



**ANNUAL INFORMATION FORM  
FOR THE FINANCIAL YEAR ENDED DECEMBER 31, 2019  
Dated April 29, 2020**

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## GLOSSARY

Certain terms and abbreviations used in this Annual Information Form are defined below:

“**ABCA**” means the *Business Corporations Act (Alberta)*, as amended from time to time, including the regulations promulgated thereunder.

“**affiliate**” or “**associate**” when used to indicate a relationship with a person or company, has the meaning set forth in the *Securities Act (Alberta)*.

“**AIF**” means this Annual Information Form dated April 29, 2020 for the financial year ended December 31, 2019.

“**Bigoray Assets**” means the interest held by Pulse in certain oil and gas properties located in the Bigoray area of Alberta, Canada.

“**Bigoray Purchase**” means Pulse’s acquisition of an interest in the Bigoray Assets effective October 31, 2016.

“**Board**” or “**Board of Directors**” means the board of directors of Pulse, as constituted from time to time, including where applicable, any committee thereof.

“**COGE Handbook**” means the Canadian Oil and Gas Evaluation Handbook maintained by the Society of Petroleum Evaluation Engineers (Calgary Chapter), as amended from time to time.

“**Common Shares**” means the common shares in the capital of Pulse.

“**Corporation**” or “**Pulse**” means Pulse Oil Corp., formerly known as Wolfpack Capital Corp., formed under the ABCA.

“**CPC**” means a capital pool company under Policy 2.4 of the TSXV corporate finance manual.

“**Crimson**” means, collectively, Crimson Energy Ltd. and Crimson Oil & Gas Ltd.

“**Crimson Agreement**” means the asset purchase agreement between Pulse and Crimson dated September 1, 2016, as amended, in connection with the purchase by Pulse of the Bigoray Assets

“**EOR**” means enhanced oil recovery.

“**HRC (NZ)**” means HRC (NZ) Limited, incorporated under the laws of New Zealand on April 14, 2015. HRC (NZ) is a 100% owned subsidiary of Pulse OpCo.

“**Hydrate**” or “**HRC**” means Pulse OpCo until the completion of the Wolfpack Acquisition.

“**IFRS**” or “**GAAP**” means International Financial Reporting Standards as issued by the International Accounting Standards Board.

“**McDaniel**” means McDaniel & Associates Consultants Ltd., independent petroleum consultants.

“**NI 51-101**” means National Instrument 51-101 – *Standards of Disclosure for Oil and Gas Activities* of the Canadian Securities Administrators.

“**NI 51-102**” means National Instrument 51-102 – *Continuous Disclosure Obligations* of the Canadian Securities Administrators.

“**Pulse OpCo**” means Pulse Oil Operating Corp. (formerly Hydrate Resources Corp.), a 100% owned subsidiary of Pulse formed under the laws of British Columbia.

“**QT**” means a Qualifying Transaction under Policy 2.4 of the TSXV.

“**Queenstown Assets**” means the oil and gas property interests owned by Pulse located in the Queenstown area of Alberta, Canada.

“**Rolling Hills**” means Rolling Hills Energy Ltd.

“**Rolling Hills Agreement**” means the asset sale agreement between Pulse and Rolling Hills dated April 3, 2017 in connection with the purchase by Pulse of the Queenstown Assets.

“**Sproule**” means Sproule Associates Limited.

“**Tax Act**” means the *Income Tax Act* (Canada), as amended from time to time, including the regulations promulgated thereunder.

“**TSXV**” means the TSX Venture Exchange.

“**Wolfpack**” means Pulse until the completion of the Wolfpack Acquisition.

“**Wolfpack Acquisition**” means the reverse take-over of Pulse (then named Wolfpack Capital Corp.) by the former shareholders of Pulse OpCo (then named Hydrate Resources Corp.), upon the completion of which Pulse OpCo became a 100% owned subsidiary of Pulse.

“**2017 Warrants**” means the warrants issued on June 13, 2017 with an expiry of June 13, 2019.

“**2018 Warrants**” means the warrants issued on November 20, 2018 with an expiry of November 20, 2020.

## CONVENTIONS

Unless otherwise indicated, references herein to “\$” or “dollars” are to Canadian dollars. All financial information with respect to Pulse has been presented in Canadian dollars in accordance with IFRS. The information in this AIF is stated as at December 31, 2019, unless otherwise indicated.

## ABBREVIATIONS

|         | <b>Oil and Natural Gas Liquids</b> |       | <b>Natural Gas</b>            |
|---------|------------------------------------|-------|-------------------------------|
| Bbl     | Barrel                             | Mcf   | thousand cubic feet           |
| Bbls    | Barrels                            | Mmcf  | million cubic feet            |
| Mbbl    | thousand barrels                   | Mcf/d | thousand cubic feet per day   |
| Bbls/d  | barrels per day                    | MMBTU | million British Thermal Units |
| Mbbls/d | thousand barrels per day           | NGLs  | natural gas liquids           |

## Other

|              |  |
|--------------|--|
| AECO         | the physical storage and trading hub for natural gas on the TransCanada Alberta Transmission System (NOVA), that is the Canadian benchmark price for Canadian natural gas  |
| API          | an indication of the specific gravity of crude oil measured on the American Petroleum Institute gravity scale. Crude oil with a relative density greater than 31.1° API gravity or higher is generally referred to as light crude oil            |
| BOE          | barrel of oil equivalent of natural gas and crude oil on the basis of 1 BOE for 6 (unless otherwise stated) Mcf of natural gas (this conversion factor is an industry accepted norm and is not based on either energy content or current prices) |
| BOE/D        | barrel of oil equivalent per day   |
| m3           | cubic meters   |
| EPEA         | <i>Environmental Protection and Enhancement Act</i> (Alberta)  |
| MBOE         | 1,000 barrels of oil equivalent  |
| NEB          | National Energy Board of Canada  |
| WTI          | West Texas Intermediate, the reference price paid in U.S. dollars at Cushing, Oklahoma for crude oil of standard grade   |
| \$000 or M\$ | thousands of dollars   |

## CONVERSION

The following table sets forth certain standard conversions from Standard Imperial Units to 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      |
| Bbls            | Cubic metres | 0.159       |
| Cubic metres    | Bbls         | 6.290       |
| Feet            | Metres       | 0.305       |
| Metres          | Feet         | 3.281       |
| Miles           | Kilometres   | 1.609       |
| Kilometres      | Miles        | 0.621       |
| Acres           | Hectares     | 0.405       |
| Hectares        | Acres        | 2.471       |

## ADDITIONAL INFORMATION CONCERNING RESERVES DATA

### Reserve Categories

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from known accumulations, from a given date forward, based on:

- (a) analysis of drilling, geological, geophysical and engineering data;
- (b) the use of established technology; and
- (c) specified economic conditions, specifically the forecast prices and costs.

Reserves are classified according to the degree of certainty associated with the estimates, as follows:

(a) proved reserves are those reserves that can be estimated with a high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves; and

(b) probable reserves are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved plus probable reserves.

Other criteria that must also be met for the categorization of reserves are provided in the COGE Handbook.

Each of the proved reserve and probable reserve categories may be further divided into developed and undeveloped categories:

(a) developed reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (for example, when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing:

(i) developed producing reserves are those reserves that are expected to be recovered from completion intervals open at the time of the estimate. These reserves may be currently producing or, if shut-in, they must have previously been on production, and the date of resumption of production must be known with reasonable certainty; and

(ii) developed non-producing reserves are those reserves that either have not been on production, or have previously been on production, but are shut-in, and the date of resumption of production is unknown; and

(b) undeveloped reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (for example, when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable) to which they are assigned.

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

### **Levels of Certainty for Reported Reserves**

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

(a) at least a 90% probability that the quantities actually recovered will equal or exceed the estimated proved reserves; and

(b) at least a 50% probability that the quantities actually recovered will equal or exceed the sum of the estimated proved plus probable reserves.

A quantitative measure of the certainty levels pertaining to estimates prepared for the various reserves categories is desirable to provide a clearer understanding of the associated risks and

uncertainties. However, the majority of reserves estimates will be prepared using deterministic methods that do not provide a mathematically derived quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

Additional clarification of certainty levels associated with reserves estimates and the effect of aggregation is provided in the COGE Handbook.

## **SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS**

Certain statements contained in this AIF may constitute forward-looking statements and forward-looking information as such terms are defined under applicable Canadian Securities legislation. These statements relate to future events or Pulse's future performance. All statements other than statements of historical fact are intended to identify forward-looking statements. Forward-looking statements are often, but not always, identified by the use of words such as "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "predict", "potential", "intend", "could", "might", "should", "believe" and similar expressions. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking statements. No assurance can be given that these expectations will prove to be correct and such forward-looking statements included in this AIF should not be unduly relied upon by readers.

Forward-looking statements or information in this AIF include, but are not limited to, the following:

In particular, this AIF contains forward-looking statements pertaining to the following:

- future revenues and costs (including royalties) and operating, transportation, general, administrative and other expenses, and revenues and costs per commodity unit;
- recovery factors on expected drilling and optimization operations of Pulse's properties;
- the performance characteristics of Pulse's oil and natural gas properties, including oil and natural gas production estimates and targets;
- well completions and the timing of Completion;
- productive capacity of Pulse's wells, anticipated or expected production rates and anticipated dates of commencement of production and timing of results from Pulse's wells;
- the size of Pulse's oil and natural gas reserves and anticipated future cash flows;
- reserves;
- expectations regarding future development and growth prospects;
- ability to meet current and future obligations;
- expectations regarding future sources of funding for capital programs and future availability of such sources;
- expectations regarding future asset acquisitions or dispositions;

- future abandonment, reclamation and decommissioning costs;
- future tax liabilities and future use of tax pools and losses;
- market prices and world-wide supply and demand for petroleum products;
- future exploration and development plans;
- expectations regarding Pulse's permits, including expectations in respect of the grand and relinquishment of permits and the expiry of such permits;
- Pulse's treatment under governmental regulatory regimes and tax laws;
- Pulse's ability to obtain financing on acceptable terms or at all; and
- currency, exchange and interest rates.

All forward-looking statements in this AIF are based on management's reasonable beliefs, intentions and expectations with respect to future events as of the date of this AIF and are subject to certain risks, uncertainties and assumptions. With respect to forward-looking statements contained in this AIF, Pulse has made assumptions regarding, among other things:

- that there will be no adverse changes to the legislative and regulatory environments in the jurisdictions where Pulse carries on business or has operations and any other jurisdictions in which Pulse may conduct its business in the future;
- oil and natural gas production levels remain within the expectations of management;
- the success of Pulse's operations and exploration and development activities;
- that there will be no adverse changes to prevailing climatic conditions, royalty regimes, commodity prices and exchange and interest rates;
- the impact of increasing competition in the oil and gas production industry;
- the availability of skilled labour, services and drilling and related equipment to Pulse;
- the timing and amount of Pulse's capital expenditures;
- the conditions in general economic and financial markets, including that oil and gas prices do not materially decline;
- Pulse's royalty rates and future operating costs;
- access to market for Pulse's oil and gas production; and
- Pulse's ability to obtain additional financing on satisfactory terms.

Pulse's actual results could differ materially from those anticipated in forward-looking statements as a result of the risk factors set forth below and elsewhere in this AIF under "Risk Factors". These factors include but are not limited to:

- volatility in market prices for oil and natural gas and exchange and interest rates;
- availability of sufficient financial resources to fund Pulse's capital expenditures;

- risks related to the market price of Pulse's securities and stock market volatility;
- risks inherent in marketing operations, including credit risk;
- pipeline and third party facility capacity constraints and access to sales markets;
- the risks inherent in the oil and gas industry, such as operational risks and market demand;
- uncertainty that expenditures on exploration and development activities will result in oil or natural gas in commercial quantities;
- uncertainty in amounts and timing of royalty payments;
- actions taken by governmental authorities, including increases in taxes and changes in government regulations and incentive programs;
- risks and uncertainties involving geology of oil and natural gas deposits, including encountering unexpected formations or pressures, premature decline of reservoirs and the invasion of water into producing formations;
- uncertainties inherent in estimating quantities of oil and natural gas reserves and cash flows to be derived therefrom;
- uncertainties associated with estimating oil and natural gas reserves and reserves life;
- the ability of management to execute its business plan;
- governmental regulation of the oil and gas industry, including environmental regulation;
- geological, technical, drilling and processing problems;
- potential delays or changes in plans with respect to exploration or development projects or capital expenditures;
- unanticipated operating events which could reduce production or cause production to be shut-in or delayed;
- hazards such as fire, explosion, blowouts, cratering, and spills, each of which could result in substantial damage to wells, production facilities, other property and the environment or in personal injury;
- the inability to add production and reserves through development and exploration activities;
- uncertainties in regard to the timing of exploration and development activities;
- uncertainties in regard to estimates and projections relating to production, cost and expense;
- changes in general economic, market and business conditions in Canada and globally;

- competition for, among other things, capital, acquisition of reserves, unproved land and skilled personnel.
- changes in costs related to new technologies;
- failure to obtain industry partner and other third party consents and approvals, as and when required;
- changes to asset retirement obligations that may impact security that may need to be posted;
- the possibility that government policies or laws, including laws and regulations related to the environment, may change or governmental approvals may be delayed or withheld; and
- failure to realize the anticipated benefits of acquisitions and dispositions;

In addition, this AIF may contain forward-looking statements attributed to third party industry sources.

Statements relating to “reserves” are deemed to be forward-looking statements or information, as they involve the implied assessment, based on certain estimates and assumptions, that the resources and reserves described can be profitable in the future. There are numerous uncertainties inherent in estimating quantities of reserves, including many factors beyond the control of Pulse. The reserve data included herein represents estimates only. In general, estimates of economically recoverable oil and natural gas reserves and the future net cash flows therefrom are based upon a number of variable factors and assumptions, such as historical production from the properties, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary considerably from actual results. All such estimates are to some degree speculative and classifications of reserves are only attempts to define the degree of speculation involved. For those reasons, estimates of the economically recoverable oil and natural gas reserves attributable to any particular group of properties and classification of such reserves based on risk of recovery and estimates of future net revenues expected therefrom, prepared by different engineers or by the same engineers at different times, may vary substantially. The actual production, revenues, taxes and development and operating expenditures of Pulse with respect to these reserves will vary from such estimates, and such variances could be material.

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

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

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

Readers are cautioned that the foregoing lists of factors are not exhaustive. The forward-looking statements contained herein are made as of the date hereof and are expressly qualified by this cautionary statement. Except as required by applicable Canadian securities laws, Pulse does not undertake any obligation to publicly update or revise any forward-looking statements, nor disclose any difference between Pulse's actual results and those reflected in the statements. Readers should also carefully consider the matters discussed under the heading "*Risk Factors*" below.

### Caution Respecting BOE

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

### Non-IFRS Measures

Certain financial measures in this document do not have a standardized meaning as prescribed by IFRS and are therefore considered non-IFRS measures. These measures may not be comparable to similar measures presented by other issuers. These measures have been described and presented in order to provide readers with additional measures for analyzing Pulse's ability to generate funds to finance its operations and information regarding its liquidity. The additional information should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS.

The term "netback" in this document is not a recognized measure under IFRS. Management believes that in addition to net losses and cash flow from (used in) operating activities as defined by IFRS, these terms are useful supplemental measures to evaluate operating performance. Users are cautioned however, that these measures should not be construed as an alternative to net losses or cash flow from (used in) operating activities determined in accordance with IFRS as an indication of Pulse's performance.

## CORPORATE STRUCTURE

Pulse's full name is "Pulse Oil Corp.". Pulse's registered and records office is located at 1700, 10175 – 101 Street NW, Edmonton, Alberta, T5J 0H3, and its head office is located at Suite 500, 666 Burrard Street, Vancouver, British Columbia, V6C 3P6.

The Corporation was incorporated under the ABCA on September 17, 2012 under the name "Wolfpack Capital Corp.". On August 28, 2013, the Common Shares were listed and began trading on the TSXV, as a CPC, under the symbol "WLP.P".

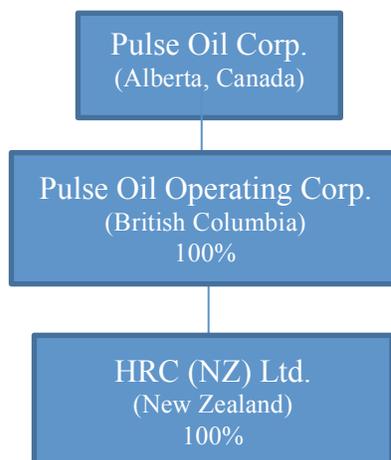
On October 20, 2016, as a result of the Corporation not being able to complete a QT within the time period prescribed by the TSXV, the listing of the Corporation's shares was transferred to the NEX board of the TSXV at which time the Corporation's symbol changed from WLP.P to WLP.H. In addition, as required under the TSXV policy, an aggregate of 1,000,000 shares of the Corporation that were subject to escrow and held by the Corporation's officers and directors, were cancelled.

On November 30, 2016, the Corporation changed its name to Pulse Oil Corp. and on December 1, 2016, its trading symbol changed to “PUL”.

On February 24, 2017, Pulse completed its QT by acquiring all of the issued and outstanding shares of Pulse OpCo in exchange for common shares of Pulse. As a result of closing its QT, Pulse changed from a CPC to a Tier 2 oil and gas company trading on the TSXV.

As of the date of this AIF, Pulse’s only subsidiaries are Pulse OpCo and HRC (NZ). HRC (NZ) is an inactive corporation with no substantial assets or liabilities as of the date hereof.

The following chart shows the corporate relationship between Pulse and its subsidiaries:



## GENERAL DEVELOPMENT OF THE BUSINESS

### Three-Year History

*Development from January 1, 2020 until April 30, 2020:*

- a. As of the date of this AIF, Pulse is working to plan the next stage of its EOR project that will involve installation of critical infrastructure and negotiation of key contracts required to complete the project.

*Financial year ended December 31, 2019*

- a. McDaniel, a qualified independent reserves evaluator in accordance with National Instrument 51-101 and the COGE Handbook, completed their independent reserves assessment (the “Assessment”) on Pulse’s interests within the Bigoray and Queenstown core operating areas as at December 31, 2019. The Assessment was effective December 31, 2019 and resulted in a pre-tax net present value of \$29.73 million for Pulse’s proved plus probable (“2p”) reserves and \$17,162 million for Pulse’s proved (“1p”) reserves, using a 10% discount rate to Pulse’s net working interest. This represents a decrease in the value of 1p reserves of 20.3% and a decrease in the value of 2p reserves of 11.0% when compared to December 31, 2018.
- b. On January 2, 2019, Pulse reported that on December 27, 2018, drilling of Pulse’s second exploration well in the Queenstown light oil field was completed. This well was Pulse’s second well successfully targeting a new 3-D seismic interpretation intended to focus on the highest porosity/permeability lithic deposits within the Mannville channel trend. Multi-stage frac operations were completed on both new wells. On April 16, 2019,

- Pulse reported that the pipeline infrastructure required to complete the tie-in of these wells was completed and the wells started full-time production.
- c. On January 30, 2019, Pulse reported that Pulse's contracted technical consultants have completed Phase 3 of the Bigoray EOR modelling project and have now simulated various solvent injection scenarios as part of the final phase of the project.
  - d. On February 19, 2019, Pulse announced that it will drill two new wells within the Bigoray EOR acreage as the next step in completing its EOR project and to potentially add some new interim oil production.
  - e. On March 11, 2019, Pulse announced that the Company has spudded the first of two new wells within Pulse's Bigoray assets on March 9, 2019. On April 23, 2019 the Company further announced the completion of the first well, and that the second well had been spudded on April 17, 2019. New technical data uncovered during the Schlumberger EOR study encourages Pulse to also investigate the possibility that these new wells could drill into previously unrecognized and un-drained areas of these light oil reservoirs. Pulse completed one of the wells as a possible short-term production well that can add cash flow and reserves while all permanent EOR facilities and pipelines are being completed. The final tie in of the well is anticipated in 2020 when additional infrastructure can be put in place.
  - f. On May 22, 2019, Pulse announced the initial test results from its Queenstown wells following the installation of all surface tie-in facility work.
  - g. On June 5, 2019, the Company announced the completion of its two new injection wells and successful initial production tests in the Bigoray area.
  - h. On June 11, 2019, Pulse announced the additional key findings from the third phase of the EOR modelling study that had previously been announced earlier in the year. The key findings included additional peak production rates forecasted for both the Nisku D and Nisku E pools.
  - i. On June 27, 2019, the Company announced the acceptance as a presenter at the SIS Global Forum that took place September 16 – 19, 2019. The presentation was of a paper titled "Reviving a Mature, Watered-Out Fractured Carbonate Reservoir: An Integrated Approach to Design a Miscible EOR Scheme for tow Bigoray Nisku Pools in Alberta."
  - j. Pulse continued to further its work for the remainder of the year to prepare for the EOR project and the necessary infrastructure and applications that will be required to complete the process.

*Financial year ended December 31, 2018*

- a. In March 2018, Pulse initiated Phase 1 of the Bigoray Nisku Pinnacle Reef EOR project related to well and facility optimization.
- b. In April 2018, Pulse retained Schlumberger to complete a three phase petro-technical modelling of Pulse's Bigoray Nisku Pinnacle Reef EOR project.
- c. In June 2018, Pulse reported that it had completed a geotechnical evaluation of 3-D seismic data covering 24 sections (15,360 acres) of land centred on Pulse's light oil-prone Queenstown acreage. The geotechnical study led to the identification of eight further development locations, all targeting the highest porosity and permeability sections

of the light oil-prone Glauconite Lithic Chanel trend previously discovered on Pulse's land.

- d. In July 2018, Pulse reported that it has purchased a 50-year seismic data license for a Queenstown specific 3D data set covering 15,360 acres of Pulse total Queenstown acreage of 24,326 acres, which encompasses the current core area of Pulse's Queenstown assets targeting light sweet crude.
- e. In July 2018, Pulse reported the reactivation of another previously shut-in well from Pulse's 100% Bigoray oil assets resulting in approximately 100 barrels of oil a day of additional production. In addition, Pulse reactivated associated facilities and pipelines as planned and importantly, re-commissioned important infrastructure which is critical to the Company's ongoing EOR program.
- f. In August 2018, Pulse reported, via its contractual technical consultant, the completion of Phase 1 of the Bigoray EOR Modelling Project. This phase included analysis and interpretation of every well (15 wells) drilled within the Company's two Nisku pools, followed by analysis and interpretation of every core cut within the two pools (ten cores).

In November 2018, Pulse acquired, from an arms-length third party, one Bigoray well bore (the "primary well") and up to two additional well bores in the future, subject to certain conditions being met. Pulse acquired 100% of this primary well. In addition, Pulse received regulatory approval by the Alberta Energy Regulator for the transfer of its next Bigoray well, located in the Bigoray Nisku E Pool.

- g. On November 20, 2018, Pulse completed a public offering (the "Offering") and a concurrent strategic private placement for gross proceeds of \$11,300,520, including the exercise of the over-allotment option under the Offering. The proceeds were used to fund its Bigoray EOR and a multi-well drill program. Pursuant to the Offering, Pulse issued 11,137,600 flow-through common shares of the Corporation ("FT Shares") at a price of C\$0.22 per FT Share and 15,953,555 units of the Corporation at a price of C\$0.21 per Unit for aggregate proceeds of \$5,800,519, inclusive of the proceeds from the over-allotment option. Each Unit was comprised of one Common Share and one-half of one Common Share purchase warrant (each whole warrant, a "**2018 Warrant**"), and each FT Share was a Common Share issued on a "flow-through" basis within the meaning of the Tax Act. Each Warrant entitles the holder thereof to acquire one Common Share (each, a "**Warrant Share**") at an exercise price of \$0.30 per Warrant Share for a period of 24 months following the closing of the Offering. In addition, Pulse concurrently completed a private placement with certain strategic investors, issuing, 26,714,285 units (the "Private Placement Units") of the Company at a price of approximately \$0.2058 per Unit for aggregate gross proceeds of \$5,500,001.11. At closing, Pulse also paid an investment fee equal to 7% of the Placement by issuing an additional 1,309,524 Units of Pulse.
- h. In December 2018, Pulse reported the start of drilling operations at its Queenstown light oil field. The first well spudded on December 6, 2018, and took 10 days to complete drilling operations. The second well was spudded on December 27, 2018 with drilling operations being completed in just 7 days, well ahead of its forecasted drilling curve and budget,
- i. On December 18, 2018, Pulse reported the appointment of Daniel Bolstad to the Company's Board of Directors.
- j. For the year ended December 31, 2018, Pulse had revenues of \$2,670,743 and a net profit of \$46,172.

*Financial year ended December 31, 2017*

- a. On February 24, 2017, the Wolfpack Acquisition was completed. This transaction constituted Wolfpack's QT.

Pursuant to the Wolfpack Acquisition, each Hydrate common share was exchanged for Pulse common shares at a ratio of 1 Hydrate common share to 0.95 Pulse common share. In total, Pulse issued 27,781,197 Common Shares to the holders of common shares of Hydrate, inclusive of Common Shares to the holders of Hydrate common shares issued under the \$425,000 private placement that closed on December 22, 2016.

As a result of the closing of the QT, Pulse's classification on the TSXV changed from a capital pool company to a Tier 2 oil and gas company effective March 7, 2017, and its common shares commenced trading under the symbol "PUL".

- b. On March 8, 2017, Pulse successfully negotiated an extension to the terms of the Bigoray Purchase to ensure the committed work program took optimal advantage of Pulse's funding plans and maximized the value of the Bigoray Assets. The material amendments to the terms of the Bigoray Purchase agreement were as follows:

- (i) The deadline for the \$3,000,000 capital cost commitment required to acquire a 50% interest in the Bigoray Assets was revised to:

- a. \$ 250,000 to be paid by March 20, 2017;
- b. \$ 1,000,000 to be paid by June 30, 2017; and
- c. \$ 1,750,000 to be paid by September 29, 2017.

- (ii) The deadline for acquiring the remaining 50% interest in the Bigoray Assets was revised to October 20, 2017.

- c. On March 31, 2017, Pulse entered into a purchase and sale agreement, to acquire certain oil and gas assets located in the Queenstown area of Southern Alberta for consideration of \$1,350,000 (subject to customary post-closing adjustments) and three million Common Shares of Pulse at a price of \$0.155 per share. This acquisition was completed on June 13, 2017.

- d. On June 13, 2017, Pulse raised gross proceeds of \$3,115,167 under a brokered private placement through the issuance of 25,959,724 units of Pulse (the "**Basic Units**") at a price of \$0.12 per Basic Unit. Each Basic Unit was comprised of one Common Share and one Common Share purchase warrant (a "**2017 Warrant**"). Each Warrant entitles the holder thereof to acquire one Common Share (a "**Warrant Share**") at an exercise price of \$0.17 per Common Share for a period of 24 months (June 13, 2019).

In addition to the Basic Units, Pulse also raised gross proceeds of \$1,697,768 through the issuance of 13,059,760 units of Pulse (the "**Flow-Through Units**") at a price of \$0.13 per Flow-Through Unit. Each Flow-Through Unit consisted of one Common Share issued on a flow-through basis pursuant to the *Tax Act* (a "**Flow-Through Share**") and one Warrant (also on the same terms and conditions as the Warrants issued as part of the Basic Units).

- e. On October 20, 2017, Pulse completed an asset exchange agreement that was signed on September 20, 2017. The joint venture formed by Pulse and an arm's-length Alberta incorporated private company (the "**Pulse JV**") had negotiated the agreement with an intermediate-sized oil and gas producer ("**PubCo**"). The transaction provided for the Pulse JV to exchange its 50% interest in the Central Alberta Bigoray Nisku-F Pool for PubCo's 75% interest in the nearby Bigoray Nisku-D Pool, allowing the Pulse JV to

increase its interest in the Nisku D pool and the upside Pulse's management team feels Nisku D can provide to Pulse.

- f. On October 31, 2017, Pulse completed an asset purchase and sale agreement that was signed on October 20, 2017 whereby Pulse increased its interest in the Bigoray Assets, superseding all prior terms noted above and assuming operatorship of the assets. Pursuant to the agreement, Pulse acquired 100% of the remaining working interest in the Bigoray Assets from Crimson. The acquisition price was \$4.1 million (including payments over time in a combination of cash and Common Shares) subject to customary closing adjustments. The acquired assets included increased interests in the Nisku-D and Nisku-E pool acreages and are concentrated in the light-oil prone West Pembina area of Central Alberta and 7,000 acres of hydrocarbon rights, proved producing and proved non-producing reserves in four separate formations, as well as valuable existing infrastructure associated with the Bigoray Assets.
- g. On November 27, 2017, the Warrants issued in June 2017 began trading on the TSXV under the symbol "PUL.WT".
- h. On December 6, 2017, Pulse completed the acquisition of all PNG rights in 160 acres of Bigoray land immediately adjacent to Pulse's 100% owned Bigoray Assets.

### **Significant Acquisitions**

Pulse did not complete any significant acquisitions during its most recently completed financial year.

## **DESCRIPTION OF THE BUSINESS OF PULSE**

### **General**

Pulse is a Canadian company incorporated under the ABCA. Pulse has two primary reporting segments located in the Bigoray area of Alberta and the Queenstown area of southern Alberta.

In 2017, Pulse completed transactions to consolidate its interests in the Bigoray area, resulting in 100% control of Pulse's Bigoray operations, including production, facilities, pipelines and two Nisku oil Pinnacle Reefs within which Pulse intends to conduct its EOR program. Pulse is conducting operations to grow reserves and production while also executing on its plan to progress the EOR project in order to further grow reserves and production within the large volume of independently estimated discovered petroleum initially in-place ("DPIIP") and through control of approximately 65 net sections of land across the Mannville, Cardium, Pekisko/Shunda and Nisku trends in Western Canada. In 2019, Pulse drilled the two injection wells required for the implementation of the EOR project. Pulse anticipates proceeding with the necessary infrastructure to further the EOR project throughout the 2020 fiscal year.

At Queenstown, Pulse has been working throughout 2019 to get consistent and reliable production data from the most recently drilled wells from December 2018. Various well issues have limited the ability to achieve this reliable production data. Pulse will continue to review its Queenstown operations and make decisions to improve its production and reserves throughout 2020.

Pulse plans to achieve further growth through low-risk, technically diligent drilling, infrastructure ownership and reserve growth utilizing proven EOR techniques and implementation of technology.

## Summary

### *Bigoray Area*

Pulse currently holds approximately 10,111 net acres of land in the Bigoray area of Alberta. The Bigoray Assets, 100% operated by Pulse, consist of proved and probable, producing and non-producing oil and gas reserves, production infrastructure and pipelines as well as exploration properties. The area is prospective for Cardium Oil Pools, Mannville Gas Pools, Pekisko/Shunda Oil Pools, Nisku Oil Pools and Duvernay Shale. In particular Pulse holds a 100% interest in two Nisku Oil Pools, the Nisku D and E Pools, where Pulse intends to implement an EOR miscible flood scheme.

Pulse currently owns and operates all the equipment and facilities in place from the previous waterflood production scheme, all of which will play a vital role in the miscible flood EOR scheme as well. As planning of the EOR project progresses, Pulse will determine if any additional injection/production wells, equipment and/or facilities are needed or if existing assets are in need of optimization or enhancement.

Pulse operates all of its production in the area and has an average working interest of 100%.

Pulse's 2019 exit year-end production in the Bigoray area was approximately 140 BOE/d consisting of 90 Bbls/d of crude oil and NGLs and 285 Mcf/d of conventional natural gas. Pulse anticipates production from the Bigoray area to grow once additional well reactivations can be completed and surface equipment installed at the injection well drilled in 2019.

Pulse will continue to focus on assessing the potential for drilling, implementation of proven EOR techniques and utilization of technology in the area to achieve further growth and development within its Bigoray Assets.

Currently, Pulse has multiple options available to market its products and currently distributes its oil by truck and pipeline to Pulse's contracted buyer, while gas is distributed by Pulse-owned pipelines to nearby third-party gas processing facilities. As of the date of this AIF, there are no limitations or constraints on the sale or marketing of Pulse's oil and gas products.

### *Queenstown Area*

Pulse currently holds approximately 24,326 net acres of land in the Queenstown area of Alberta. The Queenstown Assets, 100% operated by Pulse, contain at least 7 additional high-grade drill ready horizontal drilling locations established within the Mannville formation that are identified by existing 3D seismic data. In addition to the Mannville formation, Pulse has identified opportunities in the ELLerslie, Pekisko/Shunda and Nisku formations.

Pulse is the operator of its production in the area and has an average working interest of 100%.

Pulse's 2019 exit year-end production in the area was approximately 80 BOE/d consisting of 22 Bbls/d of crude oil and NGLs and 345 Mcf/d of conventional natural gas. Certain wells in the Queenstown area are currently shut-in, and awaiting a workover program to realize additional production in 2020.

Pulse plans to continue to focus on assessing the potential for drilling, utilizing proven techniques and technologies, and land sale opportunities in the area to achieve further growth within its Queenstown Assets. The future plan for the area will be to complete some workovers on the most recently drilled wells to optimize production in the field.

Currently, Pulse has signed agreements to market its products through October 2020. Pulse, as an ordinary course of running its business, has reviewed additional options to market its products

in advance of the October 2020 expiry of its current agreements. As of the time of this AIF, there are no limitations or constraints on the sale or marketing of Pulse's oil and gas products and no limitations or constraints are anticipated.

### **Production and Services**

Pulse produces all of its crude oil and natural gas through conventional methods of production. All production is transported via pipeline or trucking to nearby purchasers of all products.

### **Specialized Skill and Knowledge**

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

### **Competitive Conditions**

The oil and natural gas industry is competitive in all its phases. Pulse competes with numerous other participants in the acquisition, exploration and development of oil and natural gas assets, and in the marketing of oil and natural gas. Pulse's competitors include resource companies; which may have greater financial resources, staff and facilities than Pulse. Competitive factors in the distribution and marketing of oil and natural gas include price and methods of and reliability of delivery. Pulse believes that its competitive position is equivalent to that of other oil and gas issuers of a similar size and at a similar stage of development. See "*Risk Factors*".

### **Cyclical and Seasonal Nature of Industry**

Pulse's operational results and financial condition are dependent on the prices received for oil and natural gas production. Oil and natural gas prices have fluctuated widely during recent years and are determined by supply and demand factors, including weather and general economic conditions, as well as conditions in other oil and natural gas regions. Any decline in oil and natural gas prices could have an adverse effect on Pulse's financial condition. Furthermore, the level of activity in the Canadian oil and natural gas industry is influenced by seasonal weather patterns. See "*Risk Factors*".

### **Contracts and Availability of Services**

Pulse utilizes contracts in order to market and sell its oil and gas products. These agreements are primarily on a month-to-month basis, with the exception of a gas contract that expires in October 2020. There are no penalties or obligations prior to or after the expiry of any of the agreements. The access to market is not a constraint to Pulse at this time.

Pulse engages the services of drilling rigs and related equipment for the completion of specific drilling operations. Once those operations are complete, the drilling rig and related equipment are released and Pulse has no further contractual obligation to lease the equipment. Oil and natural gas exploration and development activities are dependent on the availability of drilling and related equipment in the particular areas where such activities will be conducted. Demand for such limited equipment or access restrictions may affect the availability of such equipment to Pulse and may delay exploration and development activities.

Pulse does not expect to renegotiate or terminate any of its existing contracts or sub-contracts during the current financial year.

### **Environmental**

The oil and natural gas industry is currently subject to environmental laws and regulations pursuant to a variety of provincial and federal legislation. Pulse believes that it is in compliance with applicable existing environmental laws and regulations and is not aware of any proposed environmental legislation or regulations with which it would not be in material compliance. Procedures are put in place to ensure that the utmost care is taken in the day-to-day management of Pulse's oil and gas properties. However, in the future, the natural resources industry may become subject to more stringent environmental protection rules. This could increase the cost of doing business and may have a negative impact on future earnings. See "*Industry Conditions – Environmental Regulation*" and "*Risk Factors – Environmental Risks*".

### **Employees**

As at December 31, 2019, Pulse had 3 employees. Additional operational tasks are completed by specialized contractors to satisfy the needs of the Company until a time when additional employees will be required.

### **Foreign Operations**

HRC (NZ), an indirect wholly owned subsidiary of Pulse, is an inactive company registered in the country of New Zealand.

### **Reorganizations**

Other than the Wolfpack Acquisition that was completed on February 24, 2017, there have been no material reorganizations of Pulse within the three most recently completed financial years or completed during or proposed for the current financial year.

### **Social or Environmental Policies**

The health and safety of employees, contractors and the public, as well as the protection of the environment, is of utmost importance to Pulse. Pulse endeavours to conduct its operations in a manner that will minimize both adverse effects and consequences of emergency situations by:

- complying with government laws, regulations and standards, particularly relating to the environment, health and safety;
- operating consistent with industry codes, practices and guidelines;
- ensuring prompt, effective response and repair to emergency situations and environmental incidents;
- providing training to employees and contractors to ensure compliance with corporate safety and environmental rules and procedures; and
- communicating openly with members of the public regarding its activities.

Pulse believes that all employees have a vital role in achieving excellence in environmental, health and safety performance, which is best achieved through careful planning and the support and active participation of everyone involved. To further ensure that Pulse achieves excellence in health and safety performance, an emergency response plan and a corporate safety policy have been implemented. Furthermore, Pulse aligns itself with the best industry practices to ensure positive results.

## STATEMENT OF RESERVES DATA AND OTHER OIL AND GAS INFORMATION

In accordance with NI 51-101, Pulse engaged McDaniel to prepare a report (the “**McDaniel Report**”) with a preparation date of April 2, 2020. The McDaniel Report, as at the effective date of December 31, 2019, evaluated all of the crude oil, NGL and natural gas reserves at the Bigoray and Queenstown properties held by Pulse. The report includes 100% of the reserves attributed to Pulse at the time of the report.

The Report on Reserves Data by McDaniel on Form 51-101F2 is attached as Schedule A to this AIF. The Report of Management and Directors on Reserves Data and Other Information on Form 51-101F3 is attached as Schedule B to this AIF.

### Disclosure of Reserves Data

The Statement set forth below discloses Pulse’s reserves data (the “**Reserves Data**”) in respect of the Queenstown Assets and the Bigoray Assets, based upon an evaluation by McDaniel. The Reserves Data summarizes the crude oil, NGLs, and natural gas reserves of Pulse and the net present values of future net revenue for these reserves using forecast prices and costs supplied by McDaniel. The McDaniel Report has been prepared in accordance with the standards contained in the COGE Handbook and the reserve definitions contained in NI 51-101 and the COGE Handbook. Additional information not required by NI 51-101 has been presented to provide continuity and additional information, which Pulse believes is important to readers of this AIF. McDaniel were engaged to provide evaluations of proved and proved plus probable reserves and no attempt was made to evaluate possible reserves.

McDaniel has evaluated the Queenstown Assets, which comprise approximately 15.88% of the net present value (discounted at 10%, before tax, using forecast prices and costs) of the Corporation’s proved plus probable reserves, and the Bigoray Assets, comprising the remaining 84.12% of the net present value of its proved plus probable reserves of the Corporation.

All of Pulse’s reserves are onshore in Canada, and specifically, in the Province of Alberta. The McDaniel Report is based on certain factual data supplied by Pulse and McDaniel’s opinion of reasonable practice in the industry. The extent and character of ownership and all factual data pertaining to petroleum properties and contracts (except for certain information residing in the public domain) were supplied by Pulse to McDaniel. McDaniel accepted this data as presented and neither title searches nor field inspections were conducted.

The net present value of future net revenue attributable to reserves is stated without provision for interest costs and general and administrative costs, but after providing for estimated royalties, production costs, development costs, other income, future capital expenditures and well abandonment and reclamation costs. The values shown may not be representative of future income tax obligations, applicable tax horizon or after tax valuation. The after tax net present value of Pulse’s oil and natural gas properties reflects the tax burden of its properties on a stand-alone basis. It does not provide an estimate of the value of Pulse as a business entity, which may be significantly different. Pulse’s consolidated financial statements and management’s discussion and analysis for the year ended December 31, 2019 should be consulted for additional information regarding Pulse’s taxes.

There are numerous uncertainties inherent in estimating quantities of crude oil, NGLs and natural gas reserves and the future cash flows attributed to such reserves. In general, such estimates are based upon a number of variable factors and assumptions, such as historical production from the properties, production rates, ultimate reserve recovery, timing and amount of capital expenditures, marketability of oil and natural gas, royalty rates, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary materially from actual

results. For those reasons, estimates of the economically recoverable crude oil, NGLs 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. Pulse'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.

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

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

Throughout the following summary tables, differences may arise due to rounding.

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

The following tables summarize certain information contained in the McDaniel Report using forecast prices and costs supplied by McDaniel,

SUMMARY OF OIL AND GAS RESERVES  
FORECAST PRICES AND COSTS AS OF DECEMBER 31, 2019

RESERVES

| Reserves Category          | Light and Medium Crude Oil      |                               | Heavy Crude Oil                 |                               | Conventional Natural Gas       |                              | Natural Gas Liquids             |                               |
|----------------------------|---------------------------------|-------------------------------|---------------------------------|-------------------------------|--------------------------------|------------------------------|---------------------------------|-------------------------------|
|                            | Gross <sup>(1)</sup><br>(Mbbbl) | Net <sup>(2)</sup><br>(Mbbbl) | Gross <sup>(1)</sup><br>(Mbbbl) | Net <sup>(2)</sup><br>(Mbbbl) | Gross <sup>(1)</sup><br>(MMcf) | Net <sup>(2)</sup><br>(MMcf) | Gross <sup>(1)</sup><br>(Mbbbl) | Net <sup>(2)</sup><br>(Mbbbl) |
| Proved                     |                                 |                               |                                 |                               |                                |                              |                                 |                               |
| Developed Producing        | 303.9                           | 249.9                         | -                               | -                             | 474.9                          | 436.6                        | 35.2                            | 26.4                          |
| Developed Non-Producing    | 618.2                           | 533.9                         | 21.4                            | 19.5                          | 828.2                          | 720.4                        | 33.1                            | 27.2                          |
| Undeveloped                | 137.7                           | 116.7                         | -                               | -                             | 1,170.8                        | 992.3                        | 29.3                            | 24.8                          |
| Total Proved               | 1059.8                          | 900.6                         | 21.4                            | 19.5                          | 2,474.0                        | 2,149.3                      | 97.6                            | 78.5                          |
| Probable                   | 514.4                           | 434.1                         | 207.0                           | 179.3                         | 2,029.7                        | 1,784.6                      | 74.6                            | 62.2                          |
| Total Proved Plus Probable | 1,574.2                         | 1,334.7                       | 228.3                           | 198.7                         | 4,503.7                        | 3,933.9                      | 172.2                           | 140.7                         |

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

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

SUMMARY OF NET PRESENT VALUE OF FUTURE NET REVENUE  
FORECAST PRICES AND COSTS AS OF DECEMBER 31, 2019

| NET PRESENT VALUES OF FUTURE NET REVENUES |          |          |          |          |          |
|---|----------|----------|----------|----------|----------|
| Before Income Taxes – Discounted at       |          |          |          |          |          |
| (% / year)                                |          |          |          |          |          |
| Reserves Category                         | 0%       | 5%       | 10%      | 15%      | 20%      |
|   | (M\$)    | (M\$)    | (M\$)    | (M\$)    | (M\$)    |
| Proved                                    |          |          |          |          |          |
| Developed Producing                       | 6,945.8  | 5,954.8  | 4,785.7  | 3,935.3  | 3,337.6  |
| Developed Non-Producing                   | 23,230.8 | 16,454.0 | 12,206.8 | 9,389.4  | 7,420.3  |
| Undeveloped                               | 582.3    | 369.8    | 169.7    | 0.2      | -136.6   |
| Total Proved                              | 30,758.9 | 22,778.6 | 17,162.2 | 13,324.9 | 10,621.3 |
| Probable                                  | 25,160.8 | 17,026.2 | 12,565.6 | 9,771.1  | 7,859.7  |
| Total Proved Plus Probable                | 55,919.6 | 39,804.8 | 29,727.8 | 23,095.9 | 18,481.0 |

| NET PRESENT VALUES OF FUTURE NET REVENUES |          |          |          |          |          |                        |
|---|----------|----------|----------|----------|----------|------------------------|
| After Income Taxes – Discounted at        |          |          |          |          |          |                        |
| (% / year)                                |          |          |          |          |          |                        |
| Reserves Category                         | 0%       | 5%       | 10%      | 15%      | 20%      | Unit Value             |
|   | (M\$)    | (M\$)    | (M\$)    | (M\$)    | (M\$)    | Before Tax             |
|   |          |          |          |          |          | @ 10.0% <sup>(1)</sup> |
|   |          |          |          |          |          | (\$/BOE)               |
| Proved                                    |          |          |          |          |          |                        |
| Developed Producing                       | 6,945.8  | 5,954.8  | 4,785.7  | 3,935.3  | 3,337.6  | 13.71                  |
| Developed Non-Producing                   | 18,109.1 | 13,108.7 | 9,876.4  | 7,683.9  | 6,123.7  | 17.42                  |
| Undeveloped                               | 447.8    | 164.5    | -61.0    | -234.1   | -364.1   | 0.55                   |
| Total Proved                              | 25,502.6 | 19,228.0 | 14,601.1 | 11,385.2 | 9,097.3  | 12.65                  |
| Probable                                  | 19,416.0 | 12,986.9 | 9,474.9  | 7,286.8  | 5,799.7  | 12.91                  |
| Total Proved Plus Probable                | 44,918.7 | 32,214.9 | 24,076   | 18,671.9 | 14,897.0 | 12.76                  |

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

**TOTAL FUTURE NET REVENUE (UNDISCOUNTED)  
FORECAST PRICES AND COSTS AS OF DECEMBER 31, 2019**

| Reserves Category                   | Revenue <sup>(1)</sup><br>(M\$) | Royalties <sup>(2)</sup><br>(M\$) | Operating<br>Costs<br>(M\$) | Development<br>Costs<br>(M\$) | Abandonment<br>And Reclamation<br>Costs<br>(M\$) | Future Net<br>Revenue Before<br>Future Income<br>Tax Expense<br>(M\$) | Future<br>Income<br>Tax<br>Expense<br>(M\$) | Future Net<br>Revenue After<br>Future Income<br>Tax Expense<br>(M\$) |
|-------------------------------------|---------------------------------|-----------------------------------|-----------------------------|-------------------------------|--|---|---|--|
| Proved Reserves                     | 97,689                          | 14,758                            | 35,089                      | 12,155                        | 4,929  | 30,759  | 5,256                                       | 25,503   |
| Proved Plus<br>Probable<br>Reserves | 165,566                         | 25,080                            | 58,703                      | 20,347                        | 5,517  | 55,920  | 11,001                                      | 44,919   |

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

(2) Royalties includes any net profits interests paid

**FUTURE NET REVENUE BY PRODUCT TYPE  
FORECAST PRICES AND COSTS AS OF DECEMBER 31, 2019**

| Reserves Category       | Product Type  | Future Net Revenue Before<br>Income Taxes (Discounted<br>at 10%/Year)<br>(M\$) | Unit Value <sup>(1)</sup><br>(\$/Bbl) or<br>(\$/Mcf) |
|-------------------------|---|--|--|
| Proved<br>Reserves      | Light and Medium Crude Oil (including solution gas & by-products) | 17,039   | 18.92  |
|                         | Heavy Crude Oil (including solution gas and by-products)          | 84   | 4.31   |
|                         | Conventional Natural Gas (including by-products)                  | 39   | 0.14   |
|                         |   | 17,162   |  |
| Proved Plus<br>Probable | Light and Medium Crude Oil (including solution gas & by-products) | 27,094   | 20.30  |
|                         | Heavy Crude Oil (including solution gas and by-products)          | 2,553  | 12.85  |
|                         | Conventional Natural Gas (including by-products)                  | 80   | 0.18   |
|                         |   | 29,728   |  |

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

***Forecast Pricing and Cost Assumptions***

The reserve data estimates contained herein are based on forecast prices and costs supplied by McDaniel, applying the 3 Consultant Average Prices (McDaniel, GLJ and Sproule) pricing, exchange rate and inflation rate assumptions as of January 1, 2020. The forecast prices and costs used by McDaniel assume increases in wellhead selling prices and take into account inflation with respect to future operating and capital costs. The following table sets forth commodity benchmark reference pricing, inflation rate and exchange rate assumptions supplied by McDaniel as of January 1, 2020. Price offsets and differentials for each property were determined by comparing actual historical benchmark prices to actual prices received at the property.

**3 Consultant Average Prices (McDaniel, GLJ and Sproule)**  
**Summary of Crude Oil and Natural Gas Liquids Price Forecasts**  
**January 1, 2020**

| Year              | Crude Oil Price Forecasts |         |           |           |           |                 |                  | Liquids Price Forecasts |          |          |                                    |
|-------------------|---------------------------|---------|-----------|-----------|-----------|-----------------|------------------|-------------------------|----------|----------|------------------------------------|
|                   | WTI                       | Brent   | Edmonton  | Alberta   | Western   | Sask            | Edmonton         | Edmonton                | Edmonton | Edmonton |                                    |
|                   | Crude                     | Crude   | Light     | Bow River | Canadian  | Alberta         |                  |                         |          | Edmonton |                                    |
|                   | Oil                       | Oil     | Crude Oil | Crude Oil | Crude Oil | Heavy Crude Oil | Medium Crude Oil | Ethane                  | Propane  | Butanes  | Edmonton Cond. & Natural Gasolines |
| \$US/bbl          | \$US/bbl                  | \$C/bbl | \$C/bbl   | \$C/bbl   | \$C/bbl   | \$C/bbl         | \$/bbl           | \$/bbl                  | \$/bbl   | \$/bbl   |                                    |
| (1)               | (2)                       | (3)     | (4)       | (5)       | (6)       | (7)             |                  |                         |          |          |                                    |
| <b>History</b>    |                           |         |           |           |           |                 |                  |                         |          |          |                                    |
| 2009              | 61.80                     | 61.60   | 65.90     | 60.30     | 58.58     | 55.30           | 62.80            |                         | 38.60    | 49.25    | 68.15                              |
| 2010              | 79.50                     | 79.90   | 77.50     | 68.50     | 67.23     | 61.45           | 73.80            |                         | 46.70    | 66.05    | 84.25                              |
| 2011              | 95.10                     | 111.25  | 95.00     | 78.55     | 77.10     | 67.90           | 88.90            |                         | 55.15    | 76.50    | 104.20                             |
| 2012              | 94.20                     | 111.65  | 86.10     | 74.35     | 73.08     | 63.65           | 82.10            |                         | 28.60    | 69.55    | 100.80                             |
| 2013              | 97.95                     | 108.60  | 93.05     | 76.55     | 75.25     | 65.25           | 88.25            |                         | 38.90    | 69.40    | 104.65                             |
| 2014              | 93.00                     | 99.00   | 93.50     | 80.40     | 79.10     | 71.20           | 87.80            |                         | 45.05    | 69.60    | 102.40                             |
| 2015              | 48.80                     | 52.35   | 57.75     | 46.10     | 44.80     | 39.55           | 51.45            |                         | 6.65     | 35.55    | 60.30                              |
| 2016              | 43.30                     | 43.55   | 53.85     | 40.30     | 39.00     | 33.35           | 48.95            |                         | 13.15    | 34.35    | 56.20                              |
| 2017              | 50.90                     | 54.25   | 62.85     | 52.00     | 50.70     | 45.20           | 59.85            |                         | 28.90    | 44.60    | 66.85                              |
| 2018              | 64.95                     | 71.05   | 69.65     | 51.25     | 49.95     | 40.00           | 70.20            |                         | 27.55    | 32.80    | 79.20                              |
| 2019              | 56.95                     | 64.15   | 68.65     | 59.30     | 58.10     | 54.50           | 67.60            |                         | 17.40    | 23.55    | 70.85                              |
| <b>Forecast</b>   |                           |         |           |           |           |                 |                  |                         |          |          |                                    |
| 2020              | 61.00                     | 66.33   | 72.64     | 58.43     | 57.57     | 51.23           | 70.29            | 6.42                    | 26.36    | 42.10    | 76.83                              |
| 2021              | 63.75                     | 67.94   | 76.06     | 63.00     | 62.35     | 56.11           | 72.93            | 7.41                    | 29.80    | 47.03    | 79.82                              |
| 2022              | 66.18                     | 70.06   | 78.35     | 64.99     | 64.33     | 57.72           | 74.73            | 8.33                    | 32.94    | 50.66    | 82.30                              |
| 2023              | 67.91                     | 71.66   | 80.71     | 66.91     | 66.23     | 59.45           | 77.00            | 8.65                    | 34.00    | 52.21    | 84.72                              |
| 2024              | 69.48                     | 73.27   | 82.64     | 68.65     | 67.97     | 61.09           | 78.87            | 8.98                    | 34.88    | 53.48    | 86.71                              |
| 2025              | 71.07                     | 74.57   | 84.60     | 70.41     | 69.72     | 62.75           | 80.76            | 9.24                    | 35.78    | 54.77    | 88.73                              |
| 2026              | 72.68                     | 76.22   | 86.57     | 72.20     | 71.49     | 64.43           | 82.67            | 9.46                    | 36.69    | 56.07    | 90.77                              |
| 2027              | 74.24                     | 77.83   | 88.49     | 73.91     | 73.20     | 66.04           | 84.53            | 9.67                    | 37.57    | 57.32    | 92.76                              |
| 2028              | 75.73                     | 79.36   | 90.31     | 75.53     | 74.80     | 67.55           | 86.29            | 9.89                    | 38.41    | 58.50    | 94.65                              |
| 2029              | 77.24                     | 80.92   | 92.17     | 77.18     | 76.43     | 69.08           | 88.08            | 10.12                   | 39.26    | 59.71    | 96.57                              |
| 2030              | 78.79                     | 82.54   | 94.01     | 78.72     | 77.96     | 70.46           | 89.84            | 10.33                   | 40.04    | 60.90    | 98.50                              |
| 2031              | 80.36                     | 84.19   | 95.89     | 80.29     | 79.52     | 71.87           | 91.64            | 10.53                   | 40.85    | 62.12    | 100.47                             |
| 2032              | 81.97                     | 85.87   | 97.81     | 81.90     | 81.11     | 73.31           | 93.47            | 10.74                   | 41.66    | 63.36    | 102.48                             |
| 2033              | 83.61                     | 87.59   | 99.76     | 83.54     | 82.73     | 74.78           | 95.34            | 10.96                   | 42.50    | 64.63    | 104.53                             |
| 2034              | 85.28                     | 89.34   | 101.76    | 85.21     | 84.39     | 76.27           | 97.24            | 11.18                   | 43.35    | 65.92    | 106.62                             |
| <b>Thereafter</b> | +2%/yr                    | +2%/yr  | +2%/yr    | +2%/yr    | +2%/yr    | +2%/yr          | +2%/yr           | +2%/yr                  | +2%/yr   | +2%/yr   | +2%/yr                             |

**Notes:**

- (1) West Texas Intermediate at Cushing Oklahoma 40 degrees API, 0.5% sulphur
- (2) North Sea Brent Blend 37 degrees API, 1.0% sulphur
- (3) Edmonton Light Sweet 40 degrees API, 0.3% sulphur
- (4) Bow River at Hardisty, Alberta (Heavy stream)
- (5) Western Canadian Select at Hardisty, Alberta
- (6) Heavy crude oil 12 degrees API at Hardisty, Alberta (after deduction of blending costs to reach pipeline quality)
- (7) Midale Cromer crude oil 29 degrees API, 2.0% sulphur

**3 Consultant Average Prices (McDaniel, GLJ and Sproule)**  
**Summary of Crude Oil and Natural Gas Liquids Price Forecasts**  
**January 1, 2020**

| Gas Price Forecasts |          |          |            |          |          |          |          |           |           |
|---------------------|----------|----------|------------|----------|----------|----------|----------|-----------|-----------|
| U.S.                | Alberta  |          |            |          | Sask.    | British  |          |           | US/CAN    |
| Henry Hub           | AECO     | Alberta  | Alberta    |          | Prov.    | Columbia | British  |           | Exchange  |
| Gas Price           | Spot     | Average  | Aggregator | Empress  | Gas      | Average  | Columbia | Inflation | Rate      |
| \$/MMBtu            | \$/MMBtu | \$/MMBtu | \$/MMBtu   | \$/MMBtu | \$/MMBtu | \$/MMBtu | \$/MMBtu | %         | \$/\$/CAN |
|                     | (8)      | (9)      |            |          |          |          |          |           |           |
| 3.95                | 4.20     | 3.95     | 3.90       |          | 3.87     | 4.05     |          | 0.3       | 0.880     |
| 4.40                | 4.15     | 3.90     | 3.85       |          | 3.96     | 3.90     |          | 1.8       | 0.971     |
| 4.00                | 3.70     | 3.50     | 3.75       |          | 3.56     | 3.30     |          | 2.9       | 1.012     |
| 2.75                | 2.45     | 2.25     | 2.25       |          | 2.31     | 2.25     |          | 1.5       | 1.000     |
| 3.75                | 3.20     | 3.00     | 3.00       |          | 3.10     | 2.90     | 3.08     | 0.9       | 0.971     |
| 4.35                | 4.40     | 4.20     | 4.20       | 4.53     | 4.40     | 4.10     | 4.20     | 1.9       | 0.906     |
| 2.60                | 2.80     | 2.55     | 2.55       | 3.00     | 2.70     | 2.00     | 2.10     | 1.1       | 0.780     |
| 2.50                | 2.10     | 1.90     | 1.90       | 2.31     | 2.20     | 1.55     | 1.68     | 1.4       | 0.760     |
| 2.95                | 2.40     | 2.15     | 2.15       | 2.83     | 2.35     | 1.75     | 1.88     | 1.6       | 0.770     |
| 3.05                | 1.55     | 1.35     | 1.35       | 2.85     | 1.60     | 1.20     | 1.40     | 2.2       | 0.770     |
| 2.55                | 1.60     | 1.40     | 1.40       | 2.70     | 1.65     | 0.95     | 1.10     | 2.0       | 0.750     |
| 2.62                | 2.04     | 1.84     | 1.84       | 2.59     | 1.94     | 1.46     | 1.66     | 0.0       | 0.760     |
| 2.87                | 2.32     | 2.12     | 2.12       | 2.85     | 2.22     | 1.79     | 1.99     | 1.7       | 0.770     |
| 3.06                | 2.62     | 2.41     | 2.41       | 3.02     | 2.52     | 2.12     | 2.32     | 2.0       | 0.785     |
| 3.17                | 2.71     | 2.50     | 2.50       | 3.02     | 2.61     | 2.26     | 2.46     | 2.0       | 0.785     |
| 3.24                | 2.81     | 2.60     | 2.60       | 3.12     | 2.70     | 2.35     | 2.55     | 2.0       | 0.785     |
| 3.32                | 2.89     | 2.67     | 2.67       | 3.20     | 2.78     | 2.46     | 2.67     | 2.0       | 0.785     |
| 3.39                | 2.96     | 2.73     | 2.73       | 3.26     | 2.85     | 2.53     | 2.73     | 2.0       | 0.785     |
| 3.45                | 3.03     | 2.80     | 2.80       | 3.33     | 2.91     | 2.59     | 2.80     | 2.0       | 0.785     |
| 3.53                | 3.09     | 2.86     | 2.86       | 3.40     | 2.98     | 2.66     | 2.86     | 2.0       | 0.785     |
| 3.60                | 3.16     | 2.93     | 2.93       | 3.47     | 3.05     | 2.73     | 2.93     | 2.0       | 0.785     |
| 3.67                | 3.23     | 2.99     | 2.99       | 3.54     | 3.11     | 2.78     | 2.99     | 2.0       | 0.785     |
| 3.74                | 3.29     | 3.04     | 3.04       | 3.61     | 3.17     | 2.84     | 3.05     | 2.0       | 0.785     |
| 3.82                | 3.36     | 3.11     | 3.11       | 3.69     | 3.23     | 2.89     | 3.11     | 2.0       | 0.785     |
| 3.89                | 3.43     | 3.17     | 3.17       | 3.76     | 3.30     | 2.95     | 3.17     | 2.0       | 0.785     |
| 3.97                | 3.49     | 3.23     | 3.23       | 3.84     | 3.36     | 3.01     | 3.24     | 2.0       | 0.785     |
| +2%/yr              | +2%/yr   | +2%/yr   | +2%/yr     | +2%/yr   | +2%/yr   | +2%/yr   | +2%/yr   | 2.0       | 0.785     |

**Notes:**

- (8) Historical prices based on AECO 7A (near month prices), 5A (daily price) expected to be equal to 7A over long term. 2019 historical prices: 7A \$1.60/MMBTU, 5A \$1.75/MMBTU  
(9) This forecast also applies to direct sales contracts and the Alberta gas reference price used in the Crown royalty calculations

Pulse's weighted average prices realized, for the year ended December 31, 2019, were \$1.25 per Mcf for conventional natural gas, \$65.94 per barrel for light and medium crude oil, and \$23.78 per barrel for natural gas liquids.

RECONCILIATION OF COMPANY GROSS RESERVES BY PRODUCT TYPE  
FORECAST PRICES AND COSTS AS OF DECEMBER 31, 2019

| Factors                        | Light and Medium Crude Oil |                     |                     | Heavy Crude Oil   |                     | Conventional Natural Gas |                  |                    |                    |
|--------------------------------|----------------------------|---------------------|---------------------|-------------------|---------------------|--------------------------|------------------|--------------------|--------------------|
|                                | Proved<br>(Mbbbl)          | Probable<br>(Mbbbl) | Proved<br>Plus      | Proved<br>(Mbbbl) | Probable<br>(Mbbbl) | Proved<br>Plus           | Proved<br>(MMcf) | Probable<br>(MMcf) | Proved<br>Plus     |
|                                |                            |                     | Probable<br>(Mbbbl) |                   |                     | Probable<br>(Mbbbl)      |                  |                    | Probable<br>(MMcf) |
| December 31, 2018              | 1,138.1                    | 542.6               | 1,680.7             | 23.1              | 187.4               | 210.5                    | 3,507.5          | 2,517.3            | 6,024.8            |
| Extensions & Improved Recovery | 0.0                        | 0.0                 | 0.0                 | 0.0               | 0.0                 | 0.0                      | 0.0              | 0.0                | 0.0                |
| Technical Revision             | (46.6)                     | (28.2)              | (74.8)              | (1.7)             | 19.5                | 17.8                     | (737.4)          | (487.6)            | (1,225.0)          |
| Discoveries                    | 0.0                        | 0.0                 | 0.0                 | 0.0               | 0.0                 | 0.0                      | 0.0              | 0.0                | 0.0                |
| Acquisitions                   | 0.0                        | 0.0                 | 0.0                 | 0.0               | 0.0                 | 0.0                      | 0.0              | 0.0                | 0.0                |
| Dispositions                   | 0.0                        | 0.0                 | 0.0                 | 0.0               | 0.0                 | 0.0                      | 0.0              | 0.0                | 0.0                |
| Economic Factors               | 0.0                        | 0.0                 | 0.0                 | 0.0               | 0.0                 | 0.0                      | 0.0              | 0.0                | 0.0                |
| Production                     | (31.7)                     | 0.0                 | (31.7)              | 0.0               | 0.0                 | 0.0                      | (296.1)          | 0.0                | (296.1)            |
| December 31, 2019              | 1,059.8                    | 514.4               | 1,574.2             | 21.4              | 206.9               | 228.3                    | 2,474.0          | 2,029.7            | 4,503.7            |

| Factors                        | Natural Gas Liquids |                     |                                       | Total             |                     |                                       |
|--------------------------------|---------------------|---------------------|---------------------------------------|-------------------|---------------------|---------------------------------------|
|                                | Proved<br>(Mbbbl)   | Probable<br>(Mbbbl) | Proved<br>Plus<br>Probable<br>(Mbbbl) | Proved<br>(Mbbbl) | Probable<br>(Mbbbl) | Proved<br>Plus<br>Probable<br>(Mbbbl) |
| December 31, 2018              | 204.8               | 128.8               | 333.6                                 | 1,950.5           | 1,278.5             | 3,229.0                               |
| Extensions & Improved Recovery | 0.0                 | 0.0                 | 0.0                                   | 0.0               | 0.0                 | 0.0                                   |
| Technical Revision             | (104.9)             | (54.2)              | (159.1)                               | (276.0)           | (144.3)             | (420.3)                               |
| Discoveries                    | 0.0                 | 0.0                 | 0.0                                   | 0.0               | 0.0                 | 0.0                                   |
| Acquisitions                   | 0.0                 | 0.0                 | 0.0                                   | 0.0               | 0.0                 | 0.0                                   |
| Dispositions                   | 0.0                 | 0.0                 | 0.0                                   | 0.0               | 0.0                 | 0.0                                   |
| Economic Factors               | 0.0                 | 0.0                 | 0.0                                   | 0.0               | 0.0                 | 0.0                                   |
| Production                     | (2.3)               | 0.0                 | (2.3)                                 | (83.4)            | 0.0                 | (83.4)                                |
| December 31, 2019              | 97.6                | 74.6                | 172.2                                 | 1,591.1           | 1,134.2             | 2,725.3                               |

## Additional Information Relating to Reserves Data

### Undeveloped Reserves

The following tables set forth the proved undeveloped reserves and the probable undeveloped reserves, each by product type, first attributed to Pulse in the three most recent financial years.

#### Proved Undeveloped Reserves

| Year | Light and Medium<br>Crude Oil<br>(Mbbbl) |                                 | Heavy Crude Oil<br>(Mbbbl)    |                                 | Conventional Natural<br>Gas<br>(MMcf) |                                | Natural Gas Liquids<br>(Mbbbl) |                                 |
|------|--|---------------------------------|-------------------------------|---------------------------------|---------------------------------------|--------------------------------|--------------------------------|---------------------------------|
|      | 1 <sup>st</sup><br>Attributed            | Total at<br>Year End<br>(Mbbbl) | 1 <sup>st</sup><br>Attributed | Total at<br>Year End<br>(Mbbbl) | 1 <sup>st</sup><br>Attributed         | Total at<br>Year End<br>(MMcf) | 1 <sup>st</sup><br>Attributed  | Total at<br>Year End<br>(Mbbbl) |
| 2017 | 147.9                                    | 147.9                           | 0.0                           | 0.0                             | 1,272.0                               | 1,272.0                        | 38.2                           | 38.2                            |
| 2018 | 169.8                                    | 309.4                           | 0.0                           | 0.0                             | 631.1                                 | 1,817.0                        | 18.8                           | 48.4                            |
| 2019 | 0.0                                      | 137.7                           | 0.0                           | 0.0                             | 0.0                                   | 1,170.8                        | 0.0                            | 29.3                            |

#### Probable Undeveloped Reserves

| Year  | Light and Medium<br>Crude Oil<br>(Mbbbl) |                                    | Heavy Crude Oil<br>(Mbbbl)    |                                 | Conventional<br>Natural Gas<br>(MMcf) |                                   | Natural Gas Liquids<br>(Mbbbl) |                                    |
|-------|--|------------------------------------|-------------------------------|---------------------------------|---------------------------------------|-----------------------------------|--------------------------------|------------------------------------|
|       | 1 <sup>st</sup><br>Attributed            | Total at<br>Year<br>End<br>(Mbbbl) | 1 <sup>st</sup><br>Attributed | Total at<br>Year End<br>(Mbbbl) | 1 <sup>st</sup><br>Attributed         | Total at<br>Year<br>End<br>(MMcf) | 1 <sup>st</sup><br>Attributed  | Total at<br>Year<br>End<br>(Mbbbl) |
| PRIOR | 0.0                                      | 0.0                                | 0.0                           | 97.2                            | 0.0                                   | 97.2                              | 0.0                            | 5.3                                |
| 2017  | 173.9                                    | 173.9                              | 94.2                          | 192.6                           | 1,496.0                               | 1,687.8                           | 44.9                           | 55.4                               |
| 2018  | 166.7                                    | 333.3                              | 0.0                           | 181.1                           | 203.8                                 | 1,756.1                           | 9.6                            | 52.8                               |
| 2019  | 0.0                                      | 163.4                              | 0.0                           | 201.0                           | 0.0                                   | 1,539.6                           | 0.0                            | 43.3                               |

### General Basis for Reserves and Timing of Development

The proved and probable undeveloped reserves have been estimated in accordance with procedures and standards contained in the COGE Handbook.

Approximately 100 percent of the proved undeveloped reserves are scheduled to be developed within the next 3 years and 100 percent of the proved plus probable undeveloped reserves are scheduled to be developed within the next four years.

### Significant Factors or Uncertainties Affecting Reserves Data

The process of evaluating reserves is inherently complex. It requires significant judgments and decisions 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 natural gas prices and costs change. The reserve estimates contained herein are based on current production forecasts, prices and economic conditions and other factors and assumptions that may affect the reserve estimates and the present worth of the future net revenue therefrom. These factors and assumptions include, among others: (i) historical production in the area compared with production rates from analogous producing areas; (ii) initial production rates; (iii) production decline rates; (iv) ultimate recovery of reserves; (v) success of future development activities; (vi) marketability of production; (vii) effects of government regulations; and (viii) other government levies imposed over the life of the reserves.

As circumstances change and additional data becomes available, reserve estimates also change. Estimates 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 government restrictions. Revisions to reserve estimates can arise from changes in year-end prices, reservoir performance and geologic conditions or production. These revisions can be either positive or negative.

While we do not anticipate any significant economic factors or significant uncertainties will affect any particular components of the reserves data, the reserves can be affected significantly by fluctuations in product pricing, capital expenditures, operating costs, royalty regimes and well performance that are beyond our control. See "*Risk Factors*".

#### **Additional Information Concerning Abandonment and Reclamation Costs**

Pulse bases its estimates for the costs of abandonment and reclamation of surface leases, wells and facilities on previous experience of management with similar well sites and facility locations. As at December 31, 2019, management expected to incur such costs on 20 net wells and 2 net facilities. The total of such costs expected to be incurred is \$2.305 million (undiscounted) and \$1.962 million (discounted at 2.5%). These estimated abandonment and reclamation costs do not include any locations for undrilled wells.

For the purposes of estimating the Reserves Data, abandonment and reclamation costs for all wells (both existing and undrilled wells) that have been attributed reserves have been taken into account. No allowance was made, however, for the abandonment and reclamation of any pipelines or facilities or for wells with no attributed reserves. Future net revenue figures set forth in this statement only include abandonment and reclamation liabilities for wells that have been assigned reserves.

Using public data and Pulse's own experience, Pulse estimates the amount and timing of future abandonment and reclamation expenditures at an operating area level. Wells within each operating area are assigned an average cost per well to abandon and reclaim the well. The estimated expenditures are based on current regulatory standards and actual abandonment and reclamation cost history.

Additional information related to our estimated share of future environmental and reclamation obligations for the working interest properties (including all abandonment and reclamation costs associated with all existing wells, facilities, pipelines and leases) can be found in Pulse's audited consolidated annual financial statements for the year ended December 31, 2019 and the accompanying management's discussion and analysis, which are available on SEDAR at [www.sedar.com](http://www.sedar.com).

### **Future Capital, Development, Abandonment and Reclamation Costs**

The table below sets out the capital, abandonment and reclamation costs deducted in the estimation of future net revenue attributed to proved reserves and proved plus probable reserves (using forecast prices and costs supplied by McDaniel).

| YEAR      | CAPITAL COST FORECAST (M\$) |                  |                      |                  | ABANDONMENT AND RECLAMATION COST FORECAST |                  |                      |                  |
|-----------|-----------------------------|------------------|----------------------|------------------|---|------------------|----------------------|------------------|
|           | Proved                      |                  | Proved Plus Probable |                  | Proved                                    |                  | Proved Plus Probable |                  |
|           | Undiscounted                | Discounted @ 10% | Undiscounted         | Discounted @ 10% | Undiscounted                              | Discounted @ 10% | Undiscounted         | Discounted @ 10% |
| 2020      | 5,335                       | 4,850            | 8,335                | 7,577            | 0   | 0                | 0                    | 0                |
| 2021      | 3,339                       | 2,760            | 3,339                | 2,760            | 0   | 0                | 0                    | 0                |
| 2022      | 3,375                       | 2,536            | 3,375                | 2,536            | 0   | 0                | 0                    | 0                |
| 2023      | 105                         | 72               | 3,548                | 2,423            | 0   | 0                | 0                    | 0                |
| 2024      | 0                           | 0                | 1,750                | 1,087            | 0   | 0                | 0                    | 0                |
| 2025      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| 2026      | 0                           | 0                | 0                    | 0                | 84  | 43               | 84                   | 43               |
| 2027      | 0                           | 0                | 0                    | 0                | 171                                       | 80               | 171                  | 80               |
| 2028      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| 2029      | 0                           | 0                | 0                    | 0                | 89  | 34               | 89                   | 34               |
| 2030      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| 2031      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| 2032      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| 2033      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| 2034      | 0                           | 0                | 0                    | 0                | 0   | 0                | 0                    | 0                |
| Remaining | 0                           | 0                | 0                    | 0                | 4,586                                     | 1,098            | 5,174                | 1,239            |
| Total     | 12,154                      | 10,217           | 20,347               | 16,382           | 4,929                                     | 1,254            | 5,517                | 1,395            |

#### **Sources of Funding**

It is expected that future capital costs required to develop the Corporation's assets will be financed through a combination of working capital, internally generated cash flows, and additional financing in the form of issuance of new equity or debt. There can be no guarantee that funds will be available or that the Board of Directors will allocate funding to develop all of the reserves attributable in the McDaniel Report. Failure to develop those reserves could have a negative impact on Pulse's future cash flow.

Interest expense or other costs of external funding are not included in the reserves and future net revenue estimates set forth above and would reduce the reserves and future net revenue to some degree depending upon the funding sources utilized. Pulse does not anticipate that interest or other funding costs would make further development of any of Pulse's properties uneconomic.

#### **Other Oil and Gas Information**

##### **Oil and Gas Properties**

The following is a description of Pulse's principal oil and natural gas properties on production or under development as at December 31, 2019. Reserve amounts are stated on a gross basis, before deduction of royalties, at December 31, 2019, based on forecast cost and price assumptions as supplied by McDaniel (see "Statement of Reserves Data and Other Oil and Gas Information"). Unless otherwise specified, gross and net acres and well count information are as at December 31, 2019. The estimate of reserves and future net revenue for individual properties may not reflect the same confidence level as estimates of reserves and future net revenue for all properties due to the effects of aggregation.

## **General**

Pulse's properties and facilities are located exclusively onshore in the Province of Alberta. Pulse operates in two core areas, namely the Bigoray area of North-Central Alberta and Queenstown area of Southern Alberta. Total capital expenditures, including cost of property acquisitions, for 2019 were \$9.17 million. In 2020, Pulse anticipates investing approximately \$10.5 million into further development capital, inclusive of reactivations and infrastructure for the EOR project.

## **Queenstown Area**

The Queenstown area is located 100 km south east of Calgary, Alberta, from Townships 18 to 19 and Ranges 21 to 22 west of the fourth meridian. Pulse holds a 100% working interest in approximately 24,326 net acres of land that contain a minimum of 7 high-grade drill ready horizontal locations established in the Mannville formation that are fully covered by 3D seismic data.

Pulse has currently been producing predominately from the Mannville formation, but Pulse believes that the geology suggests additional opportunities in the Eilerslie, Pekisko/Shunda and Nisku formations.

Pulse is the operator of 100% of its production in the area. During 2019, Pulse completed its first two wells that were drilled in December 2018. These wells were tied in and turned onto full time production in Q2 2019. These wells that initially showed good production test results had sand issues that limited the production on the wells for the remainder of 2019. Pulse was producing approximately 80 BOE/d from 7 wells, consisting of light oil and liquid rich conventional natural gas at December 31, 2019. Pulse plans to complete workovers on the two most recently drilled wells in 2020 in order to improve and stabilize production.

## **Bigoray Area**

The Bigoray area is located 110 km south west of Edmonton, Alberta near the town of Drayton Valley, from townships 50-51 and ranges 8-9 west of the fifth meridian. Pulse holds a 100% working interest in approximately 10,111 net acres of land.

Pulse has currently been producing high quality light oil from 1 of 2 Nisku Pinnacle reefs and liquids rich gas from the Mannville formation. Pulse believes that the geology suggests that additional opportunities exist in the Cardium Oil Pools, Mannville Gas Pools, Pekisko/Shunda Oil Pools, Nisku Oil Pools and Duvernay Shale trend.

Pulse is the operator of 100% of its production in the area. During 2019, Pulse drilled two wells in the Bigoray field that will ultimately be used as the injector wells for the EOR Project. The area was producing approximately 140 BOE/d, consisting of approximately 90 Bbl/d of light high quality oil and NGLs and 285 Mcf/d of conventional natural gas at December 31, 2019. In 2020, Pulse plans to invest capital in the area to begin the installation of infrastructure to continue progression of the EOR project.

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

The following table sets forth the number and status of wells in which Pulse had a working interest as at December 31, 2019.

| Area       | Oil Wells |     |                              |     | Natural Gas Wells |     |                              |     |
|------------|-----------|-----|------------------------------|-----|-------------------|-----|------------------------------|-----|
|            | Producing |     | Non-Producing <sup>(1)</sup> |     | Producing         |     | Non-Producing <sup>(1)</sup> |     |
|            | Gross     | Net | Gross                        | Net | Gross             | Net | Gross                        | Net |
| Queenstown | 5.0       | 5.0 | 1.0                          | 1.0 | 2.0               | 2.0 | 0.0                          | 0.0 |
| Bigoray    | 2.0       | 2.0 | 7.0                          | 7.0 | 1.0               | 1.0 | 0.0                          | 0.0 |
| Total      | 7.0       | 7.0 | 8.0                          | 8.0 | 3.0               | 3.0 | 0.0                          | 0.0 |

**Note:**

- <sup>(1)</sup> The non-producing oil and gas wells capable of production, but which are not currently producing, will be re-evaluated with respect to future product prices, proximity to facility infrastructure, design of future exploration and development programs and access to capital.

**Land Holdings and Unproved Properties**

The following table sets out Pulse's gross and net land holdings on its unproved properties to which no reserves have been specifically attributed as at December 31, 2019, all of which are in the Province of Alberta

| Area       | Developed Acres |       | Undeveloped Acres |        | Total Acres |        |
|------------|-----------------|-------|-------------------|--------|-------------|--------|
|            | Gross           | Net   | Gross             | Net    | Gross       | Net    |
| Queenstown | 2,571           | 1,931 | 22,587            | 22,395 | 25,158      | 24,326 |
| Bigoray    | 10,080          | 7,976 | 3,360             | 2,135  | 13,440      | 10,111 |
| Total      | 12,651          | 9,907 | 25,947            | 24,530 | 38,598      | 34,436 |

Pulse expects that the rights to explore, develop and exploit 22,057 net acres of its unproved land holdings will expire by December 31, 2020.

**Work Commitments**

There are currently no work commitments associated with any unproved property.

**Significant Factors or uncertainties relevant to properties with no attributed reserves**

Future oil and gas exploration may involve unprofitable efforts, not only from dry wells, but from wells that are productive but do not produce sufficient net revenues to return a profit after drilling, operating and other costs. In addition, drilling hazards or environmental damage could greatly increase the cost of operations, and various field operating conditions may adversely affect the production from successful wells. These conditions include delays in obtaining governmental approvals or consents, shut-ins of connected wells resulting from extreme weather conditions, insufficient storage or transportation capacity or other geological and mechanical conditions. In addition, oil and gas operations are subject to the risks of exploration, development and production of oil and natural gas properties, including encountering unexpected formations or pressures, premature declines of reservoirs, blow-outs, cratering, sour gas releases and fires and spills.

Pulse's properties with no attributed reserves have no material extraordinary risks or uncertainties beyond those, which are inherent of an oil and gas-producing Corporation.

## Forward Contract

Pulse does not hold any forward contract obligations and accordingly financial hedges have not been included in the economic forecasts.

## Tax Horizon

No material cash income taxes were paid by Pulse for the year ended December 31, 2019. Within the context of current commodity prices and capital spending plans, Pulse does not expect to incur income tax before 2022. This future tax horizon will also fluctuate depending on the ultimate nature and timing of Pulse's acquisitions and dispositions. If oil and natural gas prices were to strengthen beyond the levels anticipated by the current forward market, Pulse's tax pools would be utilized more quickly and it may experience higher than expected cash taxes or payment of such taxes in an earlier time period. However, it is difficult to give guidance on future taxability as Pulse operates within an industry that constantly changes given acquisitions, divestments, capital spending, dividends and overall commodity prices. See "Risk Factors".

## Costs Incurred

The following table summarizes the capital expenditures made by Pulse on its crude oil and natural gas properties for the period ended December 31, 2019:

| Area       | Property Acquisition Costs |                              |                            |                            |
|------------|----------------------------|------------------------------|----------------------------|----------------------------|
|            | Proved Properties<br>(M\$) | Unproved Properties<br>(M\$) | Exploration Costs<br>(M\$) | Development Costs<br>(M\$) |
| Queenstown | 0                          | 0                            | 0                          | 1,477                      |
| Bigoray    | 0                          | 0                            | 0                          | 6,342                      |

## Exploration and Development Activities

Pulse drilled 2 wells in the Bigoray field during the 2019 fiscal year to be used as injection wells for the EOR project. Additional work completed by Pulse was preparation work in anticipation of progressing the EOR project.

## Production Estimates

The table below sets out the volume of Pulse's production before royalties estimated for the year ending December 31, 2020 which is reflected in the estimate of gross proved reserves and probable reserves disclosed in the tables contained under "Statement of Reserves Data and Other Oil and Gas Information – Disclosure of Reserve Data".

| Reserves Category | Estimated Gross 2020 Production                       |   |                  |       |
|-------------------|---|---|------------------|-------|
|                   | Light and Medium Crude Oil <sup>(1)</sup><br>(Mbbbls) | Conventional Natural Gas <sup>(2)</sup><br>(MMcf) | NGLs<br>(Mbbbls) | MBOE  |
| <b>Proved</b>     |   |   |                  |       |
| Queenstown        | 33.7  | 329.9   | 8.2              | 96.9  |
| Bigoray           | 48.1  | 80.5  | 6.9              | 68.4  |
| Total Proved 2020 | 81.9  | 410.4   | 15.2             | 165.5 |

| <b>Proved Plus Probable</b> |             |              |             |              |
|-----------------------------|-------------|--------------|-------------|--------------|
| Queenstown                  | 35.1        | 342.4        | 8.6         | 100.8        |
| Bigoray                     | 64.1        | 90.8         | 7.7         | 86.9         |
| <b>Total Proved Plus</b>    | <b>99.1</b> | <b>433.2</b> | <b>16.2</b> | <b>187.5</b> |
| <b>Probable 2020</b>        |             |              |             |              |

- (1) Including other by-products.  
(2) Including solution gas and by-products and excluding by-products from oil wells.  
(3) Numbers may not add due to rounding.

### **Production History**

The following table sets forth certain information in respect of gross average daily production, product prices received, royalties, production costs and netbacks received by Pulse for each quarter of its most recently completed financial period:

|   | Year Ended December 31, 2019 |                         |                         |                         |
|---|------------------------------|-------------------------|-------------------------|-------------------------|
|   | 1 <sup>st</sup> Quarter      | 2 <sup>nd</sup> Quarter | 3 <sup>rd</sup> Quarter | 4 <sup>th</sup> Quarter |
| <b>AVERAGE DAILY PRODUCTION</b>               |                              |                         |                         |                         |
| Light/Medium Crude Oil (Bbls/d)               | 71.3                         | 101.8                   | 110.4                   | 82.6                    |
| Conventional Natural Gas (Mcf/d)              | 493.2                        | 895.6                   | 1042.3                  | 674.6                   |
| Natural Gas Liquids (Bbls/d)                  | 31.0                         | 41.5                    | 45.7                    | 35.5                    |
| <b>TOTAL PRODUCTION (BOE/d)</b>               | <b>184.5</b>                 | <b>292.5</b>            | <b>329.8</b>            | <b>230.6</b>            |
| <b>AVERAGE NET PRODUCTION PRICES RECEIVED</b> |                              |                         |                         |                         |
| Light/Medium Crude Oil (\$/Bbl)               | 63.73                        | 70.04                   | 65.18                   | 65.02                   |
| Conventional Natural Gas (\$/Mcf)             | 2.35                         | 0.80                    | 0.61                    | 2.22                    |
| Natural Gas Liquids (\$/Bbl)                  | 30.85                        | 11.01                   | 21.63                   | 18.85                   |
| <b>TOTAL REVENUE (\$/BOE)</b>                 | <b>34.08</b>                 | <b>28.34</b>            | <b>26.18</b>            | <b>32.22</b>            |
| <b>ROYALTIES PAID</b>                         |                              |                         |                         |                         |
| Light/Medium Crude Oil (\$/Bbl)               | 1.91                         | 4.94                    | 6.59                    | 1.68                    |
| Conventional Natural Gas (\$/Mcf)             | 0.31                         | 0.07                    | 0.07                    | 0.05                    |
| Natural Gas Liquids (\$/Bbl)                  | 0.93                         | 0.78                    | 2.19                    | 0.49                    |
| <b>Combined (\$/BOE)</b>                      | <b>1.70</b>                  | <b>2.02</b>             | <b>3.06</b>             | <b>1.08</b>             |
| <b>PRODUCTION COSTS</b>                       |                              |                         |                         |                         |
| Light/Medium Crude Oil (\$/Bbl)               | 15.26                        | 15.98                   | 38.72                   | 24.29                   |
| Conventional Natural Gas (\$/Mcf)             | 0.94                         | 1.01                    | 0.93                    | 1.43                    |
| Natural Gas Liquids (\$/Bbl)                  | 16.67                        | 14.97                   | 11.18                   | 15.49                   |
| <b>Combined (\$/BOE)</b>                      | <b>16.96</b>                 | <b>13.82</b>            | <b>22.07</b>            | <b>20.13</b>            |

## NETBACK RECEIVED

|                                   |       |       |       |       |
|-----------------------------------|-------|-------|-------|-------|
| Light/Medium Crude Oil (\$/Bbl)   | 46.56 | 49.11 | 19.87 | 39.05 |
| Conventional Natural Gas (\$/Mcf) | 1.10  | -0.28 | -0.39 | 0.74  |
| Natural Gas Liquids (\$/Bbl)      | 13.25 | -4.74 | 8.26  | 2.87  |
| Combined (\$/BOE)                 | 15.42 | 12.50 | 1.05  | 11.01 |

## Production Volume by Product

The following table discloses, for each of the Corporation's Bigoray and Queenstown fields, working interest production volumes for the year ended December 31, 2019 for each product type:

| Reserves Category | Light and Medium Oil <sup>(1)</sup><br>(Mbbls) | Conventional Natural Gas <sup>(2)</sup><br>(MMcf) | NGLs<br>(Mbbls) | MBOE |
|-------------------|--|---|-----------------|------|
| Queenstown        | 7.8  | 176.0   | 2.5             | 39.7 |
| Bigoray           | 22.3   | 73.2  | 9.0             | 43.4 |
| Total             | 30.1   | 249.2   | 11.5            | 83.1 |

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

(2) Including by-products, excluding solution gas and by-products from oil wells.

(3) Numbers may not add due to rounding.

## INDUSTRY CONDITIONS

Western Canada has seen significant growth in crude production volumes over recent years. This has resulted in pressure on the pipeline take-away capacity, leading to apportionment on the main lines and, in turn, backed-up local feeder pipelines. This has contributed to a widening of, and increased volatility in, the light oil pricing differential between WTI and Edmonton Par and the medium/heavy oil pricing differential between WTI and Cromer/WCS/Hardisty. Although pipeline expansions are ongoing and producers are increasingly turning to rail as an alternative means of transportation, the lack of firm pipeline capacity continues to affect the oil and natural gas industry and limit the ability to produce and to market production. In addition, the pro-rationing of capacity on the interprovincial systems also continues to affect the ability to export oil and natural gas.

## Market Access and Constraints

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. However, recent years have seen a perceived lack of policy and regulatory certainty at a federal level. The current federal government passed Bill C-69 legislation to amend the current federal approval processes. It is also uncertain whether any new approval process adopted by the federal government will result in a more efficient approval process. The lack of regulatory certainty is likely to have an influence on investment decisions for major projects. Even when projects are approved on a federal level, such projects often face further delays due to interference by provincial and municipal governments as well as court challenges 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.

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.

Bill C-48 was enacted in 2019, imposing a moratorium on tanker traffic transporting certain crude oil and NGL products from British Columbia's north coast.

With the regulatory uncertainty, the Canadian crude oil and natural gas industry has experienced significant difficulty expanding the transportation infrastructure for crude oil, natural gas and NGLs. Improved access to global markets could help alleviate the pressures affecting current commodity pricing. Several proposals have been announced to increase pipeline capacity, but the regulatory approval process and other economic and socio-political factors have led to the delay, suspension or cancellation of many projects.

### **Curtailment**

On December 2, 2018, the Government of Alberta announced that, commencing January 1, 2019, it would mandate a short-term reduction in provincial crude oil and crude bitumen production. This curtailment has remained in effect through 2019 with an anticipated conclusion in 2020. Pulse is not subject to the curtailment order.

### **Legislation and Regulation**

The oil and natural gas industry is subject to extensive controls and regulations governing its operations (including land tenure, exploration, development, production, refining, transportation and marketing) imposed by legislation enacted by various levels of government and with respect to pricing and taxation of oil and natural gas by agreements among the Governments of Canada and Alberta, each of which should be carefully considered by investors in the oil and natural gas industry. It is not expected that any of these controls or regulations will affect the operations of Pulse in a manner materially different than they would affect other oil and natural gas producers of similar size. All current legislation is a matter of public record and Pulse is unable to predict what additional legislation or amendments may be enacted. Some of the principal aspects of legislation, regulations and agreements governing the oil and natural gas industry are described further below.

### **Pricing and Marketing – Oil and Natural Gas**

The price of natural gas is determined by negotiation between buyers and sellers. Natural gas exported from Canada is subject to regulation by the NEB and the Government of Canada. Exporters are free to negotiate prices and other terms with purchasers, provided that the export contracts must continue to meet certain other criteria prescribed by the NEB and the Government of Canada. Natural gas (other than propane, butane, and ethane) exports for the term of less than two years or for a term of two to twenty years must be made pursuant to an NEB order. Any natural gas export to be made pursuant to a contract of longer duration (to a maximum of 25 years) or for a larger quantity requires an exporter to obtain an export license from NEB and issuance of such license a public hearing and the approval of the Governor in Council.

The Government of Alberta also regulates the volume of natural gas that may be removed for consumption elsewhere based on factors including, but not limited to, reserve availability, transportation arrangements and market considerations.

The lack of pipeline capacity continues to limit the ability to produce and market natural gas production although pipeline expansions are ongoing. In addition, the prorating of capacity on the interprovincial pipeline systems continues to limit oil exports.

Furthermore, recent years have seen the emergence of new sources of supply as natural gas deposits formerly regarded as inaccessible, particularly those locked in shales and other tight formations, both in Canada and the U.S., are now being exploited through new drilling and fracturing applications. Successful natural gas wells from these sources tend to be characterized by very high initial production volumes, which decline rapidly. From 2009 onwards, increased supply of natural gas from these sources, coupled with other factors such as reduced residential and industrial demand, resulted in a decrease in the price for natural gas. The effect on natural gas supply, as production of shale and other tight gas matures, cannot be determined, but the contribution of shale gas to aggregate supply will likely have a continuing and considerable influence on natural gas pricing, at least in the short and medium term.

From 2009 through to 2018, Pacific Rim countries, particularly China, Japan and South Korea, through sovereign oil companies, or representatives of end users, have expressed interest in or invested in, infrastructure projects and exploration and development activities in Canada, with a view to securing sources of future supply. Infrastructure projects have a long lead time, but if consummated, may result in Canada becoming a significant exporter of liquefied natural gas to the Pacific Rim, as an additional or successor market to the U.S. It may also lead to future internationalization of pricing for natural gas.

Pricing for natural gas is also affected by storage levels, which are built up in summer months and depleted in winter. Recent years have seen storage levels at the beginning of the winter withdrawal season higher than historical averages.

The producers of oil are entitled to negotiate sales contracts directly with oil purchasers, with the result that the market determines the price of oil. Oil prices are primarily based on worldwide supply and demand. The specific price depends in part on oil quality, prices of competing fuels, distance to market, and the value of refined products, the supply/demand balance, and contractual terms of sale. Oil exporters are also entitled to enter into export contracts with terms not exceeding one year in the case of light crude oil and two years in the case of heavy crude oil, provided that an order approving such export has been obtained from the NEB. Any oil export to be made pursuant to a contract of longer duration (to a maximum of 25 years) requires an exporter to obtain an export license from the NEB and the issuance of such a license requires a public hearing and the approval of the Governor in Council.

On February 8, 2018, the Government of Canada introduced Bill C-69, a draft legislation that was enacted in 2019 to replace the NEB with the Canadian Energy Regulator (“CER”). The CER would take over responsibilities involving the export of crude oil, natural gas and NGLs from Canada. At this time, it is believed that there will not be a substantive change under the new regime as currently drafted. Additionally, Pulse does not directly enter into contracts to export its production outside of Canada.

## **Provincial 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 crude oil, natural gas liquids, sulphur and natural gas production. Royalties payable on production from lands other than Crown lands are determined through negotiation between the mineral freehold owner and the lessee, although production from such lands is subject to certain provincial taxes. Royalties from production on Crown lands are determined by government regulation and are generally calculated as a percentage of the value of gross production. The rate of royalties payable 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 product produced.

Occasionally, the governments of the western Canadian provinces create incentive programs, often during periods of low commodity prices or to incent development of specific resources or specific technologies. Such programs can provide royalty rate reductions, royalty holidays or royalty tax credits to encourage exploration and development activity.

The following is a description of key royalty programs in the jurisdictions in which Pulse operates. This is not meant to be a fulsome description of the royalty program; please refer to the Province's website for full royalty details.

### *Alberta*

On January 29, 2016, the Government of Alberta released and accepted the Royalty Review Advisory Panel's recommendations, which outlined the implementation of a "Modernized Royalty Framework" for Alberta (the "MRF"). The MRF took effect on January 1, 2017. Wells drilled prior to January 1, 2017 continue to be governed by the prior "Alberta Royalty Framework" (the "ARF") for a period of 10 years, until January 1, 2027. The MRF is structured in three phases: (i) Pre-Payout, (ii) Mid-Life, and (iii) Mature. During the Pre-Payout phase, a fixed five per cent royalty applies until the well reaches payout. Well payout occurs when the cumulative revenue from a well is equal to the Drilling and Completion Cost Allowance (determined by a formula that approximates drilling and completion costs for wells based on depth, length and historical costs). The new royalty rate will be payable on gross revenue generated from all production streams (oil, gas, and natural gas liquids), eliminating the need to label a well as "oil" or "gas". Post-payout, the Mid-Life phase will apply a higher royalty rate than the Pre-Payout phase. In the Mature phase, once a well reaches the tail end of its cycle and production falls below a Maturity Threshold, the royalty rate will move to a sliding scale (based on volume and price) with a minimum gross royalty rate of five per cent. The downward adjustment of the royalty rate in the mature phase is intended to account for the higher per-unit fixed cost involved in operating an older well.

Future changes to the royalty regime in Alberta may have a material effect on Pulse. See "*Risk Factors – Fiscal and Royalty Regimes.*"

## **Climate Change Regulation**

### *Federal*

Canada is a signatory to the United Nations Framework Convention on Climate Change ("**UNFCCC**"), which was entered into in order work towards stabilizing atmospheric concentrations of greenhouse gas ("**GHG**") emissions at a level to prevent "dangerous anthropogenic interference with the climate system". The UNFCCC came into force on March 21, 1994. Subsequent international negotiations led to the Kyoto Protocol, an international treaty which extends the UNFCCC and commits its signatories to reduce GHG emissions. The Kyoto Protocol was adopted in December 1997 and came into force on February 16, 2005. Canada withdrew from the Kyoto Protocol effective December 2012. On December 12, 2015, the UNFCCC adopted the Paris Agreement, which Canada ratified on October 5, 2016.

In May 2015, Canada submitted its Intended Nationally Determined Contribution ("**INDC**") to the UNFCCC Secretariat, pledging a 30% reduction from 2005 levels – approximately 523 Mt – by 2030. In addition, provincial/territorial and federal leaders met and agreed that they would work together to build a national climate change plan. At a follow-up meeting of the First Ministers and Prime Minister on March 3, 2016, the parties agreed under the Vancouver Declaration on Clean Growth and Climate Change to launch a process to develop the Pan-Canadian Framework on Clean Growth and Climate Change (the "**Framework**"), which was released on December 9, 2016 at the First Ministers meeting. Saskatchewan was the only province that decided not to adopt the Framework. Prior to the release of the Framework, the Government of Canada announced in October 2016 that it would set a minimum price on carbon starting at \$10 per tonne

of CO<sub>2</sub>e in 2018, which will increase by \$10 per year until it reaches \$50 per tonne of CO<sub>2</sub>e by 2022. This approach will be reviewed in 2022 to confirm the path forward, including continued increases in stringency. Under the federal plan, each province and territory will be required to implement carbon pricing in its jurisdiction by 2018, whether in the form of a carbon tax or a cap-and-trade system. If the carbon price in a jurisdiction does not meet the federal minimum price, the Government of Canada will step in and impose a carbon price that makes up the difference and return the revenue to the province or territory. In addition, provincial and territorial goals for reducing emissions must be at least as stringent as federal targets.

In March 2016, a Joint Statement on Climate, Energy, and Arctic Leadership was issued. This joint statement sets out specific commitments on energy development, environmental protection, and Arctic leadership. In particular, Canada and the US have made commitments to reduce methane emissions by 40-45% below 2012 levels by 2025 from the oil and gas sector, finalize and implement the second phase of an aligned GHG emission standard for post-2018 model year on-road heavy duty vehicles, phase out fossil fuel subsidies, accelerate clean energy development and foster sustainable energy development.

With regards to GHG emissions, in March 2004, the Government of Canada announced the introduction of the Greenhouse Gas Emissions Reporting Program (“**GHGRP**”), which applies to large industrial GHG emitters in Canada. All facilities that emit the equivalent of 50,000 tonnes or more of CO<sub>2</sub>e per year are required to submit a report to Environment Canada. Facilities with emissions below the reporting threshold of 50,000 tonnes per year can voluntarily report their GHG emissions.

It is expected that any regulations eventually implemented by the Government of Canada will have an impact of the oil and gas industry as a whole, which could result in increased costs for Pulse to comply with such legislation. In the meantime, Pulse will continue to monitor the policies of the Government of Canada and any resulting legislation with respect to GHG emissions. The US Environmental Protection Agency (“**EPA**”) is proceeding to regulate greenhouse gases under the *Clean Air Act*. This EPA action is subject to legal and political challenges, the outcome of which cannot be predicted. The ultimate form of Canadian regulation is anticipated to be strongly influenced by the regulatory decisions made within the United States. Various states have enacted or are evaluating low carbon fuel standards, which may affect access to market for crude oils with higher emissions intensity.

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

#### *Alberta*

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 per cent and 25 per cent 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 one per cent, beginning in 2020. The Government of Alberta intends for this strategy to align with the federal Framework.

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.

### **Environmental Regulation**

The oil and natural gas industry is currently subject to environmental regulations pursuant to a variety of provincial and federal legislation, all of which is subject to governmental review and revision from time to time. Such legislation provides for restrictions and prohibitions on the release or emitting of various substances produced in association with certain oil and gas industry operations, such as sulphur dioxide and nitrous oxide. In addition, such legislation sets out the requirements for the satisfactory abandonment and reclamation of well and facility sites and provides for, among other things, restrictions and prohibitions on spills, releases, discharges, or emissions of various substances produced in association with oil and gas operations, habitat protection, and minimum setbacks of oil and gas activities from fresh water bodies. Compliance with such legislation can require significant expenditures and a 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. Certain environmental protection legislation may subject Pulse to statutory strict liability in the event of an accidental spill or discharge from a licensed facility, meaning that fault need not be established by claimants affected by such a spill or discharge. Further, as Canadian environmental legislation evolves, the use of administrative penalties by the imposition of fines for the commission of environmental offences on an absolute liability basis has grown.

#### *Federal*

Environmental legislation is evolving in a manner that has and is expected to continue to result in stricter standards and enforcement, larger fines, liabilities and sanctions, and potentially increased capital expenditures and operating costs.

#### *Alberta*

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

safety, environmental management and resource conservation while respecting the rights of landowners.

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

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

The Ministry of Indigenous Relations (the "MIR") began a renewal process for the Government of Alberta's Policy on Consultation with First Nations on Land and Natural Resource Management, 2013 and the Government of Alberta's Policy on Consultation with Metis Settlements on Land and Natural Resource Management, 2015. In 2018, the Ministry updated the Joint Operating Procedures for Consultation on Energy Resource activities ("JOP") and associated guidelines. The JOPs and Guide were updated to clarify roles and responsibilities, internal procedures and expectation for information sharing. As a result of the update, industry can make applications to the AER (PLA, MSL, LOC) for a Crown Disposition concurrently with application to the Aboriginal Consultation Office.

### **Liability Management Rating Programs**

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

Complementing the AB LMR Program, Alberta's OGCA establishes an orphan fund (the "Orphan Fund") to help pay the costs to suspend, abandon, remediate and reclaim a well, facility or pipeline included in the AB LLR Program and the AB OWL Program if a licensee or working interest participant ("WIP") becomes insolvent or is unable to meet its obligations. Licensees in the AB LLR Program and AB OWL Program fund the Orphan Fund through a levy administered by the AER. A separate orphan levy applies to persons holding licences subject to the AB LFP.

Collectively, these programs are designed to minimize the risk to the Orphan Fund posed by the unfunded liabilities of licensees and to prevent the taxpayers of Alberta from incurring costs to suspend, abandon, remediate and reclaim wells, facilities or pipelines.

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

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

The AER has also implemented the Inactive Well Compliance Program (the "IWCP") to address the growing inventory of inactive wells in Alberta and to increase the AER's surveillance and compliance efforts under *Directive 013: Suspension Requirements for Wells* ("Directive 013"). The IWCP applies to all inactive wells that are noncompliant with Directive 013 as of April 1, 2015. The objective is to bring all inactive noncompliant wells under the IWCP into compliance with the requirements of Directive 013 within five years. As of April 1, 2015, each licensee is required to bring 20 per cent 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 per cent of licensees operating in the province having met their annual quota. From April 1, 2016 to April 1, 2017, this number fell from 17,470 to 12,375 noncompliant wells, with 81 per cent of licensees operating in the province having met their annual quota. The IWCP completed its third year on March 31, 2018 but the AER has not yet released its third annual report.

As part of its strategy to encourage the decommissioning of inactive or marginal oil and gas infrastructure, the AER announced a voluntary area-based closure ("ABC") program in 2018. The ABC program is designed to reduce the cost of abandonment and reclamation operations while enabling participants to meet their liability reduction targets. Pulse continues to allocate funds to abandonment and reclamation operations and is in compliance with all requirements. Pulse has committed to certain targets for 2019 and 2020 as part of the ABC program.

## **Land Tenure**

Oil and natural gas located in the western Canadian provinces is owned both by the respective provincial governments and by private individuals. Provincial governments grant rights to explore for and produce oil and natural gas pursuant to leases, licenses and permits for varying periods and on conditions set forth in provincial legislation, including requirements to perform specific work or make payments. Where oil and natural gas is privately owned, rights to explore for and produce such oil and natural gas are granted by lease on such terms and conditions as may be negotiated.

## **RISK FACTORS**

Investors should carefully consider the risk factors set out below and consider all other information contained herein and in Pulse'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 Pulse's business and the oil and natural gas business generally.

### **Overview**

Pulse's business consists of the exploration and production of oil and natural gas projects, with producing properties in Alberta. There are a number of inherent risks associated with the exploration and production of oil and gas reserves. Many of these risks are beyond the control of Pulse.

### **Nature of Business**

An investment in Pulse should be considered highly speculative due to the nature of the Corporation's involvement in the exploration for, and the acquisition, production and marketing of, oil and natural gas reserves and its current stage of development. Oil and gas operations involve many risks, which even a combination of experience, knowledge, and careful evaluation may not be able to overcome. There is no assurance that further commercial quantities of oil and natural gas will be discovered or acquired by Pulse.

### **Commodity Price Volatility**

Pulse's results of operations and financial condition are dependent on the prevailing prices of oil and natural gas. Oil and natural gas prices have fluctuated widely in the recent past and are subject to fluctuations in response to relatively minor changes in supply, demand, market uncertainty and other factors that are beyond Pulse's control. Oil and natural gas prices are impacted by a number of factors including, but not limited to: the global supply of and demand for oil and natural gas; global economic conditions; the actions of the Organization of Petroleum Exporting Countries ("OPEC"); government regulation; political stability; the ability to transport crude to markets; developments related to the market for liquefied natural gas; the availability and prices of alternate fuel sources; and weather conditions. In addition, significant growth in crude production volumes in western Canada and the northern United States has resulted in pressure on transportation and pipeline capacity, contributing to the widening of the light oil pricing

differential between WTI and Cromer/WCS/Hardisty, resulting in fluctuations in the price of oil and natural gas. All of these factors are beyond Pulse's control and can result in a high degree of price volatility.

Fluctuations in currency exchange rates further compound this volatility when the commodity prices, which are generally set in United States dollars, are stated in Canadian dollars. Pulse's financial performance also depends on revenues from the sale of commodities, which differ in quality, and location from underlying commodity prices quoted on financial exchanges. Of particular importance are the price differentials between Pulse's oil prices and quoted market prices. Not only are these discounts influenced by regional supply and demand factors, they are also influenced by other factors such as transportation costs, capacity and interruptions; refining demand; the availability and cost of diluent used to blend and transport product; and the quality of the oil produced, all of which are beyond Pulse's control. See also "*Variations in Foreign Exchange Rates and Interest Rates*".

Fluctuations in the price of commodities and associated price differentials may impact the value of Pulse's assets and the ability to maintain its business and to fund growth projects. Prolonged periods of commodity price depression and volatility may also negatively impact Pulse's ability to meet guidance targets and meet all of its financial obligations as they come due. Any substantial and extended decline in the price of oil and gas would have an adverse effect on Pulse's carrying value of its reserves, borrowing capacity, revenues, profitability and cash flows from operations and may have a material adverse effect on Pulse's business, financial condition, results of operations, prospects and the level of expenditures for the development of oil and natural gas reserves, including delay or cancellation of existing or future drilling or development programs or curtailment in production.

Any material or sustained decline in prices could result in a reduction of Pulse's net production revenue. The economics of producing from some wells may change as a result of lower prices, which could result in reduced production of oil or gas and a reduction in the volumes of Pulse's reserves. Pulse might also elect not to produce from certain wells at lower prices. All of these factors could result in a material decrease in Pulse's expected net production revenue and a reduction in its oil and gas acquisition, development and exploration activities.

Oil and natural gas prices are expected to remain volatile for the near future as a result of market uncertainties over the supply and the demand of these commodities due to the current state of the world economies and OPEC actions. Volatile oil and gas prices make it difficult to estimate the value of producing properties for acquisition and often cause disruption in the market for oil and 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.

In addition, bank borrowings available to Pulse may, in part, be determined by Pulse's borrowing base. A sustained material decline in prices from historical average prices could reduce Pulse's borrowing base, therefore reducing the bank credit available to Pulse which could require that a portion, or all, of Pulse's bank debt be repaid.

Pulse conducts regular assessments of the carrying value of its assets in accordance with IFRS. If oil and natural gas prices decline significantly and remain at low levels for an extended period of time, the carrying value of Pulse's assets may be subject to impairment.

### **Capital Lending Markets**

As a result of recent economic uncertainties in the oil and gas industry and, in particular, the lack of risk capital available to the junior resource sector, Pulse, along with other junior resource entities, may have reduced access to bank debt and to equity. As future capital expenditures will be financed out of funds generated from operations, bank borrowings, if available, and possible

issuances of debt or equity securities, Pulse's ability to fund future capital expenditures is dependent on, among other factors, the overall state of lending and capital markets and investor and lender appetite for investments in the energy industry, generally, and Pulse's securities in particular.

To the extent that external sources of capital become limited, unavailable or available only on onerous terms, Pulse's ability to invest and to maintain existing assets may be impaired, and its assets, liabilities, business, financial condition and results of operations may be materially and adversely affected as a result.

### **Markets and Marketing**

The marketability and price of oil and natural gas that may be acquired or discovered by Pulse is, and will continue to be, affected by numerous factors beyond its control. Pulse's ability to market its oil and natural gas may depend upon its ability to acquire space on pipelines that deliver natural gas to commercial markets. Pulse may also be affected by deliverability uncertainties related to the proximity of its reserves to pipelines and processing and storage facilities and operational problems affecting such pipelines and facilities as well as extensive government regulation relating to price, taxes, royalties, land tenure, allowable production, the export of oil and natural gas and many other aspects of the oil and gas business.

### **Exploration and Production Risks**

Oil and natural gas exploration involves a high degree of risk and there is no assurance that expenditures made on exploration by Pulse will result in new discoveries of crude oil or natural gas in commercial quantities. It is difficult to project the costs of implementing an exploratory drilling program due to the inherent uncertainties of drilling in unknown formations, the costs associated with encountering various drilling conditions such as over pressured zones and tools lost in the hole, and changes in drilling plans and locations as a result of prior exploratory wells or additional seismic data and interpretations thereof.

Pulse currently has a limited number of specific identified exploration or development prospects. Management will continue to evaluate prospects on an ongoing basis in a manner consistent with industry standards and their past practices. The long-term commercial success of Pulse depends on its ability to find, acquire, develop and commercially produce oil and natural gas reserves. No assurance can be given that Pulse will be able to locate satisfactory properties for acquisition or participation. Moreover, if such acquisitions or participations are identified, Pulse may determine that current markets, terms of acquisition and participation or pricing conditions make such acquisitions or participations uneconomic.

Future oil and gas exploration may involve unprofitable efforts, not only from dry wells, but from wells that are productive but do not produce sufficient net revenues to return a profit after drilling, operating and other costs. Completion of a well does not assure a profit on the investment or recovery of drilling, completion and operating costs. In addition, drilling hazards or environmental damage could greatly increase the cost of operations, and various field operating conditions may adversely affect the production from successful wells. These conditions include delays in obtaining governmental approvals or consents, shut-ins of connected wells resulting from extreme weather conditions, insufficient storage or transportation capacity or other geological and mechanical conditions. While close well supervision and effective maintenance operations can contribute to maximizing production rates over time, production delays and declines from normal field operating conditions cannot be eliminated and can be expected to adversely affect revenue and cash flow levels to varying degrees.

In addition, oil and gas operations are subject to the risks of exploration, development and production of oil and natural gas properties, including encountering unexpected formations or pressures, premature declines of reservoirs, blow outs, cratering, sour gas releases, fires, spills

or leaks. These risks could result in personal injury, loss of life, and environmental or property damage. Losses resulting from the occurrence of any of these risks could have a materially adverse effect on future results of operations, liquidity and financial conditions.

### **Additional Funding Requirements**

Pulse's cash flow from its reserves may not be sufficient to fund its ongoing activities at all times. From time to time, Pulse may require additional financing in order to carry out its oil and gas acquisition, exploration and development activities. Failure to obtain such financing on a timely basis could cause Pulse to forfeit its interest in certain properties, miss certain acquisition opportunities and reduce or terminate its operations. If Pulse's revenues from its reserves decrease as a result of lower oil and natural gas prices or otherwise, it will affect Pulse's ability to expend the necessary capital to replace its reserves or to maintain its production. If Pulse's cash flow from operations and current cash balance is not sufficient to satisfy its capital expenditure requirements, there can be no assurance that additional debt or equity financing will be available to meet these requirements or available on favorable terms.

### **Substantial Capital Requirements and Liquidity**

Pulse anticipates that it will make substantial capital expenditures for the acquisition, exploration, development and production of oil and natural gas reserves in the future. If Pulse's future revenues or reserves decline, Pulse may have limited ability to expend the capital necessary to undertake or complete future drilling programs. There can be no assurance that debt or equity financing, or cash flow from 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 Pulse. Moreover, future activities may require Pulse to alter its capitalization significantly. The inability of Pulse to access sufficient capital for its operations could have material adverse effect on Pulse's financial condition, results of operations or prospects.

### **Fiscal and Royalty Regimes and Trade Agreements**

In addition to federal regulation, each province has legislation and regulations, which govern land tenure, drilling and construction permits, royalties, production rates, environmental protection and other matters. The royalty regime is a significant factor in the profitability of oil and natural gas production. Royalties payable on production from lands other than Crown lands are determined by negotiations between the mineral owner and the lessee. Crown royalties are determined by governmental regulation and are generally calculated as a percentage of the value of the gross production, and the rate of royalties payable generally depends in part on well productivity, geographical location, field discovery data and the type or quality of the petroleum product produced. See "*Industry Conditions*".

The royalty regime in any jurisdiction in which Pulse's oil and natural gas assets are located, may be subject to further review and changes which could adversely impact Pulse's financial condition and operations. An increase in royalties would reduce Pulse's earnings and could make future capital investments, or Pulse's operations, less economic.

Change in laws or free trade agreements, including those affecting tax, royalties and other financial and trade matters, and interpretations of those laws and trade agreements may adversely affect Pulse and its security holders. For example, the U.S., Mexico and Canada negotiated certain changes to imposition of additional duties and tariffs, and could result in other changes that could negatively impact Pulse's business.

### **Reserve and Resource Estimates**

There are numerous uncertainties inherent in estimating quantities of crude oil, natural gas and natural gas liquids resources, reserves and cash flows to be derived therefrom, including many

factors beyond Pulse's control. For prospective resources, the chance of commerciality will be the product of the chance that a project will result in a discovery of petroleum or natural gas and the chance that an accumulation will be commercially developed. There is no certainty that any portion of the prospective resources will be discovered. If discovered, there is no certainty that it will be commercially viable to produce any portion of the resources.

The reserve and associated cash flow information and estimates represent estimates only. In general, estimates of economically recoverable oil and natural gas reserves and the future net cash flows therefrom are based upon a number of variable factors and assumptions, such as historical production from the properties, production rates, ultimate reserve recovery, timing and amount of capital expenditures, marketability of oil and gas, royalty rates, the assumed effects of regulation by governmental agencies and future operating costs, all of which may vary 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 expected therefrom prepared by different engineers, or by the same engineers at different times, may vary. Pulse'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. Further, the evaluations are based in part on the assumed success of exploitation activities intended to be undertaken in future years. The reserves and estimated cash flows to be derived therefrom contained in such evaluations will be reduced to the extent that such exploitation activities do not achieve the level of success assumed in the evaluation.

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

Actual future net revenue from Pulse's assets 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 revenues derived therefrom will vary from the estimates, and such variations could be material.

There are numerous uncertainties inherent in estimating quantities of resources, including many factors beyond Pulse's control, and no assurance can be given that the indicated level of resources will be realized. In general, estimates of recoverable resources are based upon a number of factors and assumptions made as of the date on which the resource estimates were determined, such as geological and engineering estimates which have inherent uncertainties, the assumed effects of regulation by governmental agencies and estimates of future commodity prices and operating costs, all of which may vary considerably from actual results. All such estimates are, to some degree, uncertain and classifications of resources are only attempts to define the degree of uncertainty involved. For these reasons, estimates of the economically recoverable natural gas and the classification of such resources based on risk of recovery prepared by different engineers or by the same engineers at different times may vary substantially.

Geological risking of prospective resources addresses the probability of success for the discovery of petroleum; this risk analysis is conducted independently of probabilistic estimates of petroleum volumes and without regard to the chance of development. Principal risk elements of the petroleum system include: (a) trap and seal characteristics; (b) reservoir presence and quality; (c) source rock capacity, quality and maturity; and (d) timing, migration and preservation of petroleum in relation to trap and seal formation. Geological risk assessment is a highly subjective process dependent upon the experience and judgment of the evaluators.

Estimates with respect to resources that may be developed and produced in the future are often based upon volumetric calculations and upon analogy to similar types of resources, rather than upon actual production history. Estimates based on these methods are generally less reliable than those based on actual production history. Subsequent evaluation of the same resources based upon production history will result in variations, which may be material, in the estimated resources.

Pulse's prospective resources described herein are those undiscovered, highly speculative resources estimated beyond reserves or contingent resources where geological and geophysical data suggest the potential for discovery of petroleum but where the level of proof is insufficient for classification as reserves or contingent resources.

Resources estimates may require revision based on actual production experience. Market price fluctuations of natural gas prices may render uneconomic the recovery of the resources.

### **Reserve Replacement**

Pulse's future oil and natural gas reserves, production, and cash flows to be derived therefrom are highly dependent on Pulse successfully acquiring or discovering new reserves. Without the continual addition of new reserves, any existing reserves Pulse may have at any particular time and the production therefrom will decline over time as such existing reserves are exploited. A future increase in Pulse's reserves will depend not only on Pulse's ability to develop any properties it may have from time to time, but also on its ability to select and acquire suitable producing properties or prospects. There can be no assurance that Pulse's future exploration and development efforts will result in the discovery and development of additional commercial accumulations of oil and natural gas.

### **Finding, Developing and Acquiring Petroleum and Natural Gas Reserves on an Economic Basis**

Petroleum and natural gas reserves naturally deplete as they are produced over time. The success of Pulse's business is highly dependent on its ability to acquire and/or discover new reserves in a cost efficient manner. Substantially all of Pulse's cash flow is derived from the sale of the petroleum and natural gas reserves it accumulates and develops. In order to remain financially viable, Pulse must be able to replace reserves over time at a lesser cost on a per unit basis than its cash flow on a per unit basis. The reserves and costs used in this determination are estimated each year based on numerous assumptions and these estimates and costs may vary materially from the actual reserves produced or from the costs required to produce those reserves. Pulse mitigates this risk by employing a qualified and experienced team of petroleum and natural gas professionals, operating in geological areas in which prospects are well understood by management and by closely monitoring the capital expenditures made for the purposes of increasing its petroleum and natural gas reserves.

### **Availability of Drilling Equipment and Access Restrictions**

Oil and natural gas exploration and development activities are dependent on the availability of drilling and related equipment in the particular areas where such activities will be conducted. Demand for such limited equipment or access restrictions may affect the availability of such equipment to Pulse and may delay exploration and development activities. Seasonal restrictions to access Pulse work sites may delay exploration and development activities.

### **Environmental Risks**

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 international conventions and federal,

provincial and municipal laws and regulations. Environmental legislation provides for, among other things, restrictions and prohibitions on spills, releases or emissions of various substances produced in association with oil and gas operations. The legislation also requires that wells and facility sites be operated, maintained, abandoned and reclaimed to the satisfaction of applicable regulatory authorities. Compliance with such legislation can require significant expenditures and a breach 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 crude 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 Pulse to incur costs to remedy such discharge. No assurance can be given that the application of environmental laws to the business and operations of Pulse will not result in a curtailment of production or a material increase in the costs of production, development or exploration activities or otherwise adversely affect Pulse's financial condition, results of operations or prospects.

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

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

### **Permits and Licenses**

The operations of Pulse may require licenses and permits from various governmental authorities. There can be no assurance that Pulse will be able to obtain all necessary licenses and permits that may be required to carry out exploration and development at its properties.

### **Project Risks**

Pulse will manage and participate in a variety of small and large projects in the conduct of its business. Project delays may delay expected revenues from operations. Project cost estimates may not be accurate due to a lack of history of comparable projects. Furthermore, significant project cost over-runs could make a project uneconomic.

Pulse's ability to execute projects and market oil and natural gas will depend upon numerous factors beyond Pulse's control, including: the availability of processing capacity; the availability and proximity of pipeline capacity; the availability of storage capacity; 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; unexpected cost increases; accidental events; currency fluctuations; changes in regulations; 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, Pulse could be unable to execute projects on time, on budget or at all, and may not be able to effectively market the oil and natural gas that it produces.

### **Regulatory**

Oil and natural gas operations (exploration, production, pricing, marketing and transportation) are subject to extensive controls and regulations imposed by various levels of government that may be amended from time to time. See "Industry Conditions".

## **Insurance**

Pulse's involvement in the exploration for and development of oil and gas properties may result in Pulse becoming subject to liability for pollution, blow-outs, property damage, personal injury or other hazards. Although Pulse has obtained insurance in accordance with industry standards to address such risks, such insurance has limitations on liability that may not be sufficient to cover the full extent of such liabilities. In addition, such risks may not, in all circumstances be insurable or, in certain circumstances, Pulse may elect not to obtain insurance to deal with specific risks due to the high premiums associated with such insurance or for other reasons. The payment of such uninsured liabilities would reduce the funds available to Pulse. The occurrence of a significant event that Pulse is not fully insured against, or the insolvency of the insurer of such event, could have a material adverse effect on Pulse's financial position, results of operations or prospects.

## **Competition**

Pulse will actively compete for acquisitions, exploration leases, licenses and concessions and skilled industry personnel with a substantial number of other oil and gas companies, many of which have significantly greater financial resources than Pulse. Pulse's competitors will include major integrated oil and natural gas companies and numerous other independent oil and natural gas companies and individual producers and operators.

The oil and gas industry is highly competitive. Pulse's competitors for the acquisition, exploration, production and development of oil and natural gas properties, and for capital to finance such activities include companies that have greater financial and personnel resources available to them than Pulse.

Pulse's ability to successfully bid on and acquire additional property rights, to discover reserves, to participate in drilling opportunities and to identify and enter into commercial arrangements with customers will be dependent upon developing and maintaining close working relationships with its future industry partners and joint operators and its ability to select and evaluate suitable properties and to consummate transactions in a highly competitive environment.

## **Cost of New Technologies**

The oil industry is characterized by rapid and significant technological advancements and introductions of new products and services utilizing new technologies. Other oil 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 Pulse. There can be no assurance that Pulse will be able to respond to such competitive pressures and implement such technologies on a timely basis or at an acceptable cost. One or more of the technologies currently utilized by Pulse or implemented in the future may become obsolete. In such case, Pulse's business, financial condition and results of operations could be materially adversely affected. If Pulse is unable to utilize the most advanced commercially available technology, its business, financial condition and results of operations could be materially adversely affected.

## **Title to Assets**

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 an unforeseen defect in the chain of title will not arise. Pulse's actual interest in properties may vary from its records. If a title defect does exist, it is possible that Pulse may lose all or a portion of the properties to which the title defect relates, which may have a material adverse effect on Pulse's business, financial condition, results of operations and prospects. There may be valid challenges to title, or proposed legislative changes which affect title, to the oil and natural gas properties

Pulse controls that, if successful or made into law, could impair Pulse's activities on them and result in a reduction of the revenue received by Pulse.

### **Liability Management**

Alberta has developed a liability management program 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 becomes defunct. These programs generally 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 required. Changes of the ratio of Pulse's deemed assets to deemed liabilities or changes to the requirements of liability management programs may result in significant increases to the security that Pulse must post. See "*Industry Conditions*".

### **Climate Change**

Pulse's exploration and production facilities and other operations and activities emit greenhouse gases and which may require Pulse to comply with greenhouse gas emissions legislation at the provincial or federal level. Climate change policy is evolving at regional, national and international levels, and political and economic events may significantly affect the scope and timing of climate change measures that are ultimately put in place. Given the evolving nature of the debate related to climate change and the control of greenhouse gases and resulting requirements, it is not possible to predict the impact on Pulse and its operations and financial condition.

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

Pulse makes acquisitions and dispositions of businesses and assets that occur in the ordinary course of business. Achieving the benefits of acquisitions depends in part on successfully consolidating functions and integrating operations and procedures in a timely and efficient manner, as well as realizing the anticipated growth opportunities and synergies from combining the acquired businesses and operations with those of Pulse. The integration of acquired businesses may require substantial management effort, time and resources and may divert management's focus from other strategic opportunities and operational matters. Management continually assesses the value and contribution of individual properties and other assets. In this regard, non-core assets are periodically disposed of, so that Pulse can focus its efforts and resources more efficiently. Depending on the state of the market for such non-core assets, certain non-core assets of Pulse, if disposed of, could realize less than their carrying amount on the consolidated financial statements of Pulse.

### **Operational Dependence**

Other companies operate some of the assets in which Pulse has an interest. As a result, Pulse will have limited ability to exercise influence over the operation of those assets or their associated costs, which could adversely affect Pulse's financial performance. Pulse's return on assets operated by others will therefore depend upon a number of factors that may be outside of Pulse's control, including 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.

### **Reliance on Key Personnel**

Pulse'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 Pulse's business, financial condition, results of operations and prospects. Pulse does not have any key personnel insurance in effect. The contributions of the existing management team to Pulse's immediate and near term operations 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 Pulse will be able to continue to attract and retain all personnel necessary for the development and operation of our business. Investors must rely upon the ability, expertise, judgment, discretion, integrity and good faith of Pulse's management.

### **Management of Growth**

Pulse may be subject to growth-related risks including capacity constraints and pressure on its internal systems and controls. The ability of Pulse 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 Pulse to deal with this growth could have a material adverse impact on its business, operations and prospects.

### **Variations in Foreign Exchange Rates and Interest Rates**

World oil and gas prices are quoted in United States dollars and the price received by Canadian producers is therefore affected by the Canadian/United States dollar exchange rate, which will fluctuate over time. Future Canadian/United States exchange rates could accordingly impact the future value of Pulse's reserves as determined by independent evaluators. Furthermore, an increase in interest rates could result in a significant increase in the amount Pulse pays to service debt.

### **Issuance of Debt**

From time to time, Pulse may enter into transactions to acquire assets or the shares of other corporations. These transactions may be financed partially or wholly with debt, which may increase Pulse's debt levels above industry standards. Neither Pulse's articles of incorporation nor its bylaws limit the amount of indebtedness that Pulse may incur. The level of Pulse's indebtedness from time to time could impair Pulse's ability to obtain additional financing in the future on a timely basis to take advantage of business opportunities that may arise. Pulse's ability to meet its debt service obligations will depend on Pulse's future operations, which are subject to prevailing industry conditions and other factors, many of which are beyond the control of Pulse. As certain of the indebtedness of Pulse would bear interest at rates which fluctuate with prevailing interest rates, increases in such rates would increase Pulse's interest payment obligations and could have a material adverse effect on Pulse's financial condition and results of operations. Further, Pulse's indebtedness would be secured by substantially all of Pulse's assets. In the event of a violation by Pulse of any of its loan covenants or any other default by Pulse on its obligations relating to its indebtedness, the lender could declare such indebtedness to be immediately due and payable and, in certain cases, foreclose on Pulse's assets. In addition, oil and gas operations are subject to the risks of exploration, development and production of oil and natural gas properties, including encountering unexpected formations or pressures, premature declines of reservoirs, blow-outs, cratering, sour gas releases, fires and spills. Losses resulting from the occurrence of any of these risks could have a materially adverse effect on future results of operations, liquidity and financial condition.

### **Hedging**

From time to time, Pulse 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, if commodity prices increase beyond the levels set in such agreements, Pulse will not benefit from such increases. Similarly, from time to time Pulse may enter into agreements to fix the exchange rate of Canadian to United States dollars in order to offset the risk of revenue losses if the Canadian dollar increases in value compared to the United States dollar; however, if the Canadian dollar declines in value compared to the United States dollar, Pulse will not benefit from its fluctuating exchange rate.

## **Litigation**

In the normal course of Pulse'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, related to personal injuries, property damage, property tax, land rights, the environment and contract disputes. The outcome of outstanding, pending or future proceedings cannot be predicted with certainty and may be determined adversely to Pulse and as a result, could have a material adverse effect on Pulse's assets, liabilities, business, financial condition and results of operations.

## **Aboriginal Claims**

Aboriginal peoples have claimed aboriginal title and rights to portions of Western Canada. Pulse 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 Pulse's business, financial condition, results of operations and prospects.

## **Tax Risk**

Pulse strives to run its business in as tax efficient a manner as possible. The tax system in Canada is complicated and subject to changes. Changes in taxation laws or reviews and assessments could result in higher taxes being payable by Pulse, which could adversely affect Pulse's profitability. Pulse has no control over changes in tax laws or reviews and assessments.

## **Breach of Confidentiality**

While discussing potential business relationships or other transactions with third parties, Pulse may disclose confidential information relating to the business, operations or affairs of this Corporation. Although confidentiality agreements are signed by third parties prior to the disclosure of any confidential information, a breach could put Pulse at competitive risk and may cause significant damage to its business. The harm to Pulse'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, Pulse 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.

## **Conflicts of Interest**

Directors and officers of Pulse may also be directors and officers of other oil and gas companies involved in oil and gas exploration and development, and conflicts of interest may arise between their duties as officers and directors of Pulse and as officers and directors of such other companies. Such conflicts must be disclosed in accordance with, and are subject to such other procedures and remedies as apply under the ABCA.

## **Dilution**

Pulse may make future acquisitions or enter into financings or other transactions involving the issuance of its securities, which may be dilutive.

## **Seasonality**

The level of activity in the Canadian oil and 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. Also, certain oil

and 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. There can be no assurance that these seasonal factors will not adversely affect the timing and scope of Pulse's exploration and development activities, which could in turn have a material adverse impact on Pulse's business, operations and prospects.

### **Third Party Credit Risk**

Pulse is, or may be, exposed to third party credit risk through its contractual arrangements with its current or future joint venture partners, hedging counterparties, marketers of its petroleum and natural gas production and other parties. In the event such entities fail to meet their contractual obligations to Pulse, such failures could have a material adverse effect on Pulse and its cash flow from operations. In addition, poor credit conditions in the industry and of joint venture partners may impact a joint venture partner's willingness to participate in Pulse's ongoing capital program, potentially delaying the program and the results of such program until Pulse finds a suitable alternative partner.

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

Fuel conservation measures, alternative fuel requirements, increasing consumer demand for alternatives to oil and natural gas, and technological advances in fuel economy and energy generation devices could reduce the demand for crude oil and other liquid hydrocarbons. Pulse cannot predict the impact of changing demand for oil and natural gas products, and any major changes may have a material adverse effect on Pulse's business, financial condition, results of operations and cash flows.

### **Expansion into New Activities**

The operations and expertise of Pulse's management are currently focused primarily on oil and gas production, exploration and development in Western Canada. In the future, Pulse 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 Pulse's exposure to one or more existing risk factors, which may in turn result in Pulse's future operational and financial conditions being adversely affected.

### **Forward-Looking Information May Prove to be Inaccurate**

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

Additional information on the risks, assumptions and uncertainties are found in this AIF under the heading "*Special Note Regarding Forward-Looking Statements*" above.

## **DIVIDENDS**

Pulse has not declared or paid any dividends since incorporation. Any decision to pay dividends on the Common Shares will be made by the Board of Directors on the basis of Pulse's earnings, financial requirements and other conditions existing at the relevant time.

## DESCRIPTION OF SHARE CAPITAL

Pulse is authorized to issue an unlimited number of Common Shares without nominal or par value. As at the date of this AIF, there were 151,592,357 Common Shares issued and outstanding. Please see below for details related Pulse's outstanding Warrants.

### Common Shares

The holders of Common Shares are entitled to receive notice of, and to one vote per Common Share at every meeting of shareholders of Pulse, to receive such dividends as the Board declares and to share equally in the assets of Pulse remaining upon the liquidation, dissolution or winding up of Pulse after the creditors of Pulse have been satisfied.

### Warrants

As of the date of this AIF, Pulse has 21,988,682 Warrants outstanding entitling the holder of each warrant to acquire one Common Share of Pulse at an exercise price of \$0.30 until November 19, 2020.

## MARKET FOR SECURITIES AND TRADING HISTORY

The Common Shares are listed and posted for trading on the TSXV under the symbol "PUL".

The following table sets forth the price range (high and low closing prices) in Canadian dollars of Common Shares and volume traded on the TSXV for the periods indicated.

| 2019      | High  | Low   | Volume    |
|-----------|-------|-------|-----------|
|           | \$    | \$    |           |
| January   | 0.20  | 0.15  | 3,886,940 |
| February  | 0.175 | 0.14  | 2,353,110 |
| March     | 0.175 | 0.145 | 1,513,901 |
| April     | 0.225 | 0.16  | 2,561,580 |
| May       | 0.20  | 0.17  | 1,610,850 |
| June      | 0.18  | 0.16  | 847,423   |
| July      | 0.16  | 0.12  | 655,621   |
| August    | 0.16  | 0.085 | 941,345   |
| September | 0.115 | 0.07  | 1,090,700 |
| October   | 0.105 | 0.055 | 1,135,919 |
| November  | 0.06  | 0.04  | 1,436,550 |
| December  | 0.065 | 0.03  | 2,331,690 |

## PRIOR SALES

During the year ended December 31, 2019, 7,383,008 warrants were exercised at a price of \$0.17 per option for proceeds of \$1,255,111. As at the date of this AIF there are no options granted and outstanding.

## ESCROWED SECURITIES

On February 24, 2017, the Wolfpack Acquisition was completed pursuant to which Pulse acquired all of the issued and outstanding shares of Pulse OpCo. This transaction qualified as Pulse's QT. As part of the Wolfpack Acquisition, 15,720,057 Common Shares (the "**Escrow Shares**") were deposited in escrow with Computershare Trust Company of Canada. Upon the issuance by the TSXV of their final bulletin on March 7, 2017 approving the Wolfpack Acquisition and other elements of Pulse's QT, 10% of the Common Shares were released from escrow with an additional 15% authorized to be released on the dates that are 6, 12, 18, 24, 30 and 36 months following March 7, 2017.

The following table summarizes Pulse's securities that remained in Escrow at December 31, 2019:

| <b>Designation of Class</b> | <b>Number Held in Escrow</b> | <b>Percentage of Class</b> |
|-----------------------------|------------------------------|----------------------------|
| Common Shares               | 2,358,009 <sup>(1)</sup>     | 1.55%                      |

**Notes:**

(1) The remaining 2,358,009 escrow shares were released on March 7, 2020.

## DIRECTORS AND OFFICERS

The following table sets forth the names and municipalities of residence of the directors and executive officers of Pulse as at the date of this AIF, their respective positions and offices with Pulse, date first elected as a director (where applicable), their principal occupation(s) within the past five years and the number of Common Shares beneficially owned, directly or in directly, or controlled by the director or executive officer.

| <b>Name and Municipality of Residence and Office Held, if any</b>   | <b>Present and Previous Principal Occupation</b>  | <b>Date First Elected as a Director</b> | <b>Number and Percentage of Common Shares Beneficially Owned, Directly or Indirectly, or Controlled</b> |
|---|---|---|---|
| <b>Garth Johnson</b> <sup>(1)</sup><br><i>Surrey, British Columbia</i><br><br>Chief Executive Officer, Secretary and Director | Chief Executive Officer, Secretary and Director of Pulse from February 24, 2017 to present; Co-founder, CEO, Director and Corporate Secretary of Hydrate Resources Corp. since 2015, which became a 100% owned subsidiary of Pulse on February 24, 2017; Director and CEO of TAG Oil Ltd. until he resigned as TAG'S CEO in 2015. | February 24, 2017                       | 6,084,208<br>(4.01%)  |

| Name and Municipality of Residence and Office Held, if any  | Present and Previous Principal Occupation   | Date First Elected as a Director | Number and Percentage of Common Shares Beneficially Owned, Directly or Indirectly, or Controlled |
|---|---|----------------------------------|--|
| <p><b>Drew Cadenhead</b> <sup>(2)</sup><br/><i>Oakura, New Zealand</i></p> <p>President, Chief Operating Officer and Director</p> | <p>President, Chief Operating Officer and Director of Pulse from February 2017 to present; In 2015, co-founder, President, COO and a Director of Hydrate Resources Corp. which became a 100% owned subsidiary of Pulse on February 24, 2017; Chief Operating Officer of TAG Oil Ltd., until he resigned as TAG's COO in 2015.</p> | <p>February 24, 2017</p>         | <p>5,646,710<br/>(3.72%)</p>   |
| <p><b>Douglas Ellenor</b> <sup>(1)(2)</sup><br/><i>Surrey, British Columbia</i></p> <p>Director</p>                               | <p>Director of Pulse from February 2017 to present; Since 2004, Dr. Ellenor has continued working in the oil and gas industry as an independent consultant.</p>   | <p>February 24, 2017</p>         | <p>321,750<br/>(0.21%)</p>   |
| <p><b>Daniel Bolstad</b><br/><i>Auckland, New Zealand</i></p> <p>Director</p>   | <p>Director of Pulse from December 18, 2018 to present; Since 2010 to present, Mr. Bolstad has worked as a lawyer at the offices of Kensington Swan in Auckland New Zealand.</p>  | <p>December 18, 2018</p>         | <p>2,464,319<br/>(1.63%)</p>   |
| <p><b>John Doyle</b> <sup>(1)(2)</sup><br/><i>Okotoks, Alberta</i></p> <p>Director</p>  | <p>Director of Pulse from February 2017 to present; Since 2005, Co-founded and Partner of Base Engineering; Contract drilling and completion Manager for TAG Oil Ltd. from 2009 until 2014.</p>   | <p>February 24, 2017</p>         | <p>Nil</p>   |
| <p><b>Aaron Doyle</b> <sup>(3)</sup><br/><i>Calgary, Alberta</i></p> <p>Chief Financial Officer</p>                               | <p>Chief Financial Officer of Pulse from February 2017 to present. Owner and Director of private independent consulting company, AFLO Resources Corp. from 2006 until present.</p>  | <p>N/A</p>                       | <p>102,334<br/>(0.07%)</p>   |

**Notes:**

- (1) Member of the Audit Committee.
- (2) Member of the Corporate Governance and Compensation Committee.
- (3) Not a director

The directors and executive officers listed above collectively own 14,619,321 Common Shares, representing 9.64% of the issued and outstanding Common Shares on the date hereof. The directors listed above will hold office until the next annual meeting of Pulse or until their successors are elected or appointed.

### **Corporate Cease Trade Orders or Bankruptcies**

Except as disclosed in this AIF, no director or officer of Pulse, has, within ten years before the date hereof, been a director, chief executive officer or chief financial officer of any person or company that, while such person was acting in that capacity:

(a) was the subject of a cease trade or similar order or an order that denied the other company access to any exemptions under applicable securities law, for a period of more than 30 consecutive days (collectively, an “**Order**”); 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.

Except as disclosed in this AIF, no director, executive officer, or to the best of Pulse’s knowledge, any shareholder holding a sufficient number of securities of Pulse to affect materially control of Pulse, is, or within ten years prior to the date of this AIF has been, a director or executive officer of any company (including Pulse) 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.

### **Personal Bankruptcies**

No director or executive officer of Pulse or a shareholder holding a sufficient number of securities of Pulse to affect materially the control of Pulse, has, within the past ten years prior to the date of this AIF, become 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 the assets of such person.

### **Penalties or Sanctions**

No director or officer of Pulse has been:

(a) subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or

(b) subject to any other penalties or sanctions imposed by a court or regulatory body, including a self-regulatory body, that would likely be considered important to a reasonable investor in making an investment decision.

### **Conflicts of Interest**

There are potential conflicts of interest to which some of the directors and officers of Pulse are subject to. All of the directors and officers of Pulse are engaged in and will continue to be engaged in companies or businesses, which may be in competition with the business of Pulse. Accordingly, situations may arise where some or all of the directors and officers of Pulse will be in direct competition with Pulse. Conflicts, if any, will be subject to the procedures and remedies as provided under the ABCA. See also “*Risk Factors*”.

## **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

There are no legal proceedings material to Pulse to which Pulse is a party or of which any of its property is the subject matter, and there are no such proceedings known to Pulse to be contemplated.

There are no penalties or sanctions imposed against Pulse by a court relating to securities legislation or by a securities regulatory authority during the most recently completed financial year, there are no other penalties or sanctions imposed by a court or regulatory body against Pulse that would likely be considered important to a reasonable investor in making an investment decisions, and there are no settlement agreements Pulse entered into before a court relating to securities legislation or with a securities regulatory authority during the most recently completed financial year.

## **INTERESTS OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

Except as disclosed in this AIF, there were no material interests, direct or indirect, of directors or executive officers of Pulse, any shareholder who beneficially owns, or controls or directs, directly or indirectly, more than 10% of the outstanding Common Shares, or any known associate or affiliate of such persons, in any transaction within the three most recently completed financial years of Pulse or during the current financial year which has materially affected, or is reasonably expected to materially affect, Pulse.

## **TRANSFER AGENT AND REGISTRAR**

Pulse's transfer agent and registrar is Computershare Trust Company of Canada at its offices at 530 – 8th Avenue SW, Calgary, Alberta, T2P 3S8.

## **MATERIAL CONTRACTS**

Except as disclosed herein and other than contracts entered into in the ordinary course of business, there have been no material contracts entered into by Pulse within the most recently completed financial year, or before the most recently completed financial year that are still in effect.

## **INTERESTS OF EXPERTS**

There is no person or company whose profession or business gives authority to a statement made by such person or company and who is named as having prepared or certified a statement, report or valuation described or included in a filing, or referred to in a filing, made under NI 51-102 by Pulse during, or related to, the year ended December 31, 2019 other than McDaniel, Pulse's independent engineering evaluators, and Manning Elliott LLP, Pulse's auditors.

None of the principals of McDaniel have any registered or beneficial interests, direct or indirect, in any securities or other property of Pulse or of Pulse's associates or affiliates either at the time they prepared the statement, report or valuation prepared by it, at any time thereafter or to be received by them.

Manning Elliott LLP, Pulse's auditors, are independent within the meaning of the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulation.

In addition, none of the aforementioned persons or companies, nor any director, officer or employee of any of the aforementioned persons or companies, is or is expected to be elected, appointed or employed as a director, officer or employee of Pulse or any associate or affiliate of Pulse.

## **ADDITIONAL INFORMATION**

Additional information relating to Pulse can be found under Pulse's profile on SEDAR at [www.sedar.com](http://www.sedar.com). Additional information, including directors' and officers' remuneration and indebtedness, principal holders of Pulse's securities and securities authorized for issuance under equity compensation plans is contained in Pulse's information circular for Pulse's most recent shareholders' meeting that involved the election of directors. Additional financial information is contained in Pulse's consolidated financial statements and the related management's discussion and analysis for the year ended December 31, 2019.

Additional copies of this AIF and the materials listed in the preceding paragraph are available on the foregoing basis and upon request by contacting Pulse at its offices at 500, 666 Burrard Street, Vancouver, BC V6C 3P6 or by phone at (604) 909-1152.

**SCHEDULE A - FORM 51-101F2 REPORT ON RESERVES DATA BY  
INDEPENDENT QUALIFIED RESERVES EVALUATOR OR AUDITOR**

April 2, 2020

**Pulse Oil Corp.**

500, 666 Burrard Street  
Vancouver, British Columbia  
V6C 3P6

Attention: The Board of Directors of Pulse Oil Corp.

Re: **Form 51-101F2**  
**Report on Reserves Data by Independent Qualified Reserves Evaluator or Auditor**  
**of Pulse Oil Corp. (the “Company”)**

To the Board of Directors of Pulse Oil Corp. (the “Company”):

1. We have evaluated the Company’s reserves data as at December 31, 2019. The reserves data are estimates of proved reserves and probable reserves and related future net revenue as at December 31, 2019 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 + 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, 2019, and identifies the respective portions thereof that we have evaluated and reported on to the Company’s Management:

| Independent Qualified Reserves Evaluator | Effective Date of Evaluation] Report | Location of Reserves | Net Present Value of Future Net Revenue \$M<br>(before income taxes, 10% discount rate) |           |          |        |
|--|--------------------------------------|----------------------|---|-----------|----------|--------|
|  |                                      |                      | Audited   | Evaluated | Reviewed | Total  |
| McDaniel                                 | December 31, 2019                    | Canada               | -   | 29,728    | -        | 29,728 |

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

  
\_\_\_\_\_  
Michael J. Verney, P. Eng.  
Executive Vice President

Calgary, Alberta, Canada  
April 2, 2020

## SCHEDULE B - FORM 51-101F3 REPORT OF MANAGEMENT AND DIRECTORS ON OIL AND GAS DISCLOSURE

*Terms to which a meaning is ascribed in National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities have the same meaning herein.*

Management of Pulse Oil Corp. ("**Pulse**" or the "**Corporation**") are responsible for the preparation and disclosure of information with respect to Pulse's oil and gas activities in accordance with securities regulatory requirements. This information includes reserves data.

An independent qualified reserves evaluator has evaluated Pulse's reserves data. The report of the independent qualified reserves evaluator is presented in the Annual Information Form of Pulse for the year ended December 31, 2019.

The Board of Directors of Pulse has:

(a) reviewed Pulse'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 Board of Directors has reviewed Pulse'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 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 51-101F2 which is the report of the independent qualified reserves evaluator on the reserves data; and

(c) the content and filing of this report.

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

/s/ Garth Johnson

Garth Johnson  
CEO, Secretary and Director

/s/ Drew Cadenhead

Drew Cadenhead  
President, COO and Director

/s/ Douglas Ellenor

Douglas Ellenor  
Director

/s/ John Doyle

John Doyle  
Director

/s/ Daniel Bolstad

Daniel Bolstad  
Director

## **SCHEDULE C - FORM 52-110F1 AUDIT COMMITTEE CHARTER**

### AUDIT COMMITTEE

#### AUDIT COMMITTEE CHARTER

This charter governs the operations of the Audit Committee (the "**Committee**") of the Board of Directors (the "**Board**") of Pulse Oil Corp. (the "**Corporation**") who shall have the oversight responsibility, authority and specific duties as described below.

#### **Composition**

The Committee will be made up of three or more directors as determined by the Board, a majority of whom shall be independent as defined in applicable securities law, Each Committee member shall satisfy the financial literacy and experience requirements of applicable securities laws, rules or guidelines, any applicable stock exchange requirements or guidelines and any other applicable regulatory rules. Determinations as to whether a particular director satisfies the requirements for membership on the Committee shall be made by the Board with the assistance of the Corporate Governance and Compensation Committee, it requested by the Board.

Members of the Committee shall be appointed by the Board. The Corporate Governance and Compensation Committee of the Board shall recommend to the Board eligible directors to fill vacancies on the Committee. Each member shall serve until his or her successor is appointed, unless such member shall resign or be removed by the Board or otherwise cease to be a director of Pulse. The Board shall fill any vacancy if the membership of the Committee is less than three directors.

The Chair of the Committee may be designated by the Board or, if it does not do so, the members of the Committee may elect a Chair by vote of a majority of the full Committee membership.

#### **Communication, Expenses and Authority to Engage Advisors**

The Committee shall have access to such officers and employees of Pulse, Pulse's external auditor and to such information respecting Pulse, as it considers to be necessary or advisable in order to perform its duties and responsibilities.

The Committee provides an avenue for communication, particularly for outside directors, with the external auditor and financial and senior management and the Board. The external auditor shall have a direct line of communication to the Committee through its Chair and shall report directly to the Committee. The Committee, through its Chair, may directly contact any employee in Pulse as it deems necessary, and any employee may bring before the Committee, on a confidential basis, any matter invoking, Pulse's financial practices or transactions.

The Committee has the authority to engage independent counsel and other advisors as it determines necessary to carry out its duties and to set the compensation for any such counsel and advisors. Any engagement of independent counsel or other advisors is to be at Pulse's expense.

Pulse shall be responsible for all expenses of the Committee that are deemed necessary, or appropriate by the Committee in carrying out its duties.

## **Meetings and Record Keeping**

Meetings of the Committee shall be conducted as follows:

1. the Committee shall meet at least four times annually at such times and at such locations as the Chair of the Committee shall determine, provided that meetings shall be scheduled so as to permit timely review of the quarterly and annual financial statements and reports. The external auditor or any two members of the Committee may also request a meeting of the Committee. The Chair of the Committee shall hold in camera sessions of the Committee, without management present, at every meeting;
2. a resolution in writing, signed by all of the members of the Committee is as valid as if it had been passed at a meeting of the Committee;
3. the Chair of the Committee shall preside as chair at each Committee meeting and lead Committee discussion on meeting agenda items;
4. the quorum for meetings shall be a majority of the members of the Committee, present in person or by telephone or by other telecommunication device that permits all persons participating, in the meeting to hear each other;
5. if the Chair of the Committee is not present at any meeting of the Committee, one of the other members of the Committee who is present at the meeting shall be chosen by the Committee to preside at the meeting;
6. the Chair shall, in consultation with management and the external auditor, establish the agenda for the meetings and instruct management to circulate properly prepared agenda materials to the Committee with sufficient time for study prior to the meeting;
7. every question at a Committee meeting shall be decided by a majority of the votes cast; in the event of a tie vote on any matter, such matter shall be presented to the Board for its consideration and determination;
8. the President and Chief Executive Officer, the Chief Financial Officer and the Controller shall be available to advise the Committee, shall receive notice of meetings and may attend meetings of the Committee at the invitation of the Chair of the Committee. Other management representatives or employees may be invited to attend as necessary; and
9. a Committee member, or any other person selected by the Committee, shall be appointed at each meeting to act as secretary for the purpose of recording the minutes of each meeting.

The Committee shall provide the Board with a copy of the minutes of such meetings. Where minutes have not yet been prepared, the Chair shall provide the Board with oral reports on the activities of the Committee. All material information reviewed and discussed by the Committee at any meeting shall be referred to in the minutes and made available for examination by the Board upon request to the Chair.

## **Responsibilities**

The Committee is part of the Board. Its primary functions are to assist the Board in fulfilling its oversight responsibilities with respect to: (i) the oversight, review and approval of the financial statements and the accounting and financial reporting processes of Pulse; (ii) the assessment of the system of internal controls that management has established; and (iii) the external audit process. In addition, the Committee shall assist the Board, as requested, in fulfilling its oversight responsibilities with respect to (a) financial policies and strategies; (b) financial risk management practices; and (c) transactions or circumstances which could materially affect the financial profile of Pulse.

The Committee shall be directly responsible, in its capacity as a committee of the Board, for recommending to the Board the nomination of the external auditor and the compensation and retention of the external auditor and overseeing the work of the external auditor and the relationship of the external auditor with Pulse (including the resolution of disagreements between management and the external auditor regarding financial reporting).

The Committee should have a clear understanding with the external auditor that they must maintain an open and transparent relationship with the Committee, and that the ultimate accountability of the external auditor is to the shareholders of Pulse.

## **Specific Duties**

### **A. Relationship with External Auditor**

The Committee shall:

1. consider and make a recommendation to the Board as to the nomination or re-appointment of the external auditor for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services, ensuring that such auditor is a participant in good standing pursuant to applicable securities laws;
2. consider and make a recommendation to the Board as to the compensation of the external auditor which is to be paid by Pulse;
3. oversee the work of the external auditor in performing their audit, review or attest services and oversee the resolution of any disagreements between management of Pulse and the external auditor;
4. review and discuss with the external auditor all significant relationships that the external auditor and its affiliates have with Pulse and its affiliates in order to determine the external auditor's independence;
5. as may be required by applicable securities laws, rules and guidelines, either:
  - (a) pre-approve all non-audit services to be provided by the external auditor to Pulse (and its subsidiaries, if any), or, in the case of de minimus non-audit services, approve such non-audit services prior to the completion of the audit; or
  - (b) adopt specific policies and procedures for the engagement of the external auditor for the purposes of the provision of non-audit services; and

6. review and approve the hiring policies of Pulse regarding partners and employees and former partners and employees of the present and former external auditor of Pulse.

B. Financial Statements and Financial Reporting

The Committee shall:

1. review with management and the external auditor, and recommend to the Board for approval, the annual and interim financial statements of Pulse and related annual and interim financial reporting, including management's discussion and analysis and earnings press releases prior to the public disclosure of such information;
2. upon completion of each audit, review with the external auditor the results of such audit. This process should include but not be limited to reviewing:
  - (a) the scope and quality of the audit work performed;
  - (b) the capability of Pulse's financial personnel;
  - (c) the co-operation received from Pulse's financial personnel during the audit;
  - (d) compliance with covenants under loan agreements;
  - (e) significant transactions outside of the normal business of Pulse; and
  - (f) significant proposed adjustments and recommendations for improving internal accounting controls, accounting principles or management systems;
3. review with management and recommend to the Board for approval, any financial statements of Pulse which have not previously been approved by the Board and which are to be included in a prospectus or other public disclosure document of Pulse;
4. consider and be satisfied that adequate policies and procedures are in place for the review of Pulse's public disclosure of financial information extracted or derived from Pulse's financial statements, and periodically assess the adequacy of such procedures; and
5. review accounting, tax, legal and financial aspects of the operations of Pulse as the Committee considers appropriate

C. Internal Controls

The Committee shall:

1. review with management and the external auditor, the adequacy and effectiveness of the internal control and management information systems and procedures of Pulse (with particular attention given to accounting, financial statements and financial reporting matters) and determine whether Pulse is in compliance with applicable legal and regulatory requirements and with Pulse's policies;
2. read the external auditor's recommendations regarding any matters, including internal control and management information systems and procedures, and management's

responses thereto, report to the Board on such recommendations and identify which recommendations should be adopted and provide reasons for rejecting those recommendations the Committee feels should not be adopted; and

3. establish procedures for the receipt, retention and treatment of complaints, submissions and concerns regarding accounting, internal controls or auditing matters and the confidential, anonymous submission by employees of concerns regarding questionable accounting or auditing matters.

D. Financial Risk Management

The Committee shall:

1. review the appropriateness and effectiveness of Pulse's policies and business practices that have an impact on the financial integrity of Pulse, including those relating to accounting and management reporting;
2. review the financial risks arising from Pulse's exposure to such things as commodity prices, interest rates, foreign currency exchange rates and credit, the activities of Pulse's marketing group, tax and government audits, tax filings and other matters affecting Pulse's status or payment of income tax, and Pulse's insurance program, including, directors' and officers' insurance, and report the results of such reviews to the Board for the purpose of assisting the Board in identifying the principal business risks associated with the business of Pulse.