologies and acquisitions. The Company actively manages its diversified portfolio of assets to crystallize value, capitalize on opportunities and manage commodity price risk.

The Company's strategic priorities are as follows:

1. Grow value of Greater Edson liquids-rich gas;
2. Grow value of Eastern Alberta assets;
3. Advance high impact opportunities; and
4. Optimize balance sheet for growth.

Oil and Natural Gas Properties

The following is a description of our principal natural gas and oil properties as at December 31, 2017.

Major Areas	Current Production(1) (*Boe/d*)	Developed and Undeveloped Land (net acres)	Gross Reserves (*MMboe*)	2017 Drilling Program (# of gross locations)
West Central	10,558	106,401	61.2	14
Eastern	1,763	218,012	5.4	5
Bitumen	0	191,840	0	0
Total	**12,321**	**516,253**	**66.6**	**19**

1) As of December 31, 2017.

West Central Deep Basin

In the West Central deep basin, core operations have been established in the greater Edson area where the Company owns and operates both vertical, multi-zone commingled wells and horizontal wells producing liquids-rich gas from the Wilrich formation. Major facilities include one operated gas plant including liquids recovery facilities, one compressor station, a 15.5 km sales pipeline, an extensive gathering system and a 15 percent working interest in a non-operated gas plant.

East Edson

The East Edson area is located west of Edmonton, Alberta in the Alberta Deep Basin and is comprised of 49,757 net acres (51 percent undeveloped) of which 27,257 net acres (33 percent undeveloped) is within the core development area. The Company holds an average 98 percent working interest in 54 gross (52.9 net) producing natural gas wells and an average 100 percent working interest in two gross (2.0 net) producing oil wells. This area represented approximately 79 percent of production from Perpetual's assets for the year 2017. The Company operates the majority of the production in this area which produced 7,842 boe/d in 2017, including 43.1 MMcf/d of natural gas and 656 bbl/d of crude oil and NGL. The primary development in the area is horizontal wells targeting the Wilrich formation.

Pursuant to a joint venture arrangement (the "**East Edson JV**"), the Company pays, on a priority basis, a gross overriding royalty to an industry partner up to a maximum of 5.6 MMcf/d of natural gas plus oil and associated NGL on a monthly basis through to December 31, 2022, declining thereafter at ten percent per year until December 31, 2034.

Perpetual fulfilled its commitment to spend an additional $30 million to drill, complete and tie-in approximately five additional wells and construct a new gas processing facility prior to December 31, 2015. Perpetual also committed to invest an additional $30 million to drill, complete and tie-in approximately six additional wells prior to December 31, 2022. This final commitment was fulfilled in 2017.

Production is processed through the 100 percent owned and operated 65 MMcf/d shallow cut gas processing facility which was constructed and came on stream in 2015 in conjunction with the East Edson JV, with expansions completed in 2016 and 2017. Additional volumes are processed through a third party operated 90 MMcf/d capacity facility at Rosevear in which Perpetual owns a 15 percent working interest. An extensive

gathering system as well as a 100 percent Company owned and operated compressor station integrates operations across the field and allows for optimization of throughput. Volumes are currently processed primarily at Perpetual's operated facility with production above current plant capacity flowing through the non-operated plant. Combined working interest capacity through both facilities aligns with Perpetual's firm transportation commitments on TransCanada Pipeline's ("**TCPL**") of 78 MMcf/d. Associated NGL volumes of approximately 12 bbl/MMcf of natural gas are recovered at the two facilities with point of sale delivery point for condensate and unsegregated NGL at the plant gate.

In 2017, Perpetual drilled 13 gross (13.0 net) wells, with 12 wells completed and equipped (including 1 well that was rig released in 2016). The two remaining wells had completion and equipping operations substantially completed by the middle of January 2018. A plant expansion was completed in December 2017 to increase the capacity at the West Wolf Lake plant from 45 to 65 MMcf/d plus associated NGL volumes. The expansion was completed for $2.1 million, on budget and three months ahead of schedule, to accommodate the early availability of increased firm transportation on TCPL to 78 MMcf/d from April 1, 2018 to December 17, 2017.

West Central Other

Other non-core assets in the West Central Deep Basin area are comprised of 56,645 net acres (84 percent undeveloped) with an average 87 percent working interest in 12 gross (10.4 net) producing oil and natural gas wells. West Central Other areas produced an average 37 boe/d in 2017 (28 boe/d in 2016).

In early 2014, Perpetual entered into a farm-out agreement on 6,240 acres of Duvernay rights in the Waskahigan area. The farmee drilled a horizontal well into the Duvernay which was completed during the fourth quarter of 2014. After significant delays substantially due to transportation restrictions in the area, continuous production from this well was started in late 2015. During the well's first two months of free flowing production, it produced an average of 250 bbl/d condensate and 270 Mcf/d of natural gas (net 100 boe/d). With the earn-in terms fulfilled, Perpetual retains a 35 percent working interest in 3,840 gross acres and 100 percent working interest in the remaining 2,400 acres. Continued area development by competitors has resulted in significant changes to well and completion design. Nearby offsets to Company land are expected to be drilled in early 2018 which will provide valuable information to assess future development potential and economic viability.

Over the past several years, Perpetual has been accumulating a material land position in a new exploration area in the Alberta Deep Basin through acquisitions and Crown land sales. At year-end 2017, Perpetual had an interest in 25,924 net acres (93% undeveloped) of land in the Columbia area. These lands are prospective in multiple horizons including Cardium, upper Mannville, and Spirit River. Perpetual participated in drilling of one (0.4 net) non-operated Fahler horizontal drill. The well was placed on production at lower than anticipated rates and is currently shut-in and being evaluated for next steps.

Eastern Alberta

In October 2016 Perpetual completed the disposition of the Shallow Gas Properties. The transaction included most of Perpetual's shallow gas assets and liabilities in eastern Alberta, along with their related production of approximately 35.5 MMcfe/d, 82.1 Bcfe of proved plus probable working interest reserves and $128.0 million in discounted decommissioning obligations. Specifically excluded in the transaction were the heavy oil and natural gas assets in the Mannville and Panny areas and other bitumen leases in northeast Alberta. The total retained Eastern Alberta assets include 218,012 net acres (32 percent undeveloped). 2017 was the first full year of operations without the legacy shallow gas production.

Perpetual's focus in the Mannville area of Eastern Alberta has been on the exploration and development of Cretaceous-aged conventional heavy oil pools geographically synergistic with the Corporation's shallow gas assets. Through Perpetual's extensive database of 2D and 3D seismic and low exposure exploration drilling, 14 pools have been discovered and placed on production. Certain assets were sold in 2014 leaving six Lloyd formation pools, two Sparky pools and one Basal Quartz pool with continued development and waterflood optimization in progress. Perpetual has an average 95 percent working interest in 177 gross (168.1 net) producing wells, 65.3 net oil wells and 102.8 net gas wells. Perpetual operates this area which produced 929 bbl/d of heavy crude and 6.3 MMcf/d of natural gas representing 20 percent of the Company's 2017 average production.

The collapse of oil prices in 2014 resulted in deferral of oil well drilling through 2015 and early 2016. In 2017, the combination of the recovery of Western Texas Intermediate ("**WTI**"), the decline in the Canadian dollar and reduced costs for drilling and related services provided enough recovery to wellhead prices and economics that conventional heavy oil drilling has regained its competitiveness. Perpetual deployed a rig to the Mannville area in late December of 2016 for the first time in over two years. Perpetual drilled four gross (3.3 net) oil wells in the first quarter of 2017. Two of the wells targeted a new pool and resulted in one new pool discovery which is currently being evaluated for follow-up. Two of the wells targeted banked waterflood oil and a new pool extension.

Perpetual has focused on waterflood initiation and expansion from 2014 through 2017, and saw significant impact of the waterflood during 2017 through increased production in certain areas and an overall reduction in decline rates. Perpetual is confident in the continued success of the program and has additional injection conversion and infrastructure projects planned for 2018. Production decline rates dropped from an average greater than 30% through 2015 and 2016 to less than 10% during 2017 (excluding the impact of new drilling).

Perpetual also has an interest in the Viking/Colorado shallow unconventional dry gas play in east central Alberta. The play is prospective in the Mannville area and retention of this asset provides continued exposure. With low natural gas prices over the last three years, the Company has allocated limited capital spending to the technical and economic delineation of this resource, however, did commence a project to further evaluate the play in late 2016 that continued into 2017 with the drilling of one (1.0) net wells in 2017 and resulting in one well in each of the Viking and Colorado zones. The wells continue to flow for evaluation purposes, but the Colorado play has been determined to be highly variable and therefore is not likely to be pursued in the short to medium term in the Mannville area lands. The Viking well is only partially fracture

stimulated and will be completed and fully evaluated once natural gas prices recover. No undeveloped reserves are currently assigned to the Viking/Colorado resource play.

Bitumen

Perpetual maintained 191,840 net acres (98 percent undeveloped) of oil sands leases at year-end 2017 which are geographically synergistic with several of its legacy shallow gas operating areas in northeast Alberta. The land holdings are focused in Panny, Liege, Ells, Pelican and a small project area in the Peace River Arch. The bitumen resource potential on these leases will likely be developed over the long-term using a variety of recovery techniques, ranging from near cold production technologies to in-situ thermal techniques such as SAGD technology.

In 2016, 23,883 net acres at Marten Hills were sold (subject to a retained one percent gross over-riding royalty) for $6.1 million. The Marten Hills lands where the Company retained a one percent over-riding royalty has undergone significant development in 2017 with the operator drilling ~7 wells with up to 4 laterals per well subject to Perpetual's royalty interest. Continued development on these lands have the potential to add a growing royalty stream to the Corporation.

In 2013 Perpetual received funding approval through the Alberta government's Innovative Energy Technology Program ("**IETP**") for the Company's Low-Pressure Electro-Thermally Assisted Drive ("**LEAD**") pilot project to develop bitumen in the Bluesky reservoir in the Panny area of northeast Alberta. Total capital and operating costs incurred over the 2013 through 2017 period for phase one of the initial pilot project were $11.4 million of which $3.4 million has been funded by IETP. The first phase of LEAD, consisting of a single well cyclic heat stimulation ("**CHS**") pilot was initiated in 2015. Perpetual drilled two (2.0 net) observation wells, installed a downhole electrical heater and related instrumentation on an existing horizontal well and completed construction of a bitumen battery in 2015. First heat in the ground commenced in mid-October 2015 with positive preliminary results from the first heating phase assessed through detailed data monitoring in near proximity observation wells. Four cycles of heating and production were conducted from start up. The single well CHS phase of the pilot was shut-down during the second quarter of 2017. Perpetual is currently evaluating the application of solvent technology, utilizing important learnings from the cyclic heat stimulation project. Solvent technology has the potential to increase production rates and recovery and positively impact capital and operating efficiencies and may also positively enhance environmental performance through reduced emissions and water usage.

STATEMENT OF RESERVES DATA AND OTHER OIL AND GAS INFORMATION

February 6, 2018

The reserves data set forth below is based upon the figures contained in the report of McDaniel dated effective December 31, 2017, with a preparation date of February 6, 2018 (the "McDaniel Report") evaluating substantially all of Perpetual's crude oil, NGL and natural gas reserves.

Disclosure of Reserves Data

The Report on Reserves Data by McDaniel in Form 51-101F2 is attached as Appendix B to this Annual Information Form and the Report of Management and Directors on Oil and Gas Disclosure in Form 51-101F3 is attached as Appendix A to this Annual Information Form.

McDaniel evaluated in the McDaniel Report, 100% of the assigned total proved plus probable reserves. McDaniel prepared their reserve report using their own technical assumptions and interpretations, methodologies and pricing and cost assumptions. Due to rounding, certain columns set forth below in this section may not add.

The McDaniel Report has been prepared in accordance with the standards contained in the Canadian Oil and Gas Evaluation Handbook ("**COGE Handbook**") and the reserve definitions contained in NI 51-101, CSA 51-324 and the COGE Handbook. Additional information not required by NI 51-101 has been presented to provide continuity and additional information which Perpetual believes is important to readers of this Annual Information Form. McDaniel was engaged to provide evaluations of proved and proved plus probable reserves and no attempt was made to evaluate possible reserves.

All of the Corporation's reserves are in Canada and, more specifically, in the province of Alberta.

There are numerous uncertainties inherent in estimating quantities of crude oil, NGL and natural gas reserves and the future cash flows attributed to such reserves. The reserve and associated cash flow information set forth in this Annual Information Form are estimates only. In general, estimates of economically recoverable oil, NGL and natural gas reserves and the future net cash flows therefrom are based upon a number of variable factors and assumptions, such as geological, geophysical, and engineering assessment of hydrocarbons in place on Company lands, 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 reserves will vary from estimates thereof and such variations could be material.

The information relating to the Corporation's crude oil, NGL and natural gas reserves contains forward-looking statements relating to anticipated production, future net revenues, forecast capital expenditures, future development plans and costs related thereto, forecast operating costs, anticipated production and abandonment and reclamation costs. See "*Forward-Looking Information and Statements*" and "*Risk Factors – Reserves Estimates*".

It should not be assumed that the estimates of future net revenues presented in the tables below represent the fair market value of the reserves. There is no assurance that the forecast prices and costs assumptions will be attained and variances could be material. Actual reserves and value may be greater than or less than the estimates provided in this Statement of Reserves and Other Oil and Gas Information.

SUMMARY OF RESERVES
TOTAL RESERVES
as at December 31, 2017
FORECAST PRICES AND COSTS

	Light and Medium Crude Oil		Heavy Oil		Conventional Natural Gas		Natural Gas Liquids		Oil Equivalent	
Reserves Categories	**Gross[1] (*Mbbl*)**	**Net[2] (*Mbbl*)**	**Gross[1] (*Mbbl*)**	**Net[2] (*Mbbl*)**	**Gross[1] (*MMcf*)**	**Net[2] (*MMcf*)**	**Gross[1] (*Mbbl*)**	**Net[2] (*Mbbl*)**	**Gross[1] (*Mboe*)**	**Net[2] (*Mboe*)**
Proved Producing	72	64	1,371	1,262	80,681	50,352	997	487	15,887	10,204
Proved Non Producing	–	–	196	174	10,103	8,954	151	116	2,030	1,783
Proved Undeveloped	–	–	438	370	136,937	121,977	1,614	1,349	24,875	22,048
Total Proved	72	64	2,004	1,806	227,721	181,283	2,761	1,951	42,791	34,035
Total Probable	11	10	990	858	125,408	113,379	1,906	1,561	23,808	21,326
Proved Plus Probable	83	74	2,994	2,664	353,129	294,662	4,667	3,512	66,599	55,361

1) "**Gross"** refers to working interest reserves before royalty deductions.
2) "**Net"** refers to company interest volumes after royalties.

NET PRESENT VALUE OF FUTURE NET REVENUE
BEFORE TAX
as at December 31, 2017
FORECAST PRICES AND COSTS (*$ millions*)

	Before Income Taxes Discounted at (%)					Unit Value Before Income Tax Discounted At 10%/Year (*$/boe*)[3]
Reserves Categories	**0%**	**5%**	**10%**	**15%**	**20%**	
Proved Producing	$ 156	$ 142	$ 129	$ 117	$ 108	$12.61
Proved Non Producing	31	22	16	13	10	$ 9.14
Proved Undeveloped	288	185	124	86	61	$ 5.64
Total Proved	475	349	269	216	179	$ 7.91
Total Probable	378	221	141	96	69	$ 6.60
Proved Plus Probable	$ 853	$ 570	$ 410	$ 312	$ 249	$ 7.40

NET PRESENT VALUE OF FUTURE NET REVENUE
AFTER TAX
as at December 31, 2017
FORECAST PRICES AND COSTS (*$ millions*)

	After Income Taxes Discounted at (%)[1][2]					Unit Value After Income Tax Discounted At
Reserves Categories	**0%**	**5%**	**10%**	**15%**	**20%**	**10%/Year (*$/boe*)[3]**
Proved Producing	$ 156	$ 142	$ 129	$ 117	$ 108	$12.61
Proved Non Producing	31	22	16	13	10	$ 9.14
Proved Undeveloped	288	185	124	86	61	$ 5.64
Total Proved	475	349	269	216	179	$ 7.91
Total Probable	317	194	127	89	66	$ 5.98
Proved Plus Probable	$ 792	$ 543	$ 397	$ 305	$ 245	$ 7.17

1) The after tax net present value of the Corporation's oil and gas properties reflects the tax burden on the properties on a stand-alone basis and utilizes the Corporation's tax pools.
2) The after tax net present value of the Corporation's oil and gas does not consider the corporate tax situation or tax planning. It does not provide an estimate of the value at the level of the Corporation, which may be significantly different. The Corporation's financial statements and the management's discussion and analysis should be consulted for information at the level of the Corporation.
3) The unit values are based on net reserve volumes.

FUTURE NET REVENUE
TOTAL RESERVES (UNDISCOUNTED)
as at December 31, 2017
FORECAST PRICES AND COSTS (*$ millions*)

Reserves Categories	Revenue	Royalties	Operating Costs	Development Costs	Abandonment and Reclamation Costs	Future Net Revenue Before Income Taxes	Income Taxes	Future Net Revenue After Income Taxes[1][2]
Total Proved Reserves	1,130	(226)	(200)	(201)	(27)	475	–	475
Proved Plus Probable Reserves	1,846	(306)	(304)	(348)	(35)	853	(61)	792

1) The after tax net present value of the Corporation's oil and gas properties reflects the tax burden on the properties on a stand-alone basis and utilizes the Corporation's tax pools.

2) The after tax net present value of the Corporation's oil and gas does not consider the corporate tax situation, or tax planning. It does not provide an estimate of the value at the level of the Corporation, which may be significantly different. The Corporation's financial statements and the management's discussion and analysis should be consulted for information at the level of the Corporation.

FUTURE NET REVENUE
TOTAL RESERVES
by production group
as at December 31, 2017

Reserve Categories	Production Group	Future Net Revenue Before Income Taxes (discounted at 10%/year) (*$ millions*)	Unit Value (*$/Mcfe*) (*$/boe*)
Proved Reserves	Conventional Natural Gas (including by-products but excluding solution gas and by-products from oil wells)	233	1.29/Mcfe
Proved Reserves	Light and Medium Crude Oil (including solution gas and other by products)	2	64.73/boe
Proved Reserves	Heavy Oil (including solution gas and other by products)	34	18.82/boe
Total Proved Reserves – Total		269	7.91/boe
Proved Plus Probable Reserves	Conventional Natural Gas (including by-products but excluding solution gas and by-products from oil wells)	358	1.22/Mcfe
Proved Plus Probable Reserves	Light and Medium Crude Oil (including solution gas and other by products)	3	62.52/boe
Proved Plus Probable Reserves	Heavy Oil (including solution gas and other by products)	49	18.36/boe
Proved Plus Probable Reserves – Total		410	7.40/boe

Forecast Prices and Costs

Pricing Assumptions (Forecast Prices and Costs)

SUMMARY OF PRICING ASSUMPTIONS
AS AT DECEMBER 31, 2017
FORECAST PRICES AND COSTS

Year	West Texas Intermediate Crude Oil (*$US/bbl*)	Edmonton Light Crude Oil (*$Cdn/bbl*)	Alberta Heavy Crude Oil (*$Cdn/bbl*)	Natural Gas at AECO (*$Cdn/MMbtu*)	Foreign Exchange (*$US/$Cdn*)[1]
2018	58.50	70.10	45.20	2.25	0.790
2019	58.70	71.30	49.60	2.65	0.790
2020	62.40	74.90	53.60	3.05	0.800
2021	69.00	80.50	57.60	3.40	0.825
2022	73.10	82.80	59.20	3.60	0.850
2023	74.50	84.40	60.30	3.65	0.850
2024	76.00	86.10	61.60	3.75	0.850
2025	77.50	87.80	62.80	3.80	0.850
2026	79.10	89.60	64.10	3.90	0.850
2027	80.70	91.40	65.40	3.95	0.850
2028	82.30	93.20	66.60	4.05	0.850
2029	83.90	95.00	67.90	4.15	0.850
2030	85.60	97.00	69.40	4.25	0.850
2031	87.30	98.90	70.70	4.30	0.850
2032	89.10	100.90	72.10	4.35	0.850

1) Exchange rates used to generate the benchmark reference prices in this table.

For comparison purposes, the Corporation realized a weighted average gas price for the year ended December 31, 2017 of $3.51/Mcf, including $0.80/Mcf of realized hedging gains for natural gas. The weighted average AECO daily gas index price for the same 12 month period was $2.16/GJ. Perpetual's realized oil price averaged $41.62/bbl including $5.03/bbl of realized hedging losses relative to the benchmarks. The Corporation realized an average NGL price of $46.60/bbl in 2017. The West Texas Intermediate benchmark price for 2017 was $US50.95/bbl.

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

	Light and Medium Oil			Heavy Oil			Oil		
Factors	Gross Proved (*Mbbl*)	Gross Probable (*Mbbl*)	Gross Proved Plus Probable (*Mbbl*)	Gross Proved (*Mbbl*)	Gross Probable (*Mbbl*)	Gross Proved Plus Probable (*Mbbl*)	Gross Proved (*Mbbl*)	Gross Probable (*Mbbl*)	Gross Proved Plus Probable (*Mbbl*)
December 31, 2016	**37**	**9**	**46**	**1,672**	**832**	**2,504**	**1,709**	**841**	**2,550**
Extensions & Improved Recoveries	0	0	0	187	250	437	187	250	437
Discoveries	0	0	0	0	0	0	0	0	0
Technical Revisions	48	2	50	536	(96)	440	584	(93)	491
Acquisitions	8	0	8	0	0	0	8	0	8
Dispositions	0	0	0	0	0	0	0	0	0
Production	(13)	0	(13)	(332)	0	(332)	(345)	0	(345)
Economic Factors	(7)	(1)	(8)	(59)	4	(55)	(66)	3	(63)
December 31, 2017	**72**	**11**	**83**	**2,004**	**990**	**2,994**	**2,077**	**1,001**	**3,077**

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

	Conventional Natural Gas			Natural Gas Liquids			Total boe		
Factors	**Gross Proved** (*MMcf*)	**Gross Probable** (*MMcf*)	**Gross Proved Plus Probable** (*MMcf*)	**Gross Proved** (*Mbbl*)	**Gross Probable** (*Mbbl*)	**Gross Proved Plus Probable** (*Mbbl*)	**Gross Proved** (*Mbbl*)	**Gross Probable** (*Mbbl*)	**Gross Proved Plus Probable** (*Mbbl*)
December 31, 2016	**186,455**	**140,292**	**326,747**	**2,311**	**1,963**	**4,274**	**35,096**	**26,186**	**61,283**
Extensions & Improved Recoveries	85	11,252	11,337	0	206	206	201	2,331	2,532
Discoveries	0	0	0	0	0	0	0	0	0
Technical Revisions	59,246	(26,236)	33,010	675	(270)	405	11,133	(4,736)	6,397
Acquisitions	740	91	830	30	4	33	160	19	179
Dispositions	0	0	0	0	0	0	0	0	0
Production	(18,097)	0	(18,097)	(239)	0	(239)	(3,599)	0	(3,599)
Economic Factors	(708)	10	(699)	(16)	3	(13)	(200)	8	(192)
December 31, 2017	**227,721**	**125,408**	**353,129**	**2,761**	**1,906**	**4,667**	**42,791**	**23,808**	**66,599**

Additional Information Relating to Reserves Data

Proved Undeveloped Reserves

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

	Light and Medium Oil (*Mbbl*)		Heavy Oil (*Mbbl*)		Conventional Natural Gas (*MMcf*)		NGL (*Mbbl*)	
Year	**First Attributed**	**Cumulative at Year-End**	**First Attributed**	**Cumulative at Year-End**	**First Attributed**	**Cumulative at Year-End**	**First Attributed**	**Cumulative at Year-End**
Prior thereto	–	14	287	387	95,501	178,500	1,258	2,271
2015	–	10	–	355	–	138,410	–	1,688
2016	–	11	–	335	–	146,778	–	1,803
2017	–	–	115	**438**	58	**136,937**	–	**1,614**

The Corporation has a large inventory of proved undeveloped reserves, the majority of which are associated with its liquids-rich Wilrich gas reservoir in West Central Alberta. These reserves are booked as per the COGE Handbook to Company land immediately adjacent to existing producing wells. McDaniel has forecast the development of these proved undeveloped reserves over the next five years as part of larger drilling programs subject to commodity prices. In East Edson at year-end 2017, McDaniel has increased the proved undeveloped reserves per location based on anticipation of the use of extended reach horizontal wells for more capital efficient reserve recovery in select regions of the reservoir. This has resulted in fewer wells being required to maintain full facility and transportation capacity within the five year development plan time frame.

Proved undeveloped reserves are also booked for heavy oil at Mannville, the majority of which are expected to be developed through execution of the Company's 2018 drilling program.

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 and, in the aggregate, before that time.

	Light and Medium Oil (*Mbbl*)		Heavy Oil (*Mbbl*)		Conventional Natural Gas (*MMcf*)		NGL (*Mbbl*)	
Year	**First Attributed**	**Cumulative at Year-End**	**First Attributed**	**Cumulative at Year-End**	**First Attributed**	**Cumulative at Year-End**	**First Attributed**	**Cumulative at Year-End**
Prior thereto	–	4	267	378	142,304	178,829	1,750	2,166
2015	–	4	–	358	–	130,588	–	2,251
2016	–	(11)	–	272	–	102,573	–	1,437
2017	–	–	232	**472**	11,243	**97,845**	206	**1,577**

The Corporation has a large inventory of probable undeveloped reserves, the majority of which are associated with its liquids-rich Wilrich gas program in West Central Alberta. These reserves are booked as per the COGE handbook to Company lands. McDaniel has forecast the development of these probable undeveloped reserves over the next eight years as part of larger drilling programs subject to commodity prices. In East Edson at year-end 2017, McDaniel has increased the probable undeveloped reserves per location based on anticipation of the use of

extended reach horizonal wells for more capital efficient reserve recovery in selected regions of the reservoir. This has resulted in fewer wells being required to maintain full facility and transportation capacity within the eight year development plan time frame.

The Corporation uses many factors to determine its annual budgets and all projects, whether booked as undeveloped reserves or unbooked drilling locations, compete with funds balanced to maximize returns from capital investment as well as drive strategic initiatives.

Significant Factors or Uncertainties

In addition to the abandonment cost estimates for reserve wells provided by McDaniel inclusive in their reserve assessment, Perpetual compiles annually a detailed internal estimate of the Corporation's total future decommissioning obligations based on net ownership interest in all wells, facilities and pipelines, including estimated costs to abandon the wells, facilities and pipelines and reclaim the sites, and the estimated timing of the costs to be incurred in future periods. Pursuant to this evaluation, the estimated cost of future decommissioning obligations related to Perpetual's proved plus probable reserves and other liabilities, net of the estimated salvage value of facilities and equipment and discounted at 10%, is $3.4 million as at December 31, 2017.

The McDaniel Report includes an undiscounted amount of $34.6 million, including $20.1 million related to developed reserves and $14.5 million for undeveloped reserves, with respect to expected future well abandonment costs related specifically to proved plus probable reserves and such amount is included in the values captioned "**Total Proved Plus Probable Reserves**" in the NPV of Reserves tables. See "*Future Net Revenue*")

The following table presents the estimated future asset retirement obligations and estimated net salvage values at various discount rates:

Abandonment and Reclamation Costs

		Discounted at		
(*$ millions*, net to Perpetual)	**Undiscounted**	**5%**	**8%**	**10%**
Total estimated future abandonment and reclamation costs[1]	(38.5)	(24.9)	(16.3)	(12.4)
Salvage value	27.9	18.0	11.8	9.0
Abandonment and reclamation costs, net of salvage	(10.6)	(6.9)	(4.5)	(3.4)
Well abandonment costs for developed reserves included in McDaniel Report	(20.1)	(7.7)	(4.7)	(3.5)
Estimate of additional future abandonment and reclamation costs, net of salvage[2]	9.5	0.8	0.2	0.1

1) Estimated internally for existing wells, pipelines and facilities.
2) Future abandonment and reclamation costs not included in the McDaniel Report, net of salvage value.

The process of estimating reserves is complex. It requires significant judgments and decisions based on available geological, geophysical, engineering and economic data. These estimates may change substantially as additional data from ongoing development activities and production performance becomes available and as economic conditions impacting oil and gas prices and costs change. The reserves estimates contained herein are based on current production forecasts, prices and economic conditions.

As circumstances change and additional data become available, reserve estimates also change. Estimates made are reviewed and revised, either upward or downward, as warranted by the new information. Revisions are often required due to changes in well performance, prices, economic conditions and governmental restrictions.

Although every reasonable effort is made to ensure that reserve estimates are accurate, reserve estimation is an inferential science. As a result, the subjective decisions, new geological, geophysical or production information and a changing environment may impact these estimates. Revisions to reserve estimates can arise from changes in year-end oil and gas prices and reservoir performance. Such revisions can be either positive or negative.

Future Development Costs

The following table sets forth development costs deducted in the estimation of Perpetual's future net revenue attributable to the reserve categories noted below.

FUTURE DEVELOPMENT COSTS
FORECAST PRICES AND COSTS (*$ millions*)

Year	Proved Reserves		Proved Plus Probable Reserves	
Discount Rate	0%	10%	0%	10%
2018	36.7	35.0	40.4	38.6
2019	43.9	38.0	45.1	39.0
2020	39.4	30.9	39.4	30.9
2021	40.1	28.7	40.1	28.7
2022	41.3	26.9	41.3	26.9
Thereafter	0.0	0.0	142.1	76.5
Total	**201.4**	**159.5**	**348.4**	**240.7**

The Corporation expects to fund future development costs from internally-generated funds flow, debt or equity financing through the capital markets and the Corporation does not expect such costs to make development of any properties uneconomic.

The McDaniel Report on Reserves Data estimates that future capital costs of $337.3 million will be required over the life of the Corporation's proved plus probable reserves for the drilling, completion, equipping and tie-in of eleven (11 net) conventional horizontal Mannville heavy oil wells and 66 (63.3 net) horizontal gas wells targeting the Wilrich at East Edson. Future capital costs also include recompletion of 15 gas wells included in Perpetual's proved plus probable reserves. As the Corporation continues to invest capital to bring on additional production, development of the undeveloped reserves will be systematically undertaken over the next several years.

OTHER OIL AND GAS INFORMATION

Oil and Gas Properties

A description of Perpetual's important oil and natural gas properties as at December 31, 2017 is included as part of "*Description of the Business – Operations*".

Oil and Gas Wells

The following table sets forth the number and status of wells in which the Corporation had a working interest as at December 31, 2017.

	Producing Gas Wells		Producing Oil Wells		Non Producing Gas Wells[3][4]		Non Producing Oil Wells[3][4]	
Property	**Gross[1]**	**Net[2]**	**Gross[1]**	**Net[2]**	**Gross[1]**	**Net[2]**	**Gross[1]**	**Net[2]**
West Central								
East Edson	54	52.9	2	2.0	9	9.0	2	2.0
West Central Other	10	9.1	2	1.4	36	27.4	6	3.7
West Central	64	62.0	4	3.4	45	36.4	8	5.7
Eastern	106	102.8	71	65.3	148	135.5	34	31.2
Total	**170**	**164.8**	**75**	**68.6**	**193**	**172.0**	**42**	**36.9**

1) "**Gross**" refers to the number of wells, respectively, in which a working interest is held by the Corporation. In addition, the Corporation held royalty interests in 51 producing wells at December 31, 2017.
2) "**Net**" refers to the aggregate of the numbers obtained by multiplying each gross well by the percentage working interest therein.
3) "**Non-Producing**" refers to wells which are not currently producing either due to lack of facilities, markets or regulatory approval. This includes 38.0 gross (34.3 net) wells shut-in as a result of GOB regulatory rulings.
4) Allowance for the abandonment costs associated with the wellbores was made in the McDaniel Report. There are 26 gross (21.2 net) wells that are classified as service wells not included in the gross/net well count.

Acreage Information

The following table sets out Perpetual's developed and undeveloped land holdings as at December 31, 2017.

	Developed Acres		Undeveloped Acres[3]	
Property	**Gross[1]**	**Net[2]**	**Gross[1]**	**Net[2]**
West Central	57,599	33,050	98,765	73,352
Eastern	193,274	148,426	88,061	69,586
Bitumen	6,880	3,200	212,043	188,640
Total	**257,753**	**184,676**	**398,869**	**331,578**

1) "**Gross**" means the total number of acres in which the Corporation has an interest in respect of Perpetual's current assets.
2) "**Net**" means the aggregate of the numbers obtained by multiplying each gross acre by the actual percentage interest therein.
3) "**Undeveloped Acres**" refers to land where there are not any existing wells within the rights associated with those lands.

During 2018, 18,531 net acres are set to expire. A total of 30,340 net acres expired in 2017. In addition to those acres that expired, the Corporation actively surrendered 3,885 net acres to reduce carrying costs on lands which were deemed to have no commercial potential. The Corporation has assessed all expiring lands and, where appropriate, will seek continuation through mapping, development activity or, in the case of higher risk areas, farm outs, where third parties provide exploration funding in exchange for an earned working interest.

Production Estimates

The following table sets out the volume of Perpetual's future production estimated by McDaniel on a proved plus probable basis for the year ended December 31, 2018, which is reflected in the estimate of future net revenue disclosed in the tables.

2018 McDaniel Forecast Production[1]	**Light and Medium Crude Oil (*bbl/d*)**	**Heavy Oil (*bbl/d*)**	**Conventional Natural Gas (*MMcf/d*)**	**Natural Gas Liquids (*bbl/d*)**
Proved	40.7	988.9	66.1	793.2
Probable	0.9	157.8	4.8	43.3
Total Proved Plus Probable	**41.5**	**1,146.7**	**70.9**	**836.4**

1) Working interest before royalty deductions plus royalty interest share.

Production History

The following tables summarize certain information in respect of production, product prices received, royalties paid, operating expenses and resulting netback for the periods indicated below:

	2017 Quarter Ended			
Production	**Dec 31**	**Sept 30**	**June 30**	**Mar 31**
Average Daily Conventional Natural Gas Production (*MMcf/d*)	60.8	51.8	45.1	40.7
Average Daily Heavy Oil Production (*bbl/d*)	888	978	1,049	877
Average Daily NGL Production	738	733	665	479
Total (*boe/d*)	**11,765**	**10,330**	**9,223**	**8,143**
Average Realized Natural Gas Price (*$/MMcf/d*)	3.22	3.11	3.18	5.04
Average Realized Heavy Oil Production *($/bbl/d*)	47.30	43.01	43.91	31.39
Average Realized NGL Price (*$/bbl/d*)	54.17	39.06	44.28	49.70
Average Total Realized Price (*$/boe*)	40.26	33.58	35.76	37.11
Royalties (*$/boe*)	2.45	2.50	4.30	4.23
Production and Transportation Costs (*$/boe*)	4.82	4.90	6.98	7.66
Operating Netback (*$/boe*)	**16.33**	**14.12**	**12.42**	**13.91**

The following table indicates Perpetual's average daily production from each of the Corporation's core areas for the year ended December 31, 2017:

Property	**Average Annual Daily Production (*boe/d*)**
West Central	
East Edson	7,851
West Central Other	36
West Central	7,887
Eastern	1,978
Bitumen	0
Total	**9,866**

Capital Expenditures

The following table summarizes capital expenditures related to Perpetual's activities for the year ended December 31, 2017:

($ thousands)	**2017**	2016
Exploration and Development	**72,956**	14,039
Other	**79**	541
Capital expenditures	**73,035**	14,580
Geological and geophysical costs[(1)]	**(22)**	23
Acquisitions	**432**	12
Net payment (proceeds) on dispositions	**1,990**	(5,984)
Total	**75,435**	8,631

1) Geological and geophysical expenditures and dry hole costs are expensed directly in the Corporation's consolidated statement of income (loss); they are considered by Perpetual to be more closely related to investing activities than operating activities and therefore are included with capital expenditures for the purposes of this report.

Exploration and Development Capital Expenditures

(*$ millions*)	**2017**	2016
West Central	**65,130**	10,538
Eastern	**7,826**	3,501
Total	**72,596**	14,039

Exploration and Development Activities

The following table sets forth the gross and net exploratory and development wells in which the Corporation participated during the year ended December 31, 2017:

Exploratory Wells	**Gross**	**Net**
Heavy Oil	1.0	1.0
Natural Gas	1.0	1.0
Total	2.0	2.0
Success Rate (%)	100%	100%
Development Wells		
Heavy Oil	3.0	2.3
Natural Gas	14.0	13.4
Total	17.0	15.7
Success Rate (%)	100%	100%
Total Exploration & Development	**19.0**	**17.7**

COMMODITY PRICE RISK MANAGEMENT

Perpetual's commodity price risk management strategy is focused on managing downside risk and increasing certainty in cash flow from operating and acquisition activities to ensure we are earning an adequate return on invested capital by mitigating the effect of commodity price volatility. Physical forward sales and financial derivatives are used to manage the balance sheet, to lock in economics on capital programs and acquisitions, and to take advantage of perceived anomalies in commodity markets. Perpetual also utilizes foreign exchange swaps and physical or financial swaps related to the differential between natural gas prices at the AECO and New York Mercantile Exchange trading hubs and oil basis differentials between WTI and Western Canadian Select ("**WCS**") in order to mitigate the effects of fluctuations in foreign exchange rates and basis differentials on the Corporation's realized revenue.

During the third quarter of 2017, Perpetual diversified its natural gas price exposure from AECO by entering into arrangements to shift the sales point of 35.0 MMcf/d to a basket of five North American natural gas hub pricing points (Chicago, Dawn, Empress, Malin and Mich Con) for a five year period commencing November 1, 2017 (40.0 MMcf/d commencing April 1, 2018). Based on current future prices, Perpetual expects these gas price diversification contracts will provide a significant premium over AECO prices for 2018 and 2019.

Our risk management policy and banking covenants allow us to manage risk on up to 70% (net of royalties) of forecast production for the next 12 months (year 1), up to 65% (net of royalties) of forecast production for the following 12 months (year 2), and up to 45% (net of royalties) of forecast for the following 12 months (year 3). Refer to note 19(c) "*Financial Risk Management – Market Risk*" in the Company's audited consolidated financial statements as at and for the years ended December 31, 2017 and 2016 for further discussion of the Company's hedging activities.

DIVIDENDS

The Corporation currently does not pay a dividend.

The Credit Facility, Term Loan and the terms of the 2019 and 2022 Senior Notes contain provisions which restrict the ability of the Corporation to pay dividends to shareholders in the event of the occurrence of certain events of default.

DESCRIPTION OF CAPITAL STRUCTURE

The authorized share capital of Perpetual consists of an unlimited number of Common Shares and an unlimited number of preferred shares. As at the date hereof, there are 59,710,564 Common Shares of which 448,000 shares are held in trust by Perpetual (59,262,564 net shares outstanding), and no preferred shares issued and outstanding. Each Common Share entitles the holder thereof to receive notice of and to attend all meetings of shareholders of Perpetual and to one vote per share at such meetings (other than meetings of another class of shares of Perpetual). The Common Shares entitle the holders thereof to receive dividends as and when declared by the Board of Directors of Perpetual on the Common Shares as a class, subject to prior satisfaction of all preferential rights to dividends attached to all shares of other classes of shares of Perpetual ranking in priority to the Common Shares in respect of dividends. Holders of Common Shares will be entitled in the event of any liquidation, dissolution or winding-up of Perpetual, whether voluntary or involuntary, or any other distribution of the assets of Perpetual among its shareholders for the purposes of winding-up its affairs, and subject to prior satisfaction of all preferential rights to return of capital on dissolution attached to all shares of other classes of shares of Perpetual ranking in priority to the Common Shares in respect of return of capital on dissolution, to share rateably, together with the holders of shares of any other class of shares of Perpetual ranking equally with the Common Shares in respect of return of capital, in such assets of Perpetual as are available for distribution.

Preferred shares may be issuable in one or more series, each series to consist of such number of shares as may, before the issuance thereof, be determined by the Board of Directors of Perpetual. The Board of Directors may from time to time fix, before issuance, the designation, rights, privileges, restrictions and conditions attaching to each series of preferred shares including, without limiting the generality of the foregoing, the amount, if any, specified as being payable preferentially to such series on a distribution, the extent, if any, of further participation on a distribution, voting rights, if any, and dividend rights (including whether such dividends be preferential, or cumulative or non-cumulative), if any.

The holders of each series of preferred shares are entitled to receive any dividends declared by the Board of Directors of Perpetual in priority to the Common Shares and to be paid rateably with holders of each other series of preferred shares, and are entitled to participate in any distribution of the assets of Perpetual upon the liquidation, dissolution, bankruptcy or winding-up of Perpetual or other distribution of its assets among its shareholders for the purpose of winding-up its affairs in priority to the holders of the Common Shares and to share rateably in the distribution with holders of each other series of preferred shares.

Constraints

There are currently no constraints imposed on the ownership of securities of the Corporation.

Ratings

The following information relating to Perpetual's credit ratings is provided as it relates to the Company's financing costs and liquidity. Credit ratings could affect Perpetual's ability to obtain short-term and long-term financing and the cost of such financing. A negative change in ratings outlook or any downgrade in current credit ratings by the ratings agencies could adversely affect the cost of borrowing and/or access to sources of liquidity and capital. Perpetual believes that its credit ratings will allow the Company to continue to have access to the capital markets, as and when needed, at a reasonable cost of funds.

Other than as set forth below, Perpetual has not asked for and has not received a stability rating, or to the knowledge of Perpetual, has not received any other kind of rating, including, a provisional rating, from one or more approved rating organizations for securities of Perpetual that are outstanding and which continue in effect.

The Corporation and its two series of outstanding 2019 Senior Notes and 2022 Senior Notes are currently rated by Standard and Poor's Rating Services, a division of McGraw-Hill Companies (Canada) Corporation ("**S&P**") and by Moody's Investors Service, Inc. ("**Moody's**"). The following table outlines the ratings and outlooks of the Corporation and the Senior Notes as of December 31, 2017.

	S&P	Moody's
Senior Unsecured Credit Rating (Senior Notes)	CCC-	Caa2
Issuer Rating	CCC+ / Stable	Caa1 / Stable

S&P and Moody's provide credit ratings of debt securities for commercial entities. A credit rating generally provides an indication of the risk that the borrower will not fulfill its full obligations in a timely manner with respect to both interest and principal commitments.

Credit ratings are intended to provide investors with an independent measure of credit quality of an issue of securities. Credit ratings are not recommendations to purchase hold or sell securities and do not address the market price or suitability of a specific security for a particular investor. There is no assurance that any rating will remain in effect for any given period of time or that any rating will not be revised or

withdrawn entirely by a rating agency in the future if, in its judgment, circumstances so warrant. A rating can be revised, suspended or withdrawn at any time by the rating agency. Potential investors should consult the rating agency should they require more information with respect to the interpretation and implications of the foregoing ratings. A revision or withdrawal of a credit rating could have a material adverse effect on the pricing and liquidity of the 2019 Senior Notes and 2022 Senior Notes in the secondary market.

MARKET FOR SECURITIES

Trading Price and Volume

The outstanding Common Shares are listed and posted for trading on the TMX under the trading symbols "PMT". The following tables set forth the closing price range and trading volume of the Common Shares as reported by the TMX for the periods indicated:

Common Shares

	Price Range		
2017	**High ($)**	**Low ($)**	**Volume**
January	2.44	1.95	713,107
February	2.10	1.58	813,287
March	1.75	1.40	1,415,386
April	1.70	1.48	750,171
May	1.65	1.48	645,318
June	1.75	1.34	763,552
July	1.41	1.23	313,048
August	1.45	1.10	253,263
September	1.40	1.12	308,914
October	1.35	1.00	790,547
November	1.25	1.00	786,876
December	1.07	0.96	743,122

Prior Sales

Other than Share Options, Restricted Rights and Warrants to acquire Common Shares and the 2019 Senior Notes and 2022 Senior Notes, there is no class of securities of Perpetual that is outstanding and not listed or quoted on a marketplace.

Set forth below are the issue dates, number issued and exercise prices at which Restricted Rights, Share Options and Warrants were issued during the most recently completed financial year by Perpetual.

Restricted Rights Granted 2017

Month of Issuance	Number of Restricted Rights	Exercise Price of Restricted Rights
January	6,625	$0.01
February	220,250	$0.01
March	115,217	$0.01
April	3,000	$0.01
May	14,700	$0.01
June	107,850	$0.01
July	56,450	$0.01
August	40,750	$0.01
September	13,150	$0.01
October	11,300	$0.01
November	32,525	$0.01
December	nil	n/a

Share Options Granted in 2017

Month of Issuance	Number of Options	Exercise Price of Options
May 2017	1,975,000	$1.72
October 2017	40,000	$1.15

Warrants Issued in 2017

Month of Issuance	Number of Warrants	Exercise Price of Warrants
March 2017	6,480,030	$2.34

ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

To the knowledge of the Corporation, none of Perpetual's securities are held in escrow or subject to a contractual restriction on transfer.

DIRECTORS AND OFFICERS

Name, Occupation and Security Holding

The names, province or state, and country of residence, positions and offices held with the Corporation, and principal occupation of the directors and executive officers of the Corporation are set out below and, in the case of directors, the period each has served as a director of the Corporation.

Name, Province or State and Country of Residence	Position Held	Principal Occupation for the Last Five Years	Director Since
Clayton H. Riddell(5) Alberta, Canada	Chairman of the Board and Directors	Executive Chairman of Paramount Resources Ltd.	June 28, 2002
Susan L. Riddell Rose(5) Alberta, Canada	Director, President and Chief Executive Officer	President and Chief Executive Officer of Perpetual Energy Inc. since June 2002	June 28, 2002
Randall E. Johnson(1)(3)(5)(6) Alberta, Canada	Director	Independent Businessperson	June 20, 2006
Robert A. Maitland(1)(2)(3)(5)(6) Alberta, Canada	Director	Independent Businessperson	February 7, 2008
Geoffrey C. Merritt(1)(2)(4)(5)(6) Alberta, Canada	Director	Independent Businessperson	June 17, 2010
Donald J. Nelson(2)(4)(5)(6) Alberta, Canada	Director	Independent Businessperson	June 28, 2002
Ryan A. Shay(1)(3)(5)(6) Alberta, Canada	Director	Independent Businessperson since 2016. Prior thereto, Managing Director, Head of Investment Banking at Cormark Securities Inc.	October 17, 2017
Howard R. Ward(3)(4)(5)(6) Alberta, Canada	Director	Independent Businessperson	June 28, 2002
W. Mark Schweitzer Alberta, Canada	Vice President, Finance & Chief Financial Officer	Vice President, Finance & Chief Financial Officer of Perpetual since May 2017. Prior thereto, Vice President, Finance & Chief Financial Officer of Grizzly Oil Sands ULC.	N/A
Jeffrey R. Green Alberta, Canada	Vice President, Corporate and Engineering Services	Vice President, Corporate and Engineering Services of Perpetual since 2009.	N/A
Linda L. McKean Alberta, Canada	Vice President, Production and Development	Vice President, Production and Development of Perpetual since 2012.	N/A
Marcello M. Rapini Alberta, Canada	Vice President, Marketing	Vice President, Marketing of Perpetual since 2007.	N/A

1) Member of the Audit Committee.
2) Member of the Reserves Committee.
3) Member of the Compensation and Corporate Governance Committee.
4) Member of the Environmental, Health and Safety Committee.
5) The terms of office of all Directors of the Company will expire on the date of the next annual shareholders' meeting.
6) Mr. Johnson, Mr. Maitland, Mr. Merritt, Mr. Nelson, Mr. Shay and Mr. Ward are independent, non-employee directors.

The Directors and officers of Perpetual, as a group, beneficially own or control or direct, directly or indirectly an aggregate of 28,927,932 voting securities as of February 22, 2018 representing approximately 48.8 percent of the outstanding Common Shares.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

Cease Trade Orders

To the knowledge of the Corporation, except as described below, no director or executive officer of the Corporation (nor any personal holding company of any of such persons) is, as of the date of this Annual Information Form, or was within 10 years before the date of this Annual Information Form, a director, chief executive officer or chief financial officer of any company (including the Corporation), that: (a) 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 30 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 (b) 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.

Mr. Riddell is a director and executive officer of Paramount Resources Ltd. ("**Paramount**") and Ms. Riddell Rose is a director and was an officer of Paramount from May 1998 to June 2002. From 1992 to 2008, Paramount was the general partner of T.T.Y. Paramount Partnership No. 5 ("**TTY**"), a limited partnership, which was an unlisted reporting issuer in certain provinces of Canada. TTY was established in 1980 to conduct oil and gas exploration and development but had not carried on active operations since 1984 and had only nominal assets. A cease trade order against TTY was issued by the Autorité des marchés financiers in 1999 for failing to file the June 30, 1998 interim financial statements in Québec. The cease trade order was revoked on April 9, 2008. TTY was dissolved on July 21, 2008.

Bankruptcies

To the knowledge of the Corporation, no director or executive officer of the Corporation (nor any personal holding company of any of such persons), or shareholder holding a sufficient number of securities of the Corporation to affect materially the control of the Corporation: (a) is, as of the date of this Annual Information Form, or has been within the 10 years before the date of this Annual Information Form, a director or executive officer of any company (including the Corporation) 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; or (b) has, within the 10 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.

Mr. Robert Maitland was a director of GasFrac Energy Services Inc. ("**GasFrac**") from April 2008 until GasFrac's annual meeting held on May 27, 2014, at which time he did not stand for re-election to the GasFrac Board of Directors. GasFrac obtained court approval on January 28, 2015 under the *Companies' Creditors Arrangement Act* (Canada) in respect of a forbearance agreement between GasFrac and its major creditor until March 18, 2015. Substantially all of GasFrac's assets were sold under a court ordered process approving the wind up of GasFrac on March 16, 2015.

Penalties or Sanctions

To the knowledge of the Corporation, no director or executive officer of the Corporation (nor any personal holding company of any of such persons), or shareholder holding a sufficient number of securities of the Corporation to affect materially the control of the Corporation, has been subject to: (a) 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 (b) 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

Certain officers and directors of the Corporation are also officers and/or directors of other entities engaged in the oil and gas business generally. As a result, situations may arise where the interest of such directors and officers conflict with their interests as directors and officers of other companies. The resolution of such conflicts is governed by applicable corporate laws, which require that directors act honestly, in good faith and with a view to the best interests of the Corporation. Conflicts, if any, will be handled in a manner consistent with the procedures and remedies set forth in the ABCA. The ABCA provides that in the event that 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 by the ABCA.

AUDIT COMMITTEE INFORMATION

Audit Committee Charter

The mandate and responsibilities of Perpetual's audit committee (the "**Audit Committee**") are set out in the Audit Committee Charter which is part of the Corporation's Corporate Governance Directors' Manual. The Audit Committee Charter is set out in Appendix "C" to this Annual Information Form.

Audit Committee

The Audit Committee reviews and recommends to the Board the approval of the annual and interim financial statements, the associated management's discussion and analysis and related financial disclosure to the public and regulatory authorities. It is responsible for the engagement of Perpetual's external auditors, upon approval by shareholders, including fees paid for the annual audit and interim financial reviews, and pre-approves non-audit services. The Audit Committee communicates directly with the auditors and reviews programs and policies regarding the effectiveness of internal controls over the Corporation's accounting and financial reporting systems. It also reviews insurance coverage and directors' and officers' liability insurance. The Audit Committee must liaise with the Reserves Committee on matters relating to reserves valuations which impact Perpetual's financial statements.

Composition of the Audit Committee

The Audit Committee consists of four members: Randall E. Johnson, Robert A. Maitland, Geoffrey C. Merritt and Ryan A. Shay. Mr. Maitland is Chair of the Audit Committee. Each of the members of the Audit Committee is independent and financially literate in accordance with the meanings set out in National Instrument 52-110 Audit Committees.

Pre-Approval of Policies and Procedures

Perpetual has adopted policies and procedures with respect to the pre-approval of audit and permitted non-audit services to be provided by KPMG LLP. The Audit Committee establishes a budget for the provision of a specified list of audit and permitted non-audit services that the audit committee believes to be typical, recurring or otherwise likely to be provided by KPMG LLP. The budget generally covers the period between the adoption of the budget and the next meeting of the Audit Committee, but at the option of the Audit Committee it may cover a longer or shorter period. The list of services is sufficiently detailed as to the particular services to be provided to ensure that (i) the Audit Committee knows precisely what services it is being asked to pre-approve and (ii) it is not necessary for any member of management to make a judgment as to whether a proposed service fits within the pre-approved services.

The Audit Committee must pre-approve the provision of permitted services by KPMG LLP which are not otherwise pre-approved by the Audit Committee, including the fees and terms of the proposed services. Prohibited services may not be pre-approved by the Audit Committee.

External Auditor Service Fees

The following table summarizes the fees paid by Perpetual to its auditors, KPMG LLP, for external audit and other services during the periods indicated.

Year	Audit Fees[(1)] ($)	Audit-Related Fees[(2)] ($)	Tax Fees[(3)] ($)	All Other Fees[(4)] ($)
2015	530,000	nil	nil	nil
2016	526,000	nil	nil	nil
2017	300,000	nil	nil	nil

1) Represents fees billed by our external auditor for audit services.
2) Represents fees billed for assurance related services by our external auditor that are reasonably related to the performance of the audit or review of our financial statements that are not reported under Audit Fees.
3) Represents fees billed for professional services rendered by our external auditor for tax compliance, tax advice and tax planning.
4) Represents fees billed for products and services provided by our auditors other than the other services reported.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

There are no legal proceedings Perpetual is or was a party to, or that any of its property is or was the subject of, during Perpetual's financial year, nor are any such legal proceedings known to Perpetual to be contemplated, that involves a claim for damages, exclusive of interest and costs, exceeding 10 percent of the current assets of Perpetual.

Regulatory Actions

There are no:

1) penalties or sanctions imposed against Perpetual by a court relating to securities legislation or by a securities regulatory authority during Perpetual's financial year;
2) other penalties or sanctions imposed by a court or regulatory body against Perpetual that would likely be considered important to a reasonable investor in making an investment decision; and
3) settlement agreements Perpetual entered into before a court relating to securities legislation or with a securities regulatory authority during Perpetual's financial year.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

There is no material interest, direct or indirect, of any: (a) director or executive officer of Perpetual; (b) person or company that beneficially owns, or controls or directs, directly or indirectly, more than 10 percent of any class or series of Perpetual's voting securities; and (c) associate or affiliate of any of the persons or companies referred to in (a) or (b) above in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or is reasonably expected to materially affect Perpetual.

TRANSFER AGENT AND REGISTRAR

Odyssey Trust Company, at its offices in Calgary, Alberta, acts as the transfer agent and registrar for the Common Shares.

MATERIAL CONTRACTS

Except for contracts entered into in the ordinary course of business, the only material contracts that Perpetual has entered into within the last financial year, or before the last financial year which are still in effect, which can reasonably be regarded as presently material, are the following:

1) The Credit Facility agreement as described in note 9 to the audited consolidated financial statements for the year ended December 31, 2017 (the "Financial Statements"), which note is incorporated by reference herein;
2) The Term Loan agreement as described in note 10 to the Financial Statements, which note is incorporated by reference herein; and
3) The Senior Notes agreement as described in note 11 to the Financial Statements, which note is incorporated by reference herein.

Copies of these agreements and the Financial Statements have been filed on SEDAR at www.sedar.com.

INTERESTS OF EXPERTS

Names of Experts

The only persons or companies who are 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 National Instrument 51-102 by the Corporation during, or relating to, the Corporation's most recently completed financial year, and whose profession or business gives authority to the report, valuation, statement or opinion made by the person or company, are KPMG LLP, the Corporation's independent auditors, and McDaniel, the Corporation's independent reserve evaluators.

Interests of Experts

To the Corporation's knowledge, no registered or beneficial interests, direct or indirect, in any securities or other property of the Corporation or of one of the Corporation's associates or affiliates (i) were held by the McDaniel or by the "designated professionals" (as defined in Form 51-102F2) of McDaniel, when McDaniel prepared its reports, valuations, statements or opinions referred to herein as having been prepared by McDaniel, (ii) were received by McDaniel or the designated professionals of McDaniel after McDaniel prepared the reports, valuations, statements or opinions in question, or (iii) is to be received by McDaniel or the designated professionals of McDaniel.

Neither McDaniel nor any director, officer or employee of McDaniel is or is expected to be elected, appointed or employed as a director, officer or employee of the Corporation or of any associate or affiliate of the Corporation.

KPMG LLP are the auditors of the Company and have confirmed that they are independent with respect to the Company within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulations.

OTHER BUSINESS INFORMATION

Specialized Skill and Knowledge

Perpetual employs individuals with various professional skills in the course of pursuing its business plan. These professional skills include, but are not limited to, geology, geophysics, engineering, marketing, finance and business skills. Drawing on significant experience in the oil and gas

business, Perpetual 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 and leadership skills; operational and capital project execution expertise; commodity market risk management and optimization excellence; strong exploration and business development initiation, evaluation and negotiating skills; an entrepreneurial spirit that allows Perpetual to effectively identify, evaluate and execute on value added initiatives; expertise in planning and financial controls; and capital markets expertise.

Competitive Conditions

The oil and natural gas industry is intensely competitive and Perpetual competes with a substantial number of other entities, many of which have greater technical, operational and/or financial resources. With the maturing nature of the Western Canadian Sedimentary Basin, the access to new prospects is becoming more competitive and complex.

Perpetual attempts to enhance its competitive position by operating in areas where it believes its technical personnel are able to reduce some of the risks associated with exploration, production and marketing because the Company has established core competencies in these areas of operation. Management believes that Perpetual will be able to explore for and develop new production and reserves with the objective of increasing its funds flow and reserve base. See "*Risk Factors – Competition*".

Commodity Price Cycles

The Company's operational results and financial condition are dependent on commodity prices, specifically the prices of oil, natural gas, NGL and seasonal natural gas price spreads. Commodity prices have fluctuated widely during recent years and are determined by supply and demand factors including general economic conditions, weather, environmental regulations and policies, geopolitical risks, oil and gas resource extraction technologies, oil fields equipment and services, local and regional access to markets, refining capacity, as well as operating results and conditions in other oil and natural gas producing regions. See "*Risk Factors – Seasonality*".

Environmental Protection

The oil and natural gas industry is currently subject to environmental regulations pursuant to a variety of provincial and federal legislation. Compliance with such legislation may require significant expenditures or result in operational restrictions. Breach of such requirements may result in suspension or revocation of necessary licenses and authorizations, civil liability for pollution damage and the imposition of material fines and penalties, all of which might have a significant negative impact on earnings and overall competitiveness of the Corporation. For a description of the financial and operational effects of environmental protection requirements on the capital expenditures, earnings and competitive position of Perpetual see "*Industry Conditions – Environmental Regulation*" and "*Risk Factors – Environmental*".

Reorganizations

Other than as disclosed under "**General Development of the Business**", Perpetual has not completed any material reorganization within the three most recently completed financial years or during the current financial year. No material reorganization is currently proposed for the current financial year.

Environmental, Health and Safety Policies

The Corporation supports environmental protection and worker health and safety through the implementation and communication of the Corporation's environmental management and health and safety policies, practices and procedures. Committees focused on environment, health and safety ("**EH&S**") issues are established in the Corporation's operations which are designed to drive continuous improvement in policies and practices which drive accountability for EH&S by the Corporation and its employees. Practices for continuous improvement of EH&S performance management includes providing employees with job orientation, training, instruction, systems and supervision to build competency, skill and accountability in conducting daily activities in a healthy, environmentally responsible and safe manner.

The Corporation develops emergency response practices, procedures and readiness plans in conjunction with local authorities, emergency services and the communities in which it operates in order to effectively respond to an environmental or safety incident should it arise. The effectiveness of these plans is evaluated on a regular basis to ensure preparedness for emergency situations. Environmental and risk assessments are undertaken for new projects, or when acquiring new properties or facilities in order to identify, assess and minimize environmental risks, loss and operational exposures. The Corporation conducts audits of operations to measure compliance with internal and industry standards, and for continuous improvement in practices and procedures. Documentation is maintained to support internal accountability and measure operational performance against recognized industry and proactive leading indicators to assist in achieving the objectives of the described policies and programs.

Perpetual's culture of safety has been acknowledged through the results of an independent audit for the Certificate of Recognition ("**COR**") program under the Alberta governments "Partnership in Injury Reduction" initiative. In 2016 Perpetual conducted an internal maintenance audit. This audit allowed the Corporation to maintain its COR accreditation which demonstrates the Corporation has exceeded the Alberta Employment and Immigration Workplace Partnerships standard, an accomplishment shared amongst a select few in the oil and gas industry. Although the Company no longer maintains its official COR accreditation in 2017, internally certified personnel continue to maintain the spirit of the program.

The Corporation also faces environmental, health and safety risks in the normal course of its operations due to the handling and storage of hazardous substances. The Corporation's environmental and health and safety management systems are designed to manage such risks in the

Corporation's business and allow action to be taken to control the risk of environmental, health or safety impacts from such operations. A key aspect of these systems is the conducting of internal and external inspection and audits of worksites and offices. See "*Risk Factors – Environmental*".

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 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. 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 (vi) 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 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, which results in the market determining the price of crude oil. Worldwide supply and demand factors primarily determine 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

The price of natural gas sold in intra-provincial, interprovincial and international trade is determined by negotiation between buyers and sellers. 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 price of condensate and other natural gas liquids such as ethane, butane and propane ("**NGLs**") sold in intra-provincial, interprovincial and international trade is determined by negotiation between buyers and sellers. Such price depends, 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, which is no longer the case for natural gas and NGLs. For natural gas and NGLs, 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. All crude oil, natural gas and NGLs licences require the approval of the cabinet of the Canadian federal government.

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 the cabinet of the Canadian federal government. 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^3 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 other criteria prescribed by the NEB and the federal government.

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 or other transportation projects are underway, many contemplated projects have been cancelled or are delayed due to regulatory hurdles, court challenges and economic and political factors. The transportation capacity deficit is not likely to be resolved quickly given the significant length of time required to complete major pipeline or other transportation projects 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, which may be done on a firm or interruptible basis. Due to growing production and a lack of new and expanded pipeline and rail infrastructure capacity, producers in Western Canada have experienced low pricing relative to other markets in the last several years. Transportation availability is highly variable across different areas and regions, which can determine the nature of transportation commitments available, the numbers of potential customers that can be reached in a cost-effective manner and the price received.

Developing a strong network of transportation infrastructure for crude oil, natural gas and NGLs, including by means of pipelines, rail, marine and trucks, in order to obtain better access to domestic and international markets has been a significant challenge to the Canadian crude oil and natural gas industry. Improved means of access to global markets, especially the Midwest United States and export shipping terminals on the west coast of Canada, would help to alleviate the pressures of pricing discussed. 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 shipping terminals on the west coast of Canada. While certain projects are proceeding, the regulatory approval process as well as economic and political factors for transportation and other export infrastructure has led to the delay of many pipeline projects or their cancellation altogether.

Under the Canadian constitution, interprovincial and international pipelines fall within the federal government's jurisdiction and require approval by both the NEB and the cabinet of the federal government recently introduced draft legislation to amend the current federal approval processes, it is uncertain when the new legislation will be brought into force and whether any changes to the draft legislation will be made before the legislation is brought into force. 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 on various issues such as indigenous title, the government's duty to consult and accommodate indigenous peoples and the sufficiency of environmental review processes, which creates further uncertainty. In particular, politicized statements from the governments of British Columbia and Alberta may continue to intensify, leading to increased challenges to interprovincial and international infrastructure projects moving forward. 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.

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). Midstream 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 shippers. 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 exasperated 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.

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, 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.

In 2017, the United States government announced its intention to renegotiate NAFTA in order to reduce its trade deficit. As a result, Canada, the United States and Mexico began renegotiating the terms of NAFTA in mid-2017. The United States has also suggested that it might give notice of the termination of NAFTA if it is not satisfied with the outcome of the renegotiations. If the United States does give notice of its intent to terminate or withdraw from NAFTA, the earliest such termination or withdrawal could occur would be six months after such notice is given. The renegotiations are still underway and the outcome of such negotiations remain unclear, but 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, any changes to, or termination of, NAFTA could have an impact on Western Canada's crude oil and natural gas industry at large, including the Corporation's business.

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 oil and 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. The text of CPTPP has not been finalized or published and the agreement remains subject to ratification by the governments of each of the countries involved. While it is uncertain what effect CETA, CPTPP or any other trade agreements will have on the oil and gas industry in Canada, the lack of available infrastructure for the offshore export of oil and gas may limit the ability of Canadian oil and 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 Alberta, British Columbia, Saskatchewan and Manitoba 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 the provinces of Alberta, British Columbia, Saskatchewan and Manitoba. In each of the provinces of Alberta, British Columbia, Saskatchewan and Manitoba approximately 19%, 6%, 30% 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.

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 January 1, 2017. 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% 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 costs incurred by a producer, low cost producers benefit if their well costs are lower than the 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 also 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.

Oil sand production is also subject to Alberta's royalty regime. The Modernized Framework did not change the oil sands royalty framework. Prior to payout of an oil sands project, the royalty is payable on gross revenues of an oil sands project. Gross revenue royalty rates range between 1% and 9% depending on the market price of crude oil, determined using the average monthly price, expressed in Canadian dollars, for Western Texas Intermediate crude oil at Cushing, Oklahoma. Rates are 1% when the market price of crude oil is less than or equal to $55 per barrel and increase for every dollar of market price of crude oil increase to a maximum of 9% when crude oil is priced at $120 or higher. After payout, the royalty payable is the greater of the gross revenue royalty based on the gross revenue royalty rate of between 1% and 9% and the net revenue royalty based on the net revenue royalty rate. Net revenue royalty rates start at 25% and increase for every dollar of market price of crude oil increase above $55 up to 40% when crude oil is priced at $120 or higher.

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.

Freehold and Other Types of Non-Crown Royalties

Royalties on production from privately-owned freehold lands are negotiated between the mineral freehold owner and the lessee under a negotiated lease or other contract.

In addition to the royalties payable to the mineral owners, producers of crude oil and natural gas from freehold lands in each of the Western Canadian provinces are required to pay freehold mineral taxes or production taxes. Freehold mineral taxes or production taxes are taxes levied by a provincial government on crude oil and natural gas production from lands where the Crown does not hold the mineral rights. A description of the freehold mineral taxes payable in each of the Western Canadian provinces is included in the above descriptions of the royalty regimes in such provinces.

IOGC is a special agency responsible for managing and regulating the crude oil and natural gas resources located on indigenous reservations across Canada. IOGC's responsibilities include negotiating and issuing the crude oil and natural gas agreements between indigenous groups and

crude oil and natural gas companies, as well as collecting royalty revenues on behalf of indigenous groups and depositing the revenues in their trust accounts. While certain standards exist, the exact terms and conditions of each crude oil and natural gas lease dictate the calculation of royalties owed, which may vary depending on the involvement of the specific indigenous group. Ultimately, the relevant indigenous group must approve the terms.

Regulatory Authorities and Environmental Regulation

General

The 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 and facility 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 Canadian Energy Regulator ("**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 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 of the federal government; (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 resource development in Alberta. 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 Rating Program (the "**AB LLR Program**"). The AB LLR Program is a liability management program governing most conventional upstream crude oil and natural gas wells, facilities and pipelines. Alberta's *Oil and Gas Conservation Act* (the "**OGCA**") establishes an orphan fund (the "**Orphan Fund**") to pay the costs to suspend, abandon, remediate and reclaim a well, facility or pipeline included in the AB LLR Program if a licensee or working interest participant ("**WIP**") becomes insolvent or is unable to meet its obligations. The Orphan Fund is funded by licensees in the AB LLR Program through a levy administered by the AER. The AB LLR Program is designed to minimize the risk to the Orphan Fund posed by unfunded liability of licensees and to prevent the taxpayers of Alberta from incurring costs to suspend, abandon, remediate and reclaim wells, facilities or pipelines. The AB LLR Program requires a licensee whose deemed liabilities exceed its deemed assets to provide the AER with a security deposit. The ratio of deemed assets to deemed liabilities is assessed once each month and where a security deposit is deemed to be required, the failure to post any required amounts may result in the initiation of enforcement action by the AER. The AER publishes the liability management rating for each licensee on a monthly basis on its public website.

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 OGCA, including the AB LLR Program, and the *Bankruptcy and Insolvency Act* (the "**BIA**"). This ruling meant that receivers and trustees have the right to renounce assets within insolvency proceedings, which was affirmed by a majority of the Alberta Court of Appeal. Such a conflict renders the AER's legislated authority unenforceable 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 insolvent. Effectively, this means that abandonment costs will be borne by the industry-funded Orphan Well Fund or the province in these instances because any financial resources of the insolvent licensee will first be used to satisfy secured creditors under the BIA. This decision is currently under appeal to the Supreme Court of Canada, with final resolution expected in 2018.

In response to Redwater, the AER issued several bulletins and interim rule changes to govern while the case is appealed and to allow the Government of Alberta to develop appropriate regulatory measures to adequately address environmental liabilities. The AER's *Directive 067: Eligibility Requirements for Acquiring and Holding Energy Licences and Approvals*, which deals with licence eligibility to operate wells and facilities, was amended and now requires extensive corporate governance and shareholder information, with a particular focus on any previous companies of directors and officers that have 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 are assessed on a non-routine basis and the AER now requires all transferees to demonstrate that they have a LMR, being the ratio of a licensee's assets to liabilities, of 2.0 or higher immediately following the transfer, or to otherwise prove that it can satisfy its abandonment and reclamation obligations. The AER may make further rule changes in response to Redwater at any time, especially as the case heads towards a final determination, which means that additional obligations and/or different requirements may be forthcoming.

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. The IWCP completed its second year on March 31, 2017. Overall, the AER has announced that licensees brought 19% of non-compliant wells in the IWCP into compliance with AER requirements in the second year of the IWCP.

Climate Change Regulation

Climate change regulation at both the federal and provincial level has the potential to significantly affect the regulatory environment 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 February 1, 2018, 174 of the 197 parties to the convention have ratified the Paris Agreement.

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. Four provinces currently have carbon pricing systems in place that would meet federal requirements (Alberta, British Columbia, Ontario and Quebec). The federal government will accept comments on the draft legislative proposals to implement the federal carbon pricing system until February 12, 2018.

On May 27, 2017, the federal government published draft regulations to reduce emissions of methane from the crude oil and natural gas sector. The proposed 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, by introducing new control measures. Among other things, the proposed 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, since they 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. The levy is anticipated to increase again in 2021 in line with the federal legislation. 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 45% by 2025 from 2012 levels. 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 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 as well as 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 and effective maintenance operations 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, the environment and personal injury. Particularly, the Corporation may explore for and produce sour natural gas in certain areas. An unintentional leak of sour natural 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 all the risks typically associated with such operations, 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. In either event, the Corporation could incur significant costs.

Weakness in the Oil and Gas Industry

Weakness and volatility in the market conditions for the oil and 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 emerging economies, market volatility and disruptions in Asia, sovereign debt levels and political upheavals in various countries have caused significant weakness and volatility in commodity prices. These events and conditions have caused a significant decrease in the valuation of oil and gas companies and a decrease in confidence in the oil and 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. 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 gas industry in Western Canada has led to additional downward price pressure on oil and gas produced in Western Canada and uncertainty and reduced confidence in the oil and gas industry in Western Canada. 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. 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. In addition to possibly resulting in a decrease in the value of the Corporation's economically recoverable reserves, lower commodity prices may also result 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 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 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. If these conditions persist, the Corporation's cash flow may not be sufficient to continue to fund its operations and to satisfy its obligations when due and the Corporation's ability to continue as a going concern and discharge its obligations will require additional equity or debt financing and/or proceeds or reduction in liabilities from asset sales. There can be no assurance that such equity or debt financing will be available on terms that are satisfactory to the Corporation or at all. Similarly, there can be no assurance that the Corporation will be able to realize any or sufficient proceeds or reduction in liabilities from asset sales to discharge its obligations and continue as a going concern.

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. 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 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 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.

See "*Weakness in the Oil and Gas Industry*".

Market Price

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 gas market. In certain jurisdictions institutions, including government sponsored entities, have determined to decrease their ownership in oil and 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 of the Corporation 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 of the Corporation 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 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 assets required to provide such services. In this regard, 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 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 not only in Canada, but also in 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. The government in the United States are considering the renegotiation of the terms of the North American Free Trade Agreement, withdrawal of the United States from the Trans-Pacific Partnership, imposition of a tax on the importation of goods into the United States, reduction of regulation and taxation in the United States, and introduction of laws to reduce immigration and restrict access into the United States for citizens of certain countries. It is presently unclear exactly what actions the government in the United States will implement, and if implemented, how these actions may impact Canada and in particular the oil and gas industry. Any actions taken by the United States government 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 gas companies, including the Corporation.

In addition, the citizens of the United Kingdom recently voted to withdraw from the European Union and the Government of the United Kingdom has begun taken steps to implement such withdrawal. 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 its Common Shares.

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 the Corporation may be required to satisfy such 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.

Reliance on Royalty Payors

A portion of the Corporation's revenues from royalty payors and certain of its operations are dependent on the financial and operational capacity of third party working interest owners to develop and produce from the Corporation's properties, over which it has limited influence.

The Corporation relies on other companies drilling and producing from lands in which the Corporation has a royalty interest. The Corporation has very limited ability to exercise influence over the decision of companies to drill and produce from such lands. The Corporation's return on lands in which it has a royalty interest depends upon a number of factors that may be outside of the Corporation's control, including, but not

limited to, the capital expenditure budgets and financial resources of the companies who have a working interest in such lands, the operator's ability to efficiently produce the resources from such lands and commodity prices.

In addition, due to the current low and volatile commodity prices, many companies, including companies that may have a working interest in the lands in which the Corporation has a royalty interest, may be in financial difficulty, which could affect their ability to fund and pursue capital expenditures on such lands. In addition, weak commodity prices might result in companies choosing to defer capital spending or shutting-in existing production. Any reduction in the drilling and production from lands in which the Corporation has a royalty interest will negatively affect the Corporation's cash flows and financial results.

Financial difficulty of companies who have lands in which the Corporation has a royalty interest may affect the Corporation's ability to collect royalty payments, especially if such companies go bankrupt, become insolvent, or make a proposal or institute any proceedings relating to bankruptcy or insolvency.

Project Risks

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

The Corporation manages a variety of small and large projects in the conduct of its business. Project delays 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 supply of and demand for oil and natural gas;
- the availability of alternative fuel sources;
- the effects of inclement weather;
- the availability of drilling and related equipment;
- the availability of equipment and manpower for completion and fracture stimulation operations;
- unexpected cost increases;
- accidental events;
- transportation outages;
- 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 and may be unable to market the oil and natural gas that it produces effectively.

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. The 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 limit the ability to transport produced oil and gas to market. 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 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. In addition, the federal government has signaled that it plans to review the National Energy Board approval process for large federally regulated projects. This may cause the timeframe for project approvals to increase for current and future applications.

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 railway lines to alleviate pipeline capacity issues 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 and operated 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 for sale.

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, natural gas and NGL. 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, natural gas and NGL 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 enjoy technological advantages and may in the future allow them to implement new technologies before the Corporation. 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 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, natural gas and NGL 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 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 flows 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 and transportation). Governments may regulate or intervene with respect to exploration and production activities, prices, taxes, royalties and the exportation of oil and natural gas. 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. Recently, the federal government and the AER have taken steps to initiate protocols and regulations to limit the release of methane from oil and gas operations. Such draft regulations and protocols require the presence of leak detectors on-site and impose stricter standards in the construction of facilities, each of which require additional expenditures and may affect the Corporation's profitability. See "*Industry Conditions – Climate Change Regulations*".

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 its Common Shares or its assets, particularly when undertaking, or attempting to undertake, acquisition or disposition activity.

Royalty Regimes

Changes to federal or provincial 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.

Due to seismic activity reported in the Fox Creek area of Alberta, the AER announced in February 2015, seismic monitoring and reporting requirements for hydraulic fracturing operators in the Duvernay zone in the Fox Creek area. These requirements include, among others, an assessment of the potential for seismicity prior to operations, the implementation of a response plan to address potential events, and the suspension of operations if a seismic event above a particular threshold occurs. The AER continues to monitor seismic activity around the province and may extend these requirements to other areas of the province if necessary.

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 operational results.

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 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 alternatives 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 or non-existent 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 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 gas companies that may be disproportionately affected by price instability. The recent Alberta Court of Queen's Bench decision, *Redwater Energy Corporation (Re)*, found an operational conflict between the *Bankruptcy and Insolvency Act* and the AER's abandonment and reclamation powers when the licensee is insolvent, which was affirmed by a majority of the Alberta Court of Appeal, and has been appealed by the AER to the Supreme Court of Canada for final determination. In response to the decision, the AER issued interim rules to administer the liability management program and until the Government of Alberta can develop new regulatory measures to adequately address environmental liabilities. There remains a great deal of uncertainty as to what new regulatory measures will be developed by the provinces or in concert with the federal government, as the final ruling will become binding in all Canadian jurisdictions. See "*Industry Conditions – Regulatory Authorities and Environmental Regulation – Liability Management Rating Programs*".

The January 2018 LMR for Perpetual and its operating subsidiary POC, were 3.5 and 4.3 respectively.

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 which may require the Corporation to comply with GHG 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. 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 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. In addition, 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. 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 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*".

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 relative to the United States 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 and could negatively impact the market price of the Common Shares of the Corporation.

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, 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 current conditions in the oil and gas industry have negatively impacted the ability of oil and gas companies to access additional financing. 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 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 gas industry have negatively impacted the ability of oil and gas companies to access 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 such 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 Corporation's credit facility could result in restricted access to capital or being required to repay all amounts owing thereunder

The Corporation currently has a credit facility and the amount authorized thereunder is dependent on the borrowing base determined by its lenders. The Corporation is required to comply with covenants under its credit facility 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 the Corporation does not comply with these covenants, the Corporation's access to capital could be restricted or repayment could be required. Events beyond the Corporation's control may contribute to the failure of the Corporation to comply with such covenants. A failure to comply with covenants could result in default under the Corporation's credit facility, which could result in the Corporation being required to repay amounts owing thereunder. The acceleration of the Corporation's indebtedness under one agreement may permit acceleration of indebtedness under other agreements that contain cross default or cross-acceleration provisions. In addition, the Corporation's credit facility may impose operating and financial restrictions on the Corporation that could include restrictions on, the payment of dividends, repurchase or making of other distributions with respect to the Corporation's 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 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.

If the Corporation's lenders require repayment of all or portion of the amounts outstanding under its credit facilities for any reason, including for a default of a covenant or the reduction of a borrowing base, there is no certainty that the Corporation would be in a position to make such repayment. Even if the Corporation is able to obtain new financing in order to make any required repayment under its credit facilities, it may not be on commercially reasonable terms or terms that are acceptable to the Corporation. If the Corporation is unable to repay amounts owing under credit facilities, the lenders under the credit facility 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 of Drilling Equipment and Access

Restrictions to the availability of and access to drilling and completion equipment may impede the Corporation's exploration and development activities

Oil and natural gas exploration and development activities are dependent on the availability of drilling and related equipment (typically leased from third parties) as well as skilled personnel trained to use such equipment in the areas where such activities will be conducted. Demand for such limited equipment and skilled personnel, or access restrictions, may affect the availability of such equipment and skilled personnel to the Corporation and may delay exploration and development activities. Jurisdictions with conditions more attractive to oil and gas exploration and development may draw service equipment and man power away from Canadian jurisdictions in which the Company currently operates.

Diluent Supply

A decrease or restriction to diluents supply may increase the Corporation's operating costs

Heavy oil and bitumen are characterized by high specific gravity or weight and high viscosity or resistance to flow. Diluent is required to facilitate the transportation of heavy oil and bitumen. A shortfall in the supply of diluent may cause its price to increase thereby increasing the cost to transport heavy oil and bitumen to market and correspondingly increasing the Corporation's overall operating cost, decreasing its net revenues and negatively impacting the overall profitability of its heavy oil and bitumen projects.

Title to Assets

Defects in the title to the Corporation's properties may result in a financial loss

Although title reviews may be conducted prior to the purchase of oil and natural gas producing properties or the commencement of drilling wells, such reviews do not guarantee or certify that a defect in the chain of title will not arise. The actual interest of the Corporation in properties may accordingly vary from the Corporation's records. If a title defect does exist, it is possible that the Corporation may lose all or a portion of the properties to which the title defect relates, which may have a material adverse effect on the Corporation's business, financial condition, results of operations and prospects. There may be valid challenges to title or legislative changes, which affect the Corporation's title to the oil and natural gas properties the Corporation controls that could impair the Corporation's activities on them and result in a reduction of the revenue received by the Corporation.

Reserves Estimates

The Corporation's estimated proved and proved plus probable 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 quantities of oil, natural gas and natural gas liquids reserves and the future cash flows attributed to such reserves. The reserve and associated cash flow information set forth in this document are estimates only. Generally, estimates of economically recoverable oil and natural gas reserves 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 the properties;
- production rates;
- ultimate reserve recovery;
- timing and amount of capital expenditures;
- transportation and marketability of oil, NGL 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. 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, blow outs, leaks of sour natural 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 events throughout the world that cause disruptions in the supply of oil continuously affect 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 the parties in power, 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.

Eco-Terrorism Risks

The Corporation's properties may be subject to terrorist attack

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 is subject to reputational risk which may impact its operations, business and financial condition in the form of increased costs, reduced revenue and potential asset write offs. The growing movement to limit climate change has resulted in increased regulatory burdens, which have the effect of increasing the Corporation's compliance costs, potential for litigation or regulatory penalties and operational delays; a reduced number of institutional and public investors willing to fund or invest in the development of oil and gas properties or companies, which limits the Corporation's access to capital; and increased use of petroleum alternatives, which decreases the demand for oil and natural gas products, negatively impacting commodity prices and the value of the Corporation's assets. The Corporation's operations are also subject to the risk of personal injury which can negatively impact the Corporation ability to recruit and retain experienced staff and field employees.

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.

Changing Investor Sentiment

Changing investor sentiment towards the oil and 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, concerns of the impact of oil and gas operations on the environment, concerns of environmental damage relating to spills of petroleum products during transportation and concerns of indigenous rights, have affected certain investors' sentiments towards investing in the oil and 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 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 practices can involve significant costs and require a significant time commitment from the Board, management 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 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 Common Shares.

Any environmental damage, loss of life, injury or damage to property caused by the Corporation's operations could damage the Corporation's reputation in the areas in which the Corporation operates. Negative sentiment towards the Corporation could result in a lack of willingness of municipal authorities being willing to grant the necessary licenses or permits for the Corporation to operate its business and in residents in the areas where the Corporation is doing business opposing further operations in the area by the Corporation. 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 consultant to operate its business. Further, the Corporation's reputation could be affected by actions and activities of other corporations operating in the oil and gas industry, over which the Corporation has no control. In addition, environmental damage, loss of life, injury or damage to property caused by the Corporation's operations caused by the Corporation's operations 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 Common Shares

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. The inability of the Corporation to deal with this growth 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 its outstanding shares. Payment of dividends in the future will be dependent on, among other things, the cash flow, results of operations and financial condition of the Corporation, the need for funds to finance ongoing operations and other considerations, as the Board of Directors of the Corporation 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, relating 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 as a result, 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.

Intellectual Property Litigation

Unauthorized use of intellectual property may cause the Corporation to engage in or be the subject of litigation

Due to the rapid development of oil and gas technology, in the normal course of the Corporation's operations, the Corporation may become involved in, named as a party to, or be the subject of, various legal proceedings in which it is alleged that the Corporation has infringed the intellectual property rights of others or commenced lawsuits against others who the Corporation believes are infringing upon its intellectual property rights. The Corporation's involvement in intellectual property litigation could result in significant expense, adversely affecting the development of its assets or intellectual property or diverting the efforts of its technical and management personnel, whether or not such litigation is resolved in the Corporation's favour. In the event of an adverse outcome as a defendant in any such litigation, the Corporation may, among other things, be required to: (a) pay substantial damages; cease the development, use, sale or importation of processes that infringe upon other patented intellectual property; (b) expend significant resources to develop or acquire non-infringing intellectual property; (c) discontinue processes incorporating infringing technology; or (d) obtain licences to the infringing intellectual property. However, the Corporation may not be successful in such development or acquisition or such licences may not be available on reasonable terms. Any such development, acquisition or licence could require the expenditure of substantial time and other resources and could have a material adverse effect on the Corporation's business and financial results.

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 the business, operations or affairs of the Corporation. 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 *Income Tax Act* (Canada) 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 re-characterization 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 swampy terrain. 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 and of joint venture partners may affect a joint venture partner's willingness to participate in the Corporation's ongoing capital program, potentially delaying the program and the results of such program until 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 portion of any money owing from such parties. Any of these factors could materially adversely affect the Corporation's financial and operational results.

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 of 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. The loss of the services of such key personnel may 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 for the Corporation. 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 its 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 applies technical and process controls in line with industry-accepted standards to protect our information assets and systems; 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. 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.

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 are currently focused primarily on oil and 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, may acquire different energy related assets and as a result may face unexpected risks or alternatively, significantly increase the Corporation's exposure to one or more existing risk factors, 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 Risks

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

ABBREVIATIONS

Natural Gas		Oil and Liquids	
Mcf	thousand cubic feet	bbl	barrels
Mcfe	thousand cubic feet equivalent	Mbbl	thousand barrels
MMcf	million cubic feet	MMbbl	million barrels
MMcfe	million cubic feet equivalent	bbl/d	barrels per day
Bcf	billion cubic feet	m^3	cubic metres
Bcfe	billion cubic feet equivalent	boe	barrel of oil equivalent
Mcf/d	thousand cubic feet per day	Mboe	thousand barrels of oil equivalent
MMcf/d	million cubic feet per day	MMboe	million barrels of oil equivalent
Mcfe/d	thousand cubic feet equivalent per day	boe/d	barrels of oil equivalent per day
m^3	cubic metres		
MMbtu	million British thermal units		
GJ	gigajoule		

The Corporation reports production and reserves in either Mcf equivalent (Mcfe) or barrels of oil equivalent (boe). Mcfe and boe may be misleading, particularly if used in isolation. In accordance with NI 51-101, a Mcfe and boe conversion ratio for crude oil and natural gas of 1 bbl: 6 Mcf has been used, which is based on an energy equivalency conversion method primarily applicable at the burner tip and does not necessarily represent a value equivalency at the wellhead. Given that the value ratio based on the current price of crude oil as compared to natural gas is significantly different from the energy equivalency of 6:1, utilizing a conversion on a 6:1 basis may be misleading as an indication of value.

CONVERSIONS

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

To Convert From	To	Multiply By
Mcf	cubic metres	28.174
cubic metres	cubic feet	35.494
bbl	cubic metres	0.159
cubic metres	bbl	6.293
feet	metres	0.305
metres	feet	3.281
miles	kilometres	1.609
kilometres	miles	0.621
acres	hectares	0.405
hectares	acres	2.471
gigajoules	MMbtu or Mcf	0.950

FORWARD-LOOKING INFORMATION AND STATEMENTS

Certain information and statements contained in this Annual Information Form constitute forward-looking information and statements within the meaning of applicable securities laws. This information and these statements relate to future events or to Perpetual's future performance. All statements other than statements of historical fact may be forward-looking statements. The use of any of the words "anticipate", "continue", "estimate", "expect", "forecast", "may", "will", "project", "should", "believe", "outlook", "guidance", "objective", "plans", "intends", "targeting", "could", "potential", "outlook", "strategy" and any similar expressions are intended to identify forward-looking information and statements.

In particular, but without limiting the foregoing, this Annual Information Form contains forward-looking information and statements pertaining to the following:

- the quantity and recoverability of the Corporation's reserves;
- the timing and amount of future production;
- future commodity prices as well as supply and demand for natural gas and oil;
- the existence, operations and strategy of the Corporation's commodity price risk management program;
- the approximate amount of forward sales and hedging to be employed, and the value of financial forward natural gas contracts;
- funds flow sensitivities to commodity price, production, foreign exchange and interest rate changes;
- operating, general and administrative, and other expenses;
- amount of future abandonment and reclamation costs, decommissioning and environmental obligations;
- the use of exploration and development activity, prudent asset management, and acquisitions to sustain, replace or add to reserves and production or expand the Corporation's asset base;
- the Corporation's acquisition strategy and the existence of acquisition opportunities, the criteria to be considered in connection therewith and the benefits to be derived therefrom;
- the Corporation's s divestiture strategy;
- the Corporation's commodity diversification and asset base transformation strategy;
- the Corporation's business plan;
- future growth in the Corporation's funds flow;
- the Corporation's ability to benefit from the combination of growth opportunities and the ability to grow through the capital markets;
- expected book value and related tax value of the Corporation's assets and prospect inventory and estimates of net asset value;
- ability to fund exploration and development;
- expectations regarding the Corporation's access to capital to fund its acquisition, exploration and development activities;
- deferred income tax and its effect on funds flow;
- intentions with respect to preservation of tax pools and taxes payable by the Corporation;
- funding of and anticipated results from capital expenditure programs;
- renewal of and borrowing costs associated with the credit facility;
- future debt levels, financial capacity, liquidity and capital resources;
- future contractual commitments;
- drilling, completion, facilities and construction plans;
- future drilling, workovers and recompletions estimated in Perpetual's prospect inventory;
- the impact of Canadian federal and provincial governmental regulation on the Corporation relative to other issuers;
- Crown royalty rates;
- the Corporation's treatment under governmental regulatory regimes;
- business strategies and plans of management, including future changes in the structure of business operations; and
- reliance on third parties in the industry to develop and expand the Corporation's assets and operations.

The forward-looking information and statements contained in this Annual Information Form reflect several material factors and expectations and assumptions of the Corporation including, without limitation, that Perpetual will conduct its operations in a manner consistent with its expectations and, where applicable, consistent with past practice; the general continuance of current or, where applicable, assumed industry conditions; the continuance of existing, and in certain circumstances, the implementation of proposed tax, royalty and regulatory regimes; the

ability of Perpetual to obtain equipment, services, and supplies in a timely manner to carry out its activities; the accuracy of the estimates of Perpetual's reserve volumes; the timely receipt of required regulatory approvals; certain commodity price and other cost assumptions; the ability to secure adequate product transportation; the continued availability of adequate debt and/or equity financing and funds flow to fund the Corporation's capital and operating requirements as needed; and the extent of Perpetual's liabilities.

Perpetual believes the material factors, expectations and assumptions reflected in the forward-looking information and statements are reasonable but no assurance can be given that these factors, expectations and assumptions will prove to be correct. The forward-looking information and statements included in this Annual Information Form are not guarantees of future performance and should not be unduly relied upon. Such information and 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 information or statements including, without limitation:

- volatility in market prices for oil, natural gas, NGL, power and other products;
- supply and demand regarding Perpetual's products;
- risks inherent in Perpetual's operations, such as production declines, unexpected results, geological, technical, or drilling and process problems;
- unanticipated operating events that can reduce production or cause production to be shut-in or delayed, including plant upsets, transportation bottlenecks and market disruptions;
- unanticipated well or facility operating performance that impacts storage operations or working gas capacity;
- changes in exploration or development plans by Perpetual or by third party operators of Perpetual's properties;
- reliance on industry partners;
- uncertainties or inaccuracies associated with estimating reserves and resource volumes;
- competition for, among other things, capital, acquisitions of reserves, undeveloped lands, skilled personnel, equipment for drilling, completions, facilities and pipeline construction and maintenance;
- increased service and operational costs;
- incorrect assessments of the value of acquisitions;
- increased debt levels or debt service requirements;
- industry conditions including fluctuations in the price of natural gas and related commodities;
- royalties payable in respect of Perpetual's production;
- governmental regulation of the oil and gas industry, including environmental regulation;
- fluctuation in foreign exchange or interest rates;
- the need to obtain required approvals from regulatory authorities;
- changes in laws applicable to the Corporation, royalty rates, or other regulatory matters;
- general economic conditions in Canada, the United States and globally;
- stock market volatility and market valuations;
- limited, unfavourable, or a lack of access to capital markets; and
- certain other risks detailed from time to time in Perpetual's public disclosure documents including, without limitation, those risks and contingencies described above and under **"Risk Factors"** in this Annual Information Form. The foregoing list of risk factors should not be considered exhaustive.

The forward-looking information and statements contained in this Annual Information Form speak only as of the date of this Annual Information Form, and none of the Corporation or its subsidiaries assumes any obligation to publicly update or revise them to reflect new events or circumstances, unless expressly required to do so by applicable securities laws.

ADDITIONAL INFORMATION

Additional information relating to the Corporation may be found on SEDAR at www.sedar.com.

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Corporation's securities and securities authorized for issuance under equity compensation plans is contained in the Corporation's information circular for the Corporation's most recent annual meeting of security holders that involved the election of directors.

Additional financial information is contained in the Corporation's financial statements and the related management's discussion and analysis for the Corporation's most recently completed financial year.

APPENDIX A

REPORT OF MANAGEMENT AND DIRECTORS ON OIL AND GAS DISCLOSURE IN ACCORDANCE WITH FORM 51-101F3

Management of Perpetual Energy Inc. (the "**Corporation**") is responsible for the preparation and disclosure of information with respect to the Corporation's oil and gas activities in accordance with securities regulatory requirements. This information includes reserves data.

McDaniel & Associates Consultants Ltd., an independent qualified reserves evaluator, has evaluated the Corporation's reserves data. The report of the independent qualified reserves evaluator is presented below.

The Reserves Committee of the Board of Directors of the Corporation has:

(a) reviewed the Corporation's procedures for providing information to the independent qualified reserves evaluator;

(b) met with the independent qualified reserves evaluator to determine whether any restrictions affected the ability of the independent qualified reserves evaluator to report without reservation; and

(c) reviewed the reserves data with management and the independent qualified reserves evaluator.

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

(a) the content and filing with securities regulatory authorities of Form 51-101F1 containing reserves data and other oil and gas information;

(b) the filing of Form 51-102F2 which is the report of the independent qualified reserves evaluator on the reserves data, contingent resources data, or prospective resources data; and

(c) the content and filing of this report.

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

DATED as of this 22nd day of February, 2018.

"*signed by Susan L. Riddell Rose*"
Susan L. Riddell Rose
President and Chief Executive Officer

"*signed by W. Mark Schweitzer*"
W. Mark Schweitzer
Vice President, Finance and Chief Financial Officer

"*signed by Robert A. Maitland*"
Robert A. Maitland
Director

"*signed by Donald J. Nelson*"
Donald J. Nelson
Director, Chairman of the Reserves Committee

APPENDIX B

REPORT ON RESERVES DATA BY MCDANIEL & ASSOCIATES CONSULTANTS LTD.
IN ACCORDANCE WITH FORM 51-101F2
MCDANIEL & ASSOCIATES CONSULTANTS LTD.

To the Board of Directors of Perpetual Energy Inc. (the "**Company**"):

1. We have evaluated the Company's reserves data as at December 31, 2017. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2017 estimated using forecast prices and costs.

2. The reserves data are the responsibility of the Company's management. Our responsibility is to express an opinion on the reserves data based on our evaluation.

3. We carried out our evaluation in accordance with standards set out in the Canadian Oil and Gas Evaluation Handbook as amended from time to time (the "**COGE Handbook**") maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter).

4. Those standards require that we plan and perform an evaluation to obtain reasonable assurance as to whether the reserves data are free of material misstatement. An evaluation also includes assessing whether the reserves data are in accordance with principles and definitions presented in the COGE Handbook.

5. The following table shows the net present value of future net revenue (before deduction of income taxes) attributed to proved plus probable reserves, estimated using forecast prices and costs and calculated using a discount rate of 10 percent, included in the reserves data of the Company evaluated for the year ended December 31, 2017, and identifies the respective portions thereof that we have evaluated and reported on to the Company's Management:

			Net Present Value of Future Net Revenue $M (before income taxes, 10% discount rate)			
Independent Qualified Reserves Evaluator	**Effective Date of Evaluation Report**	**Location of Reserves**	**Audited**	**Evaluated**	**Reviewed**	**Total**
McDaniel & Associates	December 31, 2017	Canada	–	409,926	–	409,926

6. In our opinion, the reserves data respectively evaluated and reviewed by us have, in all material respects, been determined and are in accordance with the COGE Handbook, consistently applied. We express no opinion on the reserves data that we reviewed but did not audit or evaluate.

7. We have no responsibility to update our report referred to in paragraph 5 for events and circumstances occurring after the effective date of our report.

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

Executed as to our report referred to above:

MCDANIEL & ASSOCIATES CONSULTANTS LTD.

"*signed by P. A. Welch*"
P. A. Welch, P. Eng.
President & Managing Director

Calgary, Alberta
February 6, 2018

APPENDIX C

AUDIT COMMITTEE MANDATE

The Audit Committee:

- must review and, if appropriate, recommend to the Board the approval of the financial statements, MD&A and annual and interim earnings press releases prior to this information being publicly disclosed;
- must annually review this written charter (setting out the Audit Committee's mandate and responsibilities) and recommend any changes to the Compensation and Corporate Governance Committee;
- supply for the purposes of this Manual, in consultation with corporate counsel, a list of the laws, rules and regulations that pertain to the operation of the Audit Committee;
- must recommend to the Board the nomination, appointment, retention and compensation of external auditors ("**Auditors**");
- must oversee the work of Auditors, which oversight may include approval of the Auditor's audit plan, planning report, annual engagement letter, or services related thereto, subject to ratification by the Board
- must review and approve all non-audit services provided by the Auditors prior to the performance of those services;
- communicates directly with the Auditors who must report directly to the Audit Committee;
- must be satisfied that adequate procedures are in place for the review of Perpetual's public disclosure of financial information extracted or derived from the financial statements, and must periodically assess the adequacies of those procedures;
- must establish procedures for the receipt, retention and treatment of complaints regarding accounting, internal accounting controls, or auditing matters, and for the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters;
- must review and approve Perpetual's hiring policies regarding former and existing partners and employees of past or present Auditors;
- reviews programs and policies regarding the maintenance and effectiveness of disclosure controls and internal controls over the Corporation's accounting and financial reporting systems;
- reviews insurance coverage and Directors' and Officers' liability insurance; and,
- liaises with the reserves committee ("**Reserves Committee**") on matters relating to reserves valuations which impact the financial statements of Perpetual.

Purpose

The Audit Committee's purpose is to provide assistance to the Board in fulfilling its legal, regulatory and fiduciary obligations with respect to financial accounting, internal control processes, continuous public disclosure, the independent audit function, non-audit services provided by Auditors and such other related matters as may be delegated by the Board of Directors.

Composition, Procedures and Organization

1. The Audit Committee will be comprised of three or more Directors as determined from time to time by resolution of the Board.

2. Each member of the Audit Committee must be independent as defined in NI 52-110 and as such must be free from any material relationship that may interfere with the exercise of his or her independent judgment as a member of the Audit Committee.

3. Consistent with the appointment of other Board committees, the members of the Audit Committee will be appointed by the Board at the first meeting of the Board following each AGM or at such other time as may be determined by the Board.

4. The Committee will designate the Chairman of the Audit Committee by majority vote. The presence in person or by telephone of a majority of the Audit Committee's members constitutes a quorum for any meeting.

5. All actions of the Audit Committee will require a vote of the majority of its members present at a meeting of such committee at which a quorum is present.

6. All members of the Audit Committee must be financially literate at the time of their appointment or have become financially literate within a reasonable period of time after such appointment. NI 52-110 sets out that an individual is "financially literate" if he or she has the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by Perpetual's financial statements.

Accountability and Reporting

The Audit Committee is accountable to the Board. The Audit Committee must provide the Board with a summary of all meetings and its recommendations together with a copy of the minutes of each such meeting. If applicable, the Chairman will provide oral reports as requested.

All information reviewed and discussed by the Audit Committee at any meeting must be retained and made available for examination by the Board. The Audit Committee will review its mandate annually, and will forward to the Compensation and Corporate Governance Committee any recommended alterations to that mandate.

Meetings

The Committee will meet with such frequency and at such intervals as it determines is necessary to carry out its duties and responsibilities.

The Audit Committee will meet to review and recommend for approval to the Board of Directors the interim and year-end financial statements and MD&A; related financial public disclosure and regulatory filings including the Annual Information Form; other continuous disclosure documentation ("Continuous Disclosure Documents") as described in NI 52-101 (which is incorporated herein by reference); and to report to the Board on same. In addition to regularly scheduled quarterly meetings, the Audit Committee may meet on other occasions with the Auditors in order to be advised of current practices in the industry and to discuss and review other matters including the annual work plans, processes and procedures. The Audit Committee must meet at least quarterly with the Auditors in the absence of Perpetual's management and Officers and employees to discuss any matters that the Committee or a committee member believes should be discussed privately.

The Chairman of the Audit Committee will appoint a Director, Officer or employee of Perpetual to act as secretary for the purposes of recording the minutes of each meeting.

Responsibilities

The Audit Committee must:

- review and approve the Audit Committee Mandate annually;
- review and recommend to the Board the appointment, termination and retention of, and the compensation to be paid to, the Auditors;
- evaluate the performance of the Auditors;
- review and consider the Auditors' audit plan and annual engagement letter including the proposed fees and the proposed work plan;
- consider and make recommendations to the Board or otherwise pre-approve, all non-audit services provided by the Auditors to Perpetual or its subsidiaries;
- oversee the work and the performance of the Auditors, review the independence of the Auditors and report to the Board on these matters;
- review the annual and quarterly financial statements, MD&A and financial press releases, Annual Information Form and other related Continuous Disclosure Documents as appropriate, prior to their public disclosure;
- review the Auditors' report on the annual audited financial statements and the Auditor's review letters on interim financial statements;
- provide oral or written reports to the Board when necessary;
- resolve disagreements between management and the Auditors regarding financial reporting;
- receive periodic certificates and reports from management with respect to compliance with financial, regulatory, taxation and continuous disclosure requirements, and satisfy itself (a) that adequate procedures are in place to ensure timely and full public disclosure of Continuous Disclosure Documents; and, (b) that a system of internal controls over financial reporting has been implemented and is being maintained, in accordance with both the Disclosure Policy and the Management Responsibility For Internal Control Policy; and additionally, must consider whether any identified deficiencies in internal controls are significant or are material weaknesses;
- meet with the Auditors, without management being present, at each time the interim and financial statements are being considered, to ensure that no management restrictions have been placed on the scope of the Auditors' work and to discuss the working relationship between the Auditors and management and other matters that the Audit Committee or the Auditors may wish to raise;
- review and monitor the implementation and adequacy of disclosure policies;
- review insurance coverage including Directors' and Officers' liability insurance;
- be notified in writing within three business days of any fraud, litigation or regulatory investigation which, in the opinion of the Corporation's management, is material. Confirmation of receipt of such notification by each member of the Audit Committee will additionally be required. Any fraud, material litigation or regulatory investigation not reported as outlined above will be reported quarterly to the Board of Directors at the February, May, August, and November meetings immediately following the discovery of such occurrence;
- review and monitor the implementation and adequacy of hedging policies and controls, with reference to the Corporation's Hedging and Risk Management Policy, which is attached to this Manual in Section 7;
- review compliance with applicable laws, regulations and policies;
- be advised of and review the results of any internal audits of Perpetual and report on same to the Board;

- establish procedures for:
  - (a) the receipt, retention and treatment of complaints received by Perpetual regarding accounting, internal accounting controls, or auditing matters; and
  - (b) the confidential, anonymous submission by employees of the issuer of concerns regarding questionable accounting or auditing matters; (together with (a), a "Whistleblower Process")
- ensure that Perpetual management regularly advises employees of the existence of a Whistleblower Process;
- receive regular reports respecting complaints made under the Whistleblower Process;
- inform the Auditors of whether the Audit Committee has knowledge of any actual, suspected or alleged fraud affecting Perpetual, including complaints regarding financial reporting and confidential submissions by employees;
- review and validate Perpetual management's annual review of fraud risk assessment;
- review and approve Perpetual's hiring policies regarding partners, employees and former partners and employees of the present and former Auditor of the issuer; and
- monitor the selection and application of proper accounting principles and practices and to review the status of all relevant financial and related fiduciary aspects of Perpetual.