



Pulse Seismic Inc.
Annual Information Form
For the year ended December 31, 2019

February 12, 2020

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FORWARD LOOKING INFORMATION

This document contains information that constitutes “forward-looking information” or “forward-looking statements” (collectively, “forward-looking information”) within the meaning of applicable securities legislation. Forward-looking information is often, but not always, identified by the use of words such as "anticipate", "believe", "expect", "plan", "intend", "forecast", "target", "project", "guidance", "may", "will", "should", "could", "estimate", "predict" or similar words suggesting future outcomes or language suggesting an outlook.

This AIF contains forward-looking information which includes, but is not limited to, statements regarding:

- Estimated future demand for seismic data;
- Estimated future seismic data sales;
- Estimated future demand for participation surveys;
- Pulse’s capital allocation strategy;
- Pulse’s dividend policy;
- Pulse’s business and growth strategy; and
- Other expectations, beliefs, plans, goals, objectives, assumptions, information and statements about possible future events, conditions, results and performance, as they related to the Company or to the oil and gas industry as a whole.

By its very nature, forward-looking information involves inherent risks and uncertainties, both general and specific, and risks that predictions, forecasts, projections and other forward-looking statements will not be achieved. Pulse does not publish specific financial goals or otherwise provide guidance, due to the inherently poor visibility of seismic revenue. We caution readers not to place undue reliance on these statements as a number of important factors could cause the actual results to differ materially from the beliefs, plans, objectives, expectations and anticipations, estimates and intentions expressed in such forward-looking information. These factors include, but are not limited to:

- Uncertainty of the timing and volume of data sales from the newly acquired seismic data library, which was partially funded with long-term debt;
- Volatility of oil and natural gas prices;
- Risks associated with the oil and gas industry in general;
- The Company’s ability to access external sources of debt and equity capital;
- Credit, liquidity and commodity price risks;
- The demand for seismic data and participation surveys;
- The pricing of data library licence sales;
- Cybersecurity;
- Relicensing (change-of-control) fees and partner copy sales;
- The level of pre-funding of participation surveys, and the Company’s ability to make subsequent data library sales from such participation surveys;
- The Company’s ability to complete participation surveys on time and within budget;
- Environmental, health and safety risks;
- Federal and provincial government laws and regulations, including those pertaining to taxation, royalty rates, environmental protection and safety;
- Competition;
- Dependence on qualified seismic field contractors;
- Dependence on key management, operations and marketing personnel;

- The loss of seismic data;
- Protection of intellectual property rights;
- The introduction of new products; and
- Climate change.

Pulse cautions that the foregoing list of factors that may affect future results is not exhaustive. Additional information on these risks and other factors which could affect the Company's operations and financial results is included under "Risk Factors" in the Company's most recent MD&A, audited annual financial statements, management information circular, quarterly reports, material change reports and news releases. Copies of the Company's public filings are available on SEDAR at www.sedar.com.

When relying on forward-looking information to make decisions with respect to Pulse, investors and others should carefully consider the foregoing factors and other uncertainties and potential events. Furthermore, the forward-looking information contained in this AIF provided as of the date of this AIF and the Company does not undertake any obligation to update publicly or to revise any of the included forward-looking information, except as required by law. The forward-looking information in this document is provided for the limited purpose of enabling current and potential investors to evaluate an investment in Pulse. Readers are cautioned that such forward-looking information may not be appropriate, and should not be used, for other purposes.

CORPORATE STRUCTURE

Name, Address and Incorporation

Pulse Seismic Inc. (“Pulse” or the “Company”) was originally incorporated pursuant to the Canada Business Corporations Act as 144020 Canada Ltd. on August 26, 1985.

On September 16, 1999 the Company acquired “Pulse - A Joint Venture” and commenced the business of non-exclusive seismic data acquisition and marketing. On October 12, 1999 the Company changed its name from Augusta Gold Corporation to Pulse Data Inc.

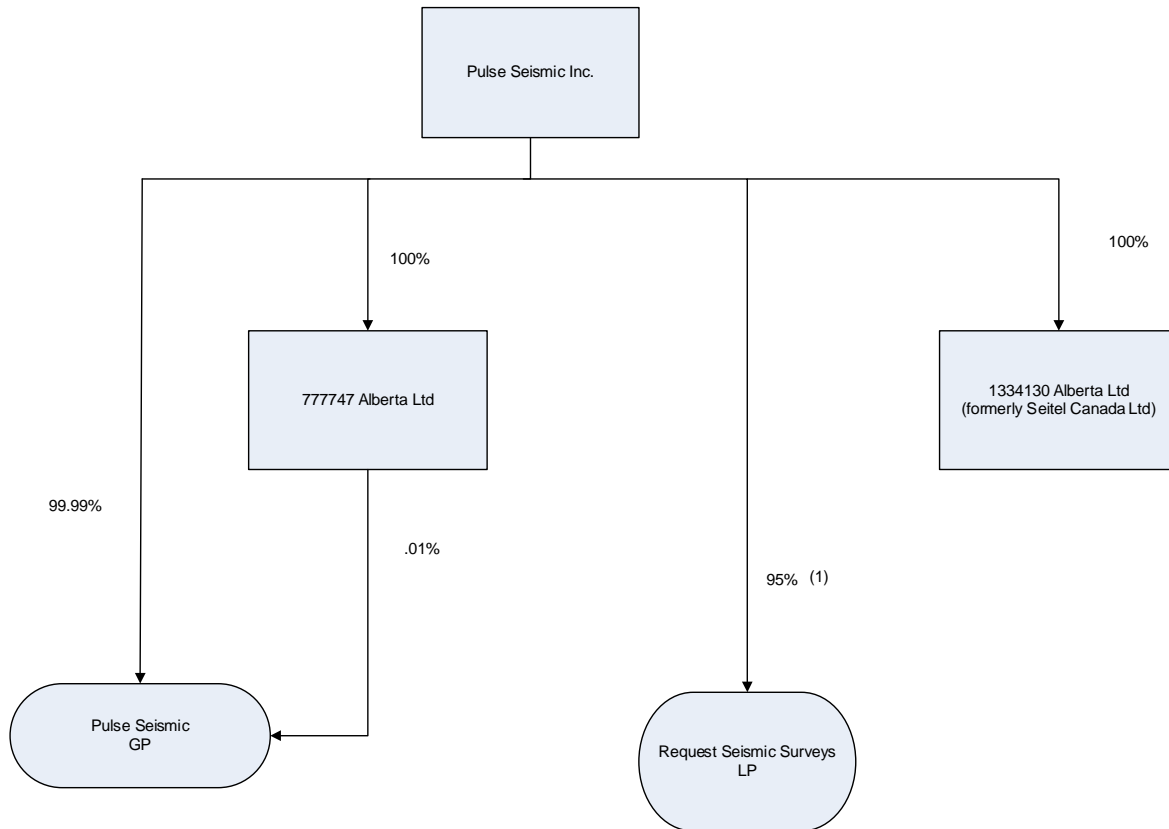
At the Company’s Annual and Special Meeting of Shareholders held on May 21, 2009, shareholders approved the change of the Company’s name from Pulse Data Inc. to Pulse Seismic Inc.

Restated Articles of Incorporation were filed by the Company under the Canada Business Corporations Act on May 18, 2012, consolidating all amendments to the Company’s articles since the original incorporation. A Restated Certificate of Incorporation was issued under the Canada Business Corporations Act, a copy of which is on SEDAR at www.sedar.com.

Pulse's head office and registered office is located at 2700, 421 – 7th Avenue S.W., Calgary, Alberta, T2P 4K9.

Intercorporate Relationships

The following diagram sets out the intercorporate relationships among the Company and its subsidiaries at December 31, 2019.



- (1) Pulse is the general partner of and owns all of the Class A units of the limited partnership (95% of the total Class A and Class B units). A third party owns all of the Class B units of the limited partnership (5% of the total Class A and Class B units). The Class B units entitle the holder to 5% of the gross license sales revenues from a specific seismic database only. In 2019, \$56,239 (2018 - \$31,822) was earned by the third party. Each of the Class A and Class B units are entitled to one vote per unit at all meetings of the unit holders of the limited partnership.

GENERAL DEVELOPMENT OF THE BUSINESS

The general development of the Company's business over the last three completed financial years is as follows:

2019:

Corporate Acquisition:

- On January 15, 2019 Pulse completed the acquisition of the pure play data library company, Seitel Canada Ltd., ("Seitel") Pulse acquired approximately 36,354 net square kilometres of 3D and 379,207 net kilometres of 2D seismic data, more than doubling the size of its seismic data library. The January 15, 2019 news release, the Share Purchase Agreement as well as the related credit agreements can be found on SEDAR at www.sedar.com.

Seismic Data Library Sales:

- Pulse generated \$23.6 million of data library sales in 2019 compared to \$10.1 million in 2018. The increase in the size of the data library due to the acquisition of Seitel Canada Ltd. was the reason for the increase.

Credit Facility:

- To fund the purchase of Seitel, Pulse amended its syndicated credit facility to include a \$15.0 million term facility and a \$40.0 million revolver of which \$8.0 million was drawn on January 15th, 2019 for the acquisition. Additionally, the Company arranged \$10.0 million of subordinated debt and agreed to a potential sales based, \$5.0 million deferred payment to the vendor. During 2019, \$1.13 million of the term loan was repaid, \$100,000 was paid on the revolver and the full \$5.0 million deferred payment to the vendor was paid.

2018:

Seismic Data Library Sales:

- Pulse generated \$10.1 million of data library sales in 2018 compared to \$43.5 million in 2017.

Data Acquisitions:

- Pulse acquired 3,000 net kilometres of 2D seismic data in 2018.

Capital Allocation:

- In 2018 Pulse purchased and cancelled 227,500 common shares through its normal course issuer bid for a total of \$673,000.

2017:

Seismic Data Library Sales:

- Pulse generated \$43.5 million of data library sales in 2017 compared to \$14.3 million in 2016.

Data Acquisitions:

- Pulse acquired 309 net square kilometres of 3D seismic data in 2017.

Credit Facility:

- In December 2017, Pulse extended the maturity date of the revolving credit facility to February 13, 2021.

Capital Allocation:

- In December 2017 Pulse invested \$1.45 million to purchase 3D seismic data in Alberta.
- In 2017 Pulse purchased and cancelled 1,900,243 common shares through its normal course issuer bid for a total of \$5.35 million.
- In December 2017 Pulse paid a special dividend of \$0.20 per share to shareholders of record on November 16, 2017 for a total cost of \$10.9 million.

For a discussion of the Company's outlook of its business for the 2020 financial year, the "Outlook" section of the MD&A for the 2019 financial year is incorporated by reference. The Company's MD&A for the year ended December 31, 2019 is on SEDAR at www.sedar.com.

DESCRIPTION OF THE BUSINESS

GENERAL

Pulse is Canada's largest pure-play seismic data library company focused on the acquisition, marketing and licensing of seismic data to the Western Canadian energy sector.

Pulse's business model is designed to generate a growing stream of cash flow by repeatedly re-licensing data in its seismic data library to oil and natural gas companies. Success in this business model requires extensive coverage through high-quality seismic data encompassing all geological target zones, with focused coverage in active play areas.

Pulse acquires seismic data to grow its data library through two main methods. The Company purchases proprietary rights to complementary 2D and 3D seismic data sets from other data library companies and oil and gas exploration and development companies when the opportunity arises and conducts 3D participation surveys. Pulse partners with customers on participation surveys from which the seismic data acquired is added to Pulse's data library to generate future licensing revenue. Pulse retains proprietary rights to the data and participating customers are provided with a licensed copy. Pulse uses internal staff to market, manage and oversee participation surveys and subcontracts all field acquisition activities to third parties.

The Company is continuously seeking and evaluating additional opportunities to acquire high-quality 2D and 3D data sets at favourable valuations and to conduct 3D participation surveys in areas complementary to Pulse's current data library.

Pulse generates revenue through licensing 2D and 3D seismic data from the library and from pre-funding on new participation surveys.

Seismic Data

Seismic data is used by oil and natural gas exploration and development companies to identify portions of geological formations that have the potential to hold hydrocarbons. Seismic data is used in conjunction with well logging data, well core comparisons, geological mapping and surface outcrops to create a detailed map of the Earth's subsurface at various depths.

Seismic data is an essential part of the oil and natural gas exploration and development process. Companies engaged in oil and natural gas exploration and development use seismic data to assist in planning land acquisition programs, in exploring for and developing new reserves and in establishing the extent of existing reserves.

In acquiring seismic data, an acoustical energy wave is transferred from an energy source at or near the surface of the earth to the subsurface. These seismic waves reflect off of the various geological beds or strata in the Earth's subsurface. Sophisticated sensors and recording instruments at the surface collect the reflected waves and convert them to digital form. The data is subsequently processed, and an image of the subsurface formations is created. The resultant seismic data provides explorationists with valuable data on the potential of a particular area to yield oil or natural gas reserves and assists in the selection of drilling locations.

2D seismic data is measured in linear kilometres and after processing provides a sectional illustration of geological formations directly below the line on which the data was acquired. 2D seismic can extend over a distance spanning many kilometres. Intersecting 2D lines can enable explorers to map large pools of oil and natural gas, but without the precision required for smaller or more complex targets. Exploration companies typically use 2D seismic to get a sense of the regional geology of an area they think is prospective for oil and natural gas. 2D seismic data continues to be used to generate regional leads and prospects in oil and natural gas exploration areas.

3D seismic data is measured in square kilometres and after processing provides map-like overhead views as well as three-dimensional visualizations of the subsurface geology. 3D seismic data is shot in grids, generating a three-dimensional image of the subsurface. 3D seismic data enables a more precise definition of geologically complex targets and facilitates precise placement of oil and natural gas wells. 3D seismic is generally used to zero-in on a discrete area of geological interest initially identified with 2D seismic. 3D seismic data is particularly important for horizontal drilling, unconventional plays (such as shale gas and tight sands) and complex conventional drilling. Typical 3D seismic surveys cover an area anywhere from a few square kilometres to several hundred square kilometres.

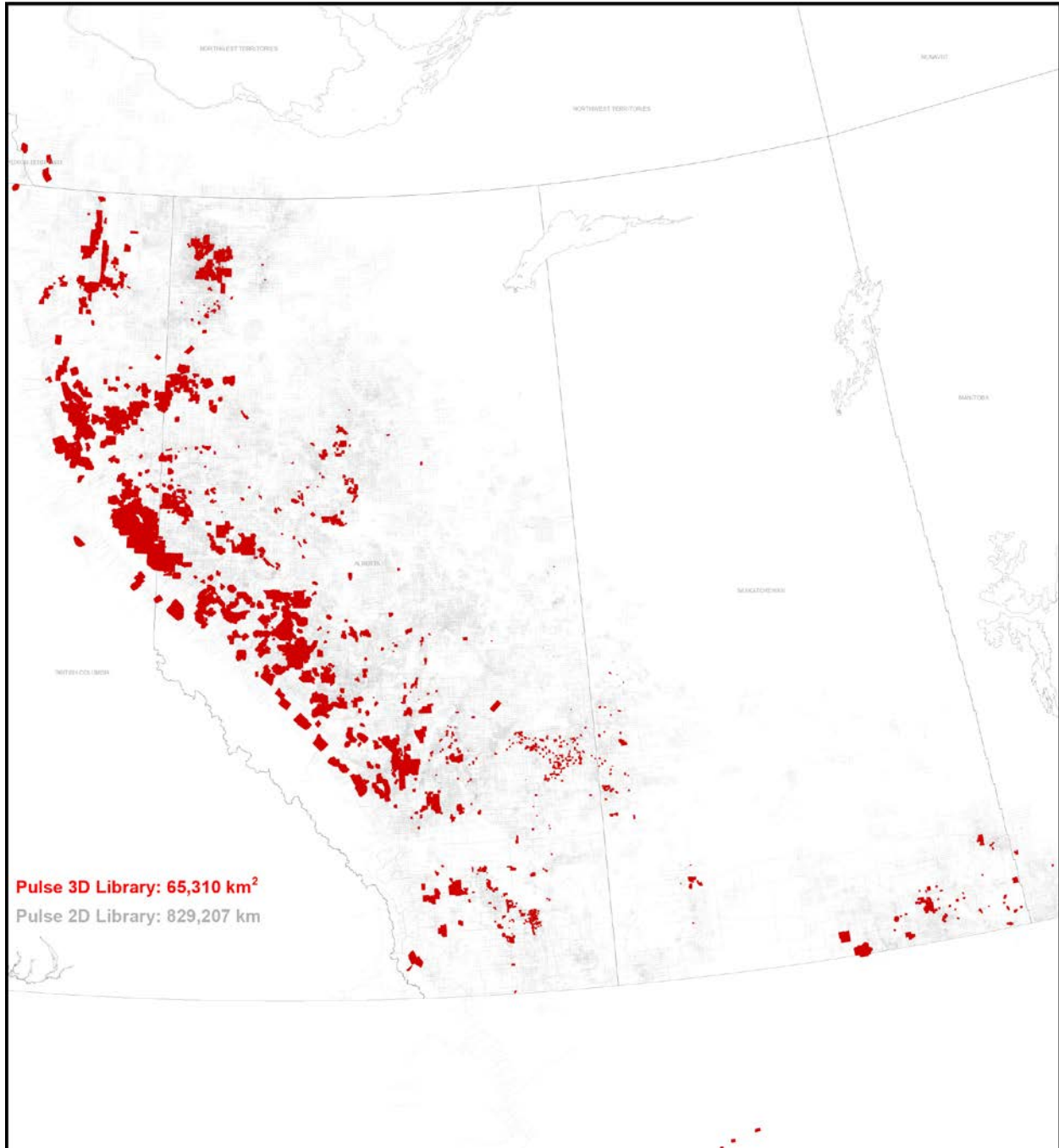
Pulse calculates net kilometres of 2D data and net square kilometres of 3D data by multiplying the number of kilometres of seismic data in each 2D line and the number of square kilometres of seismic data in each individual 3D seismic dataset by Pulse's percentage of ownership in each.

The oil and natural gas exploration and development industry targets natural gas reservoirs that are high in natural gas liquids and crude oil, lying in unconventional shale and less-permeable or tight formations. 2D and 3D seismic data are important tools for these developments or "plays". 2D seismic data is used to map the regional faults in shale gas prospects, and 3D seismic data is used to map the exact contours of variable reservoirs, as well as small-scale fractures in shale formations, to plan accurate paths for horizontal wells.

Seismic Data Library

Pulse owns the largest licensable seismic data library in Canada. This map represents Pulse's seismic data library after the acquisition of Seitel Canada Ltd. which consisted of approximately 65,310 net square kilometres of 3D seismic and 829,207 net linear kilometres of 2D seismic. The library extensively covers the Western Canada Sedimentary Basin where most of Canada's oil and natural gas exploration and development occur.

Pulse's 2D and 3D seismic data library coverage is shown on the following map:



Customers

Pulse's market is the Canadian Oil and Gas exploration and development industry. The top 10 customers by revenue are usually different each year.

Revenue

Total seismic revenue includes data library sales and other revenue. The following is a breakdown of Pulse's revenue over its last two fiscal years.

Years ended December 31	2019		2018	
(thousands of Canadian dollars)	Revenue	% of Total Revenue	Revenue	% of Total Revenue
Data Library Sales	23,635	98	10,076	99
Other Revenue	520	2	112	1
Total Seismic Revenue	24,155	100	10,188	100

Data Library Sales

Data library sales are conducted under various types of sale contracts. The sale contracts are classified as retail data library sales, library cards (discount agreement, paid on predetermined payment terms with periods of up to one year to select data), commitment cards (discount agreement, paid when data is selected and delivered within a one year period) and review and possession agreements (client is provided with data to review and selects a portion of this data to licence, with the agreement having set payment terms). If the licensee approached Pulse via a broker, a brokerage fee of 5 to 10 percent of the licence fee is generally paid to the broker by Pulse upon receipt of the proceeds from the licensee.

Data library sales also include transaction-based sales. There are three main types of transaction-based sales. The first is the partnership or joint venture, in which an oil and gas asset holder elects to pool their expertise, capital and/or assets with one or more new participants to explore or develop a play. Under the Company's current standard form licensing agreements, any new technical or operational participant that wishes to view or interpret the seismic data must purchase a data licence from Pulse, generally at a discount (usually pre-defined in the initial licensing agreement). Purely financial partners that do not wish to view or interpret the seismic information are exempted.

The second kind of transaction-based sale is a corporate merger or acquisition. In this case, the seismic data is transferred to the new organization. Under the Company's current standard form licensing agreements, the buyer has 30 days to determine whether they would like to pay a change-of-control fee to keep the data or return the data to Pulse.

The third kind is the sale of an oil and gas asset or group of assets (as well as partial mineral rights to particular zones below the asset-owner's lands). Under the Company's current standard form licensing agreements, the license agreement is not transferable upon an asset sale. In this case, no rights to the seismic data transfer to the buyer, and there are no terms of payment in the licence agreement. Should the buyer be interested in Pulse's seismic data, they must license the data from Pulse at the regular price. Following this type of transaction, considerable time may pass until a data licensing sale occurs because the new asset owner may defer development of the particular asset. In addition, the new asset owner may be interested in only portions of the original dataset. The attraction of Pulse's library remains the far lower cost of licensing the data than shooting new seismic over the same area.

The precise terms of individual license agreements (including those historically used by Pulse and its predecessors and those assumed by Pulse on data acquisitions) can vary greatly. Change of control fees and joint venture copy fees may not always be payable, and license agreements may not always be non-assignable.

Where Pulse owns less than a 100 percent ownership interest in a seismic data set in its existing library, the remaining undivided interests in such seismic data are owned by various other parties. In those circumstances, agreements are generally in place between the various interest owners of the seismic data providing for, among other things, the management of the seismic data, the licensing of the seismic data and the division of revenues arising from the licensing of the seismic data. In the absence of a written agreement, industry practice is that any licences of the seismic data require the consent of all of the owners of undivided interests in the data.

When Pulse licenses seismic data in which it owns less than a 100 percent interest, the licence fee, net of commissions and management fees, is divided among Pulse and the other interested parties. Pulse records the net amount of the revenue in data library sales. Where Pulse manages the seismic data, Pulse generally earns a 5 percent management fee and a 10 percent commission on the licence fee. This income is recorded against brokerage fees paid to external brokers.

Certain datasets are also subject to revenue sharing agreements with other parties who do not own an undivided interest in the dataset. The revenue sharing agreements provide for the management, licensing and sharing of revenues from data licence sales from these datasets. The precise terms of these revenue sharing agreements (including those assumed on data purchases or entered into as part of data acquisitions) can vary greatly.

Other Revenue

In addition to data library sales, Pulse has other revenue included in total revenue. This includes revenue from client services consisting of copy and reproduction charges, as well as data storage fees related to the leased warehouse that was acquired with the Seitel purchase.

Participation Surveys

Historically, Pulse has conducted participation surveys to acquire new seismic data to grow its data library. Pulse has not conducted a survey since 2015. The Company has chosen to grow by purchasing existing data only, in this time period. The process when we are actively shooting surveys is as follows.

Pulse designs, markets and operates participation surveys and grants licences to the seismic data acquired to parties that participate in the surveys. Pulse, either by itself or in consultation with oil and gas companies, selects a location for the survey based upon a risk analysis undertaken. Once an area has been selected, Pulse approaches oil and natural gas companies to subscribe for the seismic information to be obtained from the survey prior to the information being gathered in the field. Obtaining such subscriptions assists in the financing of the surveys and helps to indicate the marketability of the data. When sufficient subscriptions have been procured, Pulse hires sub-contractors to perform all field acquisition activities (surveying, clearing and mulching vegetation, providing the drills and energy source, recording the physical survey, and processing the data), although Pulse supervises all aspects of the survey. By way of presales of licences, the oil and natural gas companies participating in the survey purchase a non-exclusive licence to use the seismic information obtained. Such licences are perpetual and transfer no ownership rights. Pulse retains the ownership rights to continue to licence the seismic data to interested parties.

Pulse's rate of pre-funding for participation surveys varies, with the actual target percentage funding of each particular survey determined by Pulse ahead of time depending upon Pulse's risk analysis of such survey and competitive conditions in the area. Factors affecting these individual survey program targets include: circumstances where Pulse believes that there is a high probability of additional participants joining the survey before completion or additional licence sales after completion of the survey, or where a survey is located in a strategic location, or where competitive conditions require a lower level of pre-funding.

The advantages to oil and gas companies of purchasing a licence to the participation surveys are: (i) cost-effective method of obtaining seismic information for exploration purposes; (ii) ability to use experienced and knowledgeable project managers that would potentially not be available by using internal resources; and (iii) the ability to re-allocate personnel to other tasks that would otherwise be tied up supervising the acquisition of this seismic data. These advantages accrue not only to large oil and natural gas companies, which may utilize the surveys to complement their own seismic databases, but also to junior and intermediate companies which gain access to seismic data through their direct investment in participation surveys or on a licensed basis. The primary benefit to Pulse from its participation in these surveys is the addition, on a cost-effective basis, of modern seismic information to its database. The asset value of these surveys ranges from hundreds of thousands to tens of millions of dollars depending on the size and location of the project.

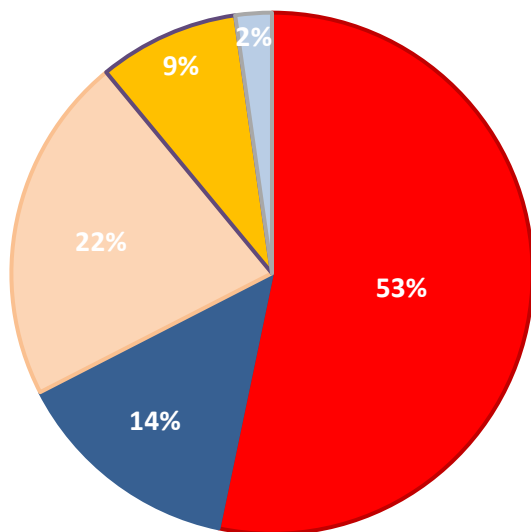
Seismic Data Library Business Competitive Conditions

The use of seismic data by oil and gas companies in exploration and development activities greatly enhances their chances for success. As a result, seismic data is essential information in the oil and natural gas exploration and development business. Pulse owns the largest licensable seismic data library in Canada, currently consisting of approximately 65,310 square kilometres of 3D and 829,207 kilometres of 2D seismic data.

Based upon information available to Pulse, its competitive position against other companies owning data libraries in the Western Canadian seismic data library business as of December 31, 2019 is estimated to be as follows:

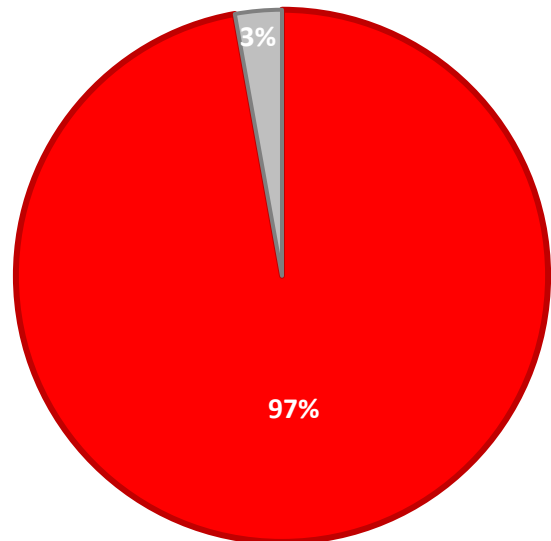
ESTIMATED CANADIAN 3D MARKET (KM)

- Pulse: 65,310
- TGS: 17,361
- SEI Seismic Exchange: 26,432
- Schlumberger: 10,686
- Divestco: 2,768



ESTIMATED CANADIAN 2D MARKET (KM)

- Pulse: 829,207
- TGS: 12,277
- SEI Seismic Exchange: 7,432
- Schlumberger: 4,523



The Western Canadian geophysical services industry is comprised of a full spectrum of service providers from full-service companies to single proprietorship owners of seismic data. Unlike full-service companies, which own and operate equipment and field crews for the purposes of seismic data acquisition and seismic data processing, Pulse's focus remains on the procurement of seismic data by purchasing existing data and developing new participation surveys through the use of contracted equipment and field crews.

Pulse is a pure-play seismic data library company and the majority of Pulse's data library sales revenue comes from the licensing of 3D data. In general, there is little overlap between 3D databases, due to the high costs of overshooting existing 3D seismic surveys, and so there is little direct competition between specific 3D datasets. However, seismic data library companies and individual oil and gas companies may elect to overshoot an existing 3D dataset if it is not of the desired quality or specifications.

Pulse's main form of competition is with other companies that acquire data through shooting participation surveys. In this case, the Company is competing for the opportunity to add seismic data to the library by conducting a survey which is partially funded by an initial customer, with the goal of selling additional licences to that data in the future to recover the balance of the survey cost, and generate a positive return. Other companies may be prepared to proceed with participation surveys with lower levels of pre-funding than Pulse. Pulse has not conducted a participation survey since 2015, and instead has chosen to grow its data library through the acquisition of existing seismic data. The Company also competes against oil and gas companies that may choose to license their own proprietary seismic data to customers.

Intangible Properties

Pulse relies upon a combination of licence agreements, copyright and other intellectual property rights to protect its ownership rights and confidentiality of its seismic data.

Seismic Revenue Fluctuations

Revenue fluctuations are a normal part of the seismic data library business, and data library sales can vary significantly from quarter to quarter and year over year.

Traditional data library sales can occur at any time. This is due to the nearly continual changes in oil and natural gas industry conditions, increased demand for seismic data covering a specific area or play, and the timing of public offerings of petroleum and natural gas rights (land sales). Pulse no longer sees any patterns in traditional sales by quarter or by season.

Transaction-based sales can also occur at any time. This is due to corporate merger and acquisition, joint venture and asset disposition activity by Pulse's clients, which are unpredictable.

Participation survey revenue also varies significantly from quarter to quarter and year over year. The majority of new 3D seismic data is typically acquired under frozen ground conditions from November to March. Summer seismic programs can only be completed in certain areas that have drier ground conditions and can be easily accessed without environmental harm. In addition, the size and pre-funding levels of individual participation surveys can vary significantly. The number and size of participation surveys undertaken from 2014 through 2019 have been considerably less than historical averages. Only one survey was conducted during this period, in the first

quarter of 2015.

Environment

Environmental Regulation:

Seismic survey field operations are subject to extensive environmental protection laws and regulations.

Before proceeding with a seismic survey, Pulse must first obtain the necessary governmental geophysical permits and approvals. These permits and approvals include operating and environmental restrictions for the survey, including conditions and restrictions on activities in environmentally sensitive areas, wildlife zones, archeological sites, water crossings, pipeline crossings, power lines, private landowners, FMA (Forest Management Agreement areas), road usage, and any seasonal access restrictions.

In accordance with Federal and Provincial exploration and environmental regulations, Pulse is required to obtain a final site letter of clearance within a set period of time (usually two years after completion of field operations). The principle behind the final site letter of clearance is to ensure that the surface of the lands have been satisfactorily reclaimed and restored as per the regulatory requirements.

Field Operations:

Acquiring new seismic data comprises of scouting and mapping the area of interest, preparing the ground so personnel and low impact equipment can travel safely, placement and drilling of shot holes on source lines, and placing lines of receivers on the ground to record the sound waves generated by an energy source. The management process is highly involved to minimize environmental and safety risks, control costs and comply with all industry best practices and government regulations.

Pulse subcontracts all field operations to seismic contractors, which encompass four main phases: (i) line clearing; (ii) surveying; (iii) drilling, if required; and (iv) recording. Line clearing involves the use of advanced mulching equipment in which the operators avoid the larger timber and take the path of least disturbance in the clearing of the trees and vegetation. The mulched lines provide a safe line for the equipment and personnel to travel down for the other phases of the operations. Surveying involves pre-determining the exact shot and receiver locations and to ensure that source points are not being put too close to pipelines, powerlines and any other areas that present concern. Drilling, if required, involves the drilling and preparation of shot holes with the energy source, which is usually dynamite, which is primarily drilled as close to bedrock as possible. The required depth to be drilled is determined from test holes, existing seismic in the area, and government regulated exploration restricted areas, such as areas known for flowing hole potential. Recording involves the laying out of the receivers, initiating the energy source (usually the detonation of dynamite or a Vibroseis unit that physically shakes the ground) and recording the seismic energy as it comes back to the surface.

Dynamite provides a robust geophysical signal, especially in areas of challenging terrain and of deeper targets. Vibroseis equipment requires wider access lines, flatter terrain and therefore may not be best suited for certain areas. Vibroseis also requires less of a set-back distance to potentially sensitive installations such as pipelines and water wells.

Mitigation of Environmental Impact:

Modern technology and processes have enabled Pulse and its field subcontractors to steadily reduce the environmental footprint of seismic survey operations. Before each survey, Pulse's experienced project managers scout the survey area and perform a detailed evaluation of the landscape, ecosystem and ground conditions, followed by developing an operational plan that will minimize environmental impact.

The environmental impact of field operations has been greatly reduced due to improved field practices:

- Consultation with local stakeholders, including provincial energy regulator officials, First Nations, operating energy companies, land and cabin owners, hunters and trappers, snowmobile clubs and trail users, takes place to ensure that potential environmental issues or concerns are properly addressed.
- Utilizing low-impact seismic equipment, such as low-ground pressure, lighter and smaller equipment.
- GPS technology means that surveyors no longer require line-of-sight, and so lines are allowed to meander, allowing mulchers on source lines to reduce their cutting of trees.
- Cut trees and vegetation are completely mulched and spread on the lines, to facilitate faster regrowth. Mulchers do not disturb the duff layer of the soil, so that root systems are left intact and regrowth begins immediately.
- The utilization of wireless recording equipment, which requires less personnel, is quicker to deploy and allows for larger surveys to be completed in less time.

Costs of Compliance:

The costs of compliance with environmental laws and regulations and the conditions and restrictions in the geophysical permits and regulations (including the restoration and reclamation of the surface of the lands) are budgeted by Pulse and accrued as part of the survey costs. Since participation survey customers usually subscribe for a survey at a fixed rate, any cost overruns will effectively reduce the percentage of pre-funding for that survey, while any cost savings will effectively increase the percentage of pre-funding for that survey.

Depending on the survey area, Pulse may be required to pay private landowners for crop damages and for site access fees. Pulse may also be required to pay the Crown and timber companies for timber damage caused by line clearing and for site access fees. Timber damages are minimal due to the low impact techniques used by Pulse. These costs are based on the overall line width of clearing required which is based on the type of equipment required.

To minimize the environmental impact, Pulse is required to construct pipeline and water crossings, which are digitally tracked, mapped and properly removed upon completion of the project. However, depending on the situation, the regulatory officer overseeing the area may request that a crossing be left in place. The final plan, which contains all of the data collected throughout the project, details the exact location of line clearings, pipeline and water crossings and other environmental impacts and is usually required to be submitted 60 days after completion of the project to the applicable governmental body that granted the geophysical approvals.

Risks and Risk Management:

If Pulse fails to conduct a seismic survey in accordance with the conditions and restrictions in the applicable geophysical permits and approvals, the permits and approvals for that survey could be terminated and Pulse could be fined. Under current laws and regulations, these fines could be significant. Pulse mitigates this risk through comprehensive training, field supervision and monitoring.

Pulse subcontracts all field operations to seismic contractors. Under applicable environmental laws and regulations, Pulse is generally responsible for ensuring compliance is adhered to at all phases of the project. Pulse mitigates this risk by carefully screening its seismic contractors. All subcontractors must be qualified through Comply Works vendor management system. It is also required for all seismic contractors to sign Pulse's Master Service Agreement which further outlines the details pertaining to the necessary environmental laws, regulations and applicable government permits and approvals that the contractor is required to oblige by while on a Pulse field site.

When using dynamite for the energy source, there is a potential to damage private landowner wells. The incidence of this type of damage is very rare, but the costs of remediating this type of damage could include the drilling of a replacement water well. Pulse mitigates this risk by adhering to industry best practices related to setback distances. In addition, Pulse tests private landowner wells and include a 400 meter perimeter buffer, both before and after field operations for flow rates and quality. This process accurately assesses whether there has been any damage caused by the seismic field operations.

The drilling of shot holes or the detonation of the dynamite also has the potential to cause underground water to be released and flow to the surface (a flowing hole). Pulse mitigates this risk by following industry best practices which includes plugging any flowing holes with bentonite to stop the flow of water to the surface.

Seismic surveys are typically conducted during winter when frozen ground conditions permit the movement and operation of equipment. In addition, government geophysical permits and approval for environmentally sensitive areas may be restricted to winter access only. If an unseasonably late or warm winter delays or prevents sufficient freezing, or if an early spring results in an early thaw, Pulse may not be able to complete its winter seismic surveys on time and within budget.

Seismic surveys may be conducted during summer in certain areas that have drier ground conditions. Under excessive rainfall, field operations may be shut down to prevent environmental damage until the ground dries up. Under typical line clearing, surveying and drilling contracts, the seismic contractors are paid standby rates and mobilization / demobilization costs during these shutdown periods. Since participation survey customers usually subscribe for a survey at a fixed rate, any cost overruns will effectively reduce the percentage of pre-funding for that survey. If excessive rain results in significant shutdowns, Pulse may not be able to complete its summer programs on time and within budget.

While Pulse maintains liability insurance, including insurance for environmental claims, the insurance is subject to coverage limits and exclusions. There can be no assurance that the possible types of environmental liabilities that may be incurred by Pulse will be covered by Pulse's insurance, or that the dollar amount of such liabilities will not exceed Pulse's policy limits.

Employees

As of December 31, 2019, the Company had 17 full time employees.

Environmental, Health and Safety Policies

The Company has implemented written policies and procedures to promote a safe, healthy and accident free workplace for its employees and contractors and to mitigate adverse effects on the environment. In addition, the Board of Directors has established an Environment, Health and Safety Committee, whose mandate is to monitor the environmental, health and safety practices and procedures of the Company for compliance with applicable legislation, conformity with industry standards, and prevention or mitigation of losses. Since the March 2018 Certificate of Recognition (COR) renewal, Pulse has conducted an annual internal maintenance audit in 2019 and will be completing its three-year COR renewal external audit in March 2021.

RISK FACTORS

The Section entitled “Risk Factors” in the Company’s MD&A for the year ended December 31, 2019 is incorporated by reference. The Company’s MD&A for the year ended December 31, 2019 is on SEDAR at www.sedar.com.

DIVIDENDS

The following table discloses the amount of cash dividends declared per common share for each of the three most recently completed financial years:

Year ended December 31, 2017	Year ended December 31, 2018	Year ended December 31, 2019
\$0.20	Nil	Nil

In November 2017, Pulse declared a special dividend of \$0.20 per common share.

DESCRIPTION OF CAPITAL STRUCTURE

The Company is authorized to issue an unlimited number of common shares and an unlimited number of preferred shares, issuable in series. As of December 31, 2019, there were 53,793,317 common shares outstanding and no preferred shares outstanding.

The holders of the common shares are entitled to receive dividends if, as and when declared by the Board of Directors. The holders of common shares are entitled to receive notice of and to attend all meetings of shareholders and are entitled to one vote per common share held at all such meetings. In the event of the liquidation, dissolution or winding up of the Company or other distribution of assets of the Company among its shareholders for the purpose of winding up its affairs, the holders of the common shares will be entitled to share equally, share for share, in any distribution of the assets of the Company.

The preferred shares are non-voting and are issuable in series, with such designations, rights, privileges, restrictions and conditions as are determined by the Board of Directors at the time of issue.

MARKET FOR SECURITIES

The common shares of Pulse are listed for trading on the TSX under the trading symbol PSD.

The following table provides information on the price ranges and volumes traded on the TSX for each month during 2019:

Month	Trading Volume	Price Range
January	912,210	\$1.36-\$2.62
February	441,599	\$2.40-\$2.56
March	253,808	\$2.20-\$2.50
April	149,216	\$2.35-\$2.60
May	120,165	\$2.06-\$2.42
June	195,774	\$2.15-\$2.409
July	206,304	\$2.10-\$2.35
August	126,484	\$1.69-\$2.34
September	473,166	\$2.02-\$2.22
October	876,028	\$2.13-\$2.92
November	182,506	\$2.05-\$2.50
December	142,379	\$1.94-\$2.09

DIRECTORS AND OFFICERS

The name, province or state and country of residence, positions and offices held with the Company of the directors and executive officers of Pulse are as follows:

Name and Residence	Positions Held	Date First Elected as a Director ⁽⁵⁾
Robert Robotti ⁽¹⁾⁽²⁾⁽³⁾ New York, USA	Director, Chair of the Board	December 2007
Karen El-Tawil ⁽²⁾⁽⁴⁾ Texas, USA	Director	May 21, 2014
Paul Crilly ⁽¹⁾⁽³⁾ Alberta, Canada	Director	May 10, 2017
Dallas Droppo ⁽¹⁾⁽²⁾⁽³⁾ Arizona, USA	Director	May 8, 2018

Grant Grimsrud ^{(1) (4)} Alberta, Canada	Director	May 8, 2018
Neal Coleman ⁽⁴⁾ Alberta, Canada	Director and President and Chief Executive Officer	December 12, 2017
Pamela Wicks Alberta, Canada	Vice President, Finance and Chief Financial Officer	N/A
Trevor Meier Alberta, Canada	Vice President Sales and Marketing	N/A

Notes:

- (1) Member of the Audit and Risk Committee. Paul Crilly is the Chair of the Committee.
- (2) Member of the Compensation Committee. Karen El-Tawil is the Chair of the Committee.
- (3) Member of the Corporate Governance and Nominating Committee. Dallas Droppo is the Chair of the Committee.
- (4) Member of the Environment, Health and Safety Committee. Grant Grimsrud is the Chair of the Committee.
- (5) Each of the directors holds office until the next annual meeting of shareholders or until their successor is duly elected or appointed.

The background of each of the directors of Pulse and their principal occupations for the past five years are as follows:

Director	Principal Occupations during the last 5 years	Other relevant experience
Robert Robotti	President of Robotti & Company Advisor, LLC, a US registered investment advisor, and President of Robotti & Company, LLC, a US registered broker-dealer.	Mr. Robotti is actively invested in the oil and gas industry. He has been a director of Panhandle Oil and Gas Inc. (NYSE) since 2004, and a director of AMREP (NYSE) since 2016 and PrairieSky Royalty Ltd. since 2019.
Karen El-Tawil	Retired from TGS-NOPEC in December 2012 as Vice President Business Development. Currently a director of Polarcus Limited, a marine geophysical company based out of Dubai and listed on the Oslo Bors Stock Exchange.	Ms. El-Tawil has 30 years' experience in the Geophysical Services industry, with 15 years' experience at the executive level. Her management experience in the Geophysical Services industry includes: Quality Control, Project Development, Customer Service, Marketing, Sales, Information Technology, Investor Relations, and Mergers and Acquisitions.

<p>Paul Crilly</p>	<p>CEO of Evolution Engineering Inc., a private technology company involved in the manufacture and sale of directional drilling equipment across North America.</p> <p>From 2010 to 2015, Mr. Crilly held the position of Managing Director, Energy at K2 & Associates Investment Management Inc. where he focused on the management and restructuring of exploration and production company investments. From 2015 to 2016, he continued his restructuring work with a large private international oil and gas services company.</p>	<p>Mr. Crilly has 27 years of experience in the oil and gas services and equipment industry. From 2005 to 2010, he was President and CEO of Norex Exploration Services Inc. a TSX-listed seismic acquisition company.</p> <p>Mr. Crilly has previously been a director of a number of public and private oil and gas services and production companies.</p>
<p>Dallas Droppo Q.C.</p>	<p>Mr. Droppo was, until his retirement in January 2018, a senior partner at the law firm of Blake, Cassels & Graydon LLP where for 27 years he had an oil & gas practice. Mr. Droppo acted as legal counsel on large, complex securities transactions and significant business mergers and acquisitions. A significant portion of Dallas' practice involved acting for oil & gas, pipeline and midstream companies in joint ventures, partnerships, and strategic alliances regarding major greenfield and expansion projects. He regularly advised several service companies. Before a career in law, Dallas was an exploration geologist with a multi-national oil company. In 2002, he was appointed Queen's Counsel.</p>	<p>Dallas has been a director, trustee or officer of numerous oil & gas companies, including TriStar Oil & Gas Ltd., Real Resources Inc., Burmis Energy Inc., Pembina Pipeline Income Fund, Iteration Energy Ltd., Norex Exploration Services Inc. and Mart Resources, Inc.</p>

Grant Grimsrud	President of RHOC Exploration Inc., a private petroleum engineering consulting company. RHOC provides petroleum engineering and management assistance to a number of small oil and gas exploration and production companies operating in the Western Canadian Sedimentary Basin.	Mr. Grimsrud is an independent businessman with over 35 years of oil and gas industry experience.
Neal Coleman	President and CEO of Pulse.	Mr. Coleman was appointed President and Chief Executive Officer of Pulse on November 1, 2012. Prior thereto, Mr. Coleman was Vice President Sales and Marketing of Pulse since April 1, 2008, and Manager Sales and Marketing of Pulse since January 2006, and joined the Company in 2004.

The background of each of the executive officers of Pulse and their principal occupations for the past five years are as follows:

Neal Coleman, President and Chief Executive Officer

Neal Coleman was appointed President and Chief Executive Officer of Pulse on November 1, 2012. Prior thereto, Mr. Coleman was Vice President Sales and Marketing of Pulse since April 1, 2008, and Manager, Sales and Marketing of Pulse since January 2006, and joined the Company in 2004.

Pamela Wicks, Vice President Finance and Chief Financial Officer

Pamela Wicks was appointed Vice President Finance and Chief Financial Officer of Pulse on March 10, 2010. Prior thereto, she was Vice President Finance of Pulse since May 2007, and prior thereto was the Corporate Controller of Pulse since January 2002.

Trevor Meier, Vice President Sales and Marketing

Trevor Meier was appointed as Vice President Sales and Marketing effective June 1, 2013. Mr. Meier joined Pulse as a Sales and Marketing Representative in 2006, and was appointed Manager, Sales and Marketing in November 2012.

Securities Owned

As at February 12, 2020, the directors and executive officers of Pulse, as a group, beneficially owned, or controlled or directed, directly or indirectly, 9,573,629 Pulse common shares (representing approximately 17.8% of the issued and outstanding Pulse common shares).

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

Karen El-Tawil is a member of the board of directors of Polarcus Limited, a marine geophysical company based out of Dubai and listed on the Oslo Bors Stock Exchange. In both January 2016 and March 2018, Polarcus Limited completed a restructuring of its balance sheet with the approval of its banks, lease providers, and certain bondholders and shareholders.

In January 2015, Mr. Crilly was retained as Chief Financial Officer of Sanjel Corporation, a private oil and gas services company, to coordinate its recapitalization in light of the severe downturn in the oil and gas industry. In March 2016, he was appointed Chief Restructuring Officer to lead a sales and investment solicitation process for the Company. The Company was subject to a proceeding under the Companies Creditors Arrangement Act (Canada) while this process was undertaken. He resigned his position in October 31, 2016 after agreements for the sale of the Company's operations and subsidiaries were completed.

TRANSFER AGENT AND REGISTRAR

The Company's transfer agent and registrar is Computershare Trust Company of Canada, with registers of transfers of the Company's common shares in Calgary, Alberta and Toronto, Ontario.

MATERIAL CONTRACTS

Other than contracts entered into in the ordinary course of business, the following contracts that are material to the Company were entered into either in 2019 or prior to the most recently completed financial year and are still in effect:

1. Share Purchase Agreement dated January 15, 2019 between the Corporation and Seitel Canada Holdings Inc., a copy of which was filed on SEDAR at www.sedar.com on February 7, 2019 under "Material contracts-Credit agreements".
2. Credit Agreement Among Pulse Seismic Inc as Borrower And the Persons Party Hereto from Time to Time in their Capacities as Lenders And Edgepoint Investment Group Inc. as Administrative Agent, a copy of which was filed on SEDAR at www.sedar.com on February 14, 2019 under 'Material contracts-Credit agreements'.
3. Amended and Restated Credit Agreement Among Pulse Seismic Inc. as Borrower And The Persons Party Hereto From Time to Time in Their Capacities as Lenders And The Toronto-Dominion bank as Administrative Agent, a copy of which was filed on SEDAR at www.sedar.com on February 14, 2019 under 'Material contracts-Credit agreements'.

INTERESTS OF EXPERTS

KPMG LLP, Chartered Accountants, audited the annual consolidated financial statements for the financial year ended December 31, 2019.

KPMG LLP is independent in accordance with the relevant rules and related interpretations prescribed by the relevant professional bodies in Canada and any applicable legislation or regulation.

ADDITIONAL INFORMATION

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

Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities and securities authorized for issuance under equity compensation plans, if applicable, is contained in the Company's Information Circular for its most recent annual meeting of shareholders that involved the election of directors.

Additional financial information is provided in the Company's financial statements and MD&A for its most recently completed financial year.

AUDIT AND RISK COMMITTEE INFORMATION

The following Audit and Risk Committee information is provided in accordance with NI 52-110 Audit Committees:

The Audit and Risk Committee's Charter

The Audit and Risk Committee's Charter is attached to this AIF.

Composition of the Audit and Risk Committee

The members of the Audit and Risk Committee are Paul Crilly (Chair), Robert Robotti, Dallas Droppo and Grant Grimsrud. All members of the Audit and Risk Committee are considered to be independent and financially literate within the meaning of NI 52-110 Audit Committees.

Relevant Education and Experience

The education and experience of each Audit and Risk Committee member that is relevant to the performance of such member's responsibilities as an Audit and Risk Committee member are as follows:

MEMBER'S NAME	RELEVANT EDUCATION AND EXPERIENCE
Robert Robotti	<p>Relevant Education:</p> <ul style="list-style-type: none">• B.S. – 1975 – Bucknell University, Pennsylvania• MBA – 1978 – Pace University, New York <p>Relevant Experience:</p> <ul style="list-style-type: none">• President and founder of Robotti & Company Advisors, LLC, a registered investment advisor, since 2003• President and founder of Robotti & Company, LLC, a registered broker-dealer, since 1983• Managing Member of Ravenswood Management Company, LLC since 1980• Member of the Board of Directors, Nominating and Governance Committee and the Compensation Committee of Panhandle Oil and Gas Inc. (NYSE)

	<ul style="list-style-type: none"> • Member of the Board of Directors, Chair of the Compensation Committee and member of the Audit and Human Resources Committee and the Nominating and Corporate Governance Committee of AMREP Corp. (NYSE) • Member of the Board of Directors and Reserves Committee of PrairieSky Royalty Ltd. (TSX)
Paul Crilly	<p>Relevant Education:</p> <ul style="list-style-type: none"> • Bachelor Commerce -1984 – University of Saskatchewan • Chartered Accountant (Alberta), Chartered Professional Accountant (Alberta) since 1987 • Institute of Corporate Directors since 2012 <p>Relevant Experience:</p> <ul style="list-style-type: none"> • 27 years of experience in the oil and gas services and equipment industry. • President and CEO of Evolution Engineering Inc. since 2016 • President and CEO of Norex Exploration Inc. (TSX) from 2005 to 2010 • Managing Director, Energy of K2 and Associates Inc. (TSX) from 2010 to 2014 • Chair of the Audit Committee of Mart Resources Inc. (TSX) from 2010 to 2016 • Vice President of Finance and CFO of Ryan Energy Technologies Inc. (TSX) from 1996 to 2000 and Global Thermoelectric Inc. (TSX) from 2000-2004
Dallas Droppo Q.C.	<p>Relevant Education:</p> <ul style="list-style-type: none"> • B.Sc. (Honors Geology) -1975 -University of Calgary • L.L.B (Law)-1979 – University of Alberta • ICD.D (Corporate Director) -2011 – Institute of Corporate Directors <p>Relevant Experience:</p> <ul style="list-style-type: none"> • Corporate Consultant since January 1, 2018, and for 25 years prior thereto, a senior partner in the Calgary Office of Blake Cassels & Graydon LLP, where he practiced in the areas of corporate governance, oil & gas, energy and equity capital markets. • While practicing law advised audit committees and special committees of numerous public companies. • Past director of numerous public (TSX) and private companies, including Mart Resources Inc., Norex Exploration Services Inc., and Heration Energy Ltd. where he served on the audit committee for those public companies.

Grant Grimsrud	<p>Relevant Education:</p> <ul style="list-style-type: none"> • M.Sc. Natural Gas Engineering and Management - 1991, College of Petroleum Studies, Oxford, England and Salford University, Manchester, England. • B.Sc. (with Distinction) Engineering (Civil) - 1981, University of Alberta, Edmonton, Alberta, Canada. <p>Relevant Experience:</p> <ul style="list-style-type: none"> • Over 35 years of experience in the upstream oil and gas industry • Currently President of RHOC Exploration Inc., a private petroleum engineering consulting firm. • COO of Great Plains Exploration Inc. 2009 to 2010 • President and COO of Northpoint Energy Ltd. 2003 to 2005 • President of Integrity Custom Processing 1996 to 2000 • President and COO of Scimitar Hydrocarbons Corporation 1995 to 1996 • Various positions including Manager Exploration Development of Home Oil Company Limited, 1981 to 1996.
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Pre-Approval Policies and Procedures

The Audit and Risk Committee has adopted the following specific policies and procedures for the engagement of non-audit services:

- On an annual basis, the Audit and Risk Committee updates and approves a list of pre-approved audit, audit-related, tax and other services, and pre-approves services that are recurring or are otherwise reasonably expected to be provided.
- The Audit and Risk Committee is informed quarterly of the services on such list for which the auditor has actually been engaged.
- Additional requests for pre-approval are addressed on a case by case specific engagement basis as follows:
 - Where the aggregate fees for an engagement are estimated to be less than or equal to \$10,000, the VP Finance and CFO submits a recommendation to the Chair of the Audit and Risk Committee for pre-approval. The full Audit and Risk Committee is informed of the service at the next meeting of the Audit and Risk Committee. The engagement may commence upon pre-approval by the Chair of the Audit and Risk Committee;
 - Where the aggregate fees for an engagement are estimated to be greater than \$10,000, the VP Finance and CFO submits a recommendation to the full Audit and Risk Committee for pre-approval. The engagement may commence upon pre-approval by the full Audit and Risk Committee.

External Auditor Service Fees (by Category)

	2019 Financial Year	2018 Financial Year
Audit Fees ⁽¹⁾	149,000	\$137,500
Audit-Related Fees ⁽²⁾	12,000	\$nil
Tax Fees ⁽³⁾	-	\$15,586

Notes:

- (1) Includes the audit of annual consolidated financial statements, and the review of interim consolidated financial statements for the periods ended March 31, June 30 and September 30. The 2019 audit fees is an estimate.
- (2) Regulatory advice.
- (3) Canadian compliance, tax planning and due diligence tax review for Seitel Canada Ltd. acquisition.

Revised November 2, 2016

OVERVIEW AND PURPOSE

The Audit and Risk Committee (the “Committee”) is appointed by and responsible to the Board of Directors (the “Board”) of Pulse Seismic Inc. (the “Corporation”) with the purpose of assisting the Board in fulfilling its oversight responsibilities regarding the integrity of the Company’s accounting and financial reporting, the Company’s internal controls and disclosure controls, the Company’s legal and regulatory compliance, the Company’s timeliness of financial filings with regulatory authorities, the independence and performance of the Company’s external auditors, the identification and management of the Company’s risks, the Company’s treasury plans and the Company’s whistleblower and complaint procedures for financial and accounting matters in accordance with these Terms of Reference.

The Committee has the authority to investigate any financial activity of the Corporation.

The primary responsibilities of the Committee include:

- overseeing the accounting and financial reporting processes of the Corporation;
- overseeing the audits of the financial statements of the Corporation; and
- assessing the processes related to identification of financial and other business and organizational risks and effectiveness of the control environment.

The Committee shall have unrestricted access to the Corporation’s personnel and documents and will be provided with the resources necessary to carry out its responsibilities.

COMPOSITION

The Committee will be comprised of a minimum of three directors. All Committee members will be independent and financially literate within the meaning of NI 52-110 Audit Committees.

The members of the Committee shall be appointed or reappointed at the meeting of the Board immediately following each annual meeting of the shareholders of the Corporation. Each member of the Committee shall continue to be a member thereof until such member’s successor is appointed, unless such member shall resign or be removed by the Board or such member shall otherwise cease to be a director of the Corporation. Where a vacancy occurs at any time in the membership of the Committee, it may be filled by the Board and shall be filled by the Board if the membership of the Committee is less than three (3) directors as a result of the vacancy.

The members of the Committee shall choose one of its members to serve as Chair (the “Chair”) who is responsible for the preparation of reports to the Board and conducting the meetings of the Committee. If the Chair of the Committee is not present at any meeting of the Committee, the Chair of the meeting shall be chosen by the Committee from among the members present.

Resolutions of the Committee shall be carried by the majority of the votes of the members of the Committee present at the meeting.

All members of the Board shall be free to attend any meetings of the Committee and participate, but only those members of the Committee shall be entitled to vote on any question before the Committee. Other than members of the Board, entitlement to attend all or a portion of any Committee meetings shall be determined by the Chair of the Committee or its members. The Chair of the Board is an ex-officio and non-voting member of the Committee, unless appointed by the Board as a full member of the Committee.

The members of the Committee shall be entitled to receive such remuneration for acting as members of the Committee as the Board may from time to time determine.

RESPONSIBILITIES

The responsibilities of the Committee include the following:

- To review the Corporation's quarterly financial statements, quarterly management's discussion and analysis and the financial information contained in the interim results news releases and interim reports to shareholders, and to provide recommendations to the Board for their approval;
- To review the Corporation's annual audited financial statements and notes thereto and satisfy itself that they are fairly presented in accordance with International Financial Reporting Standards (IFRS) and to recommend to the Board whether such financial statements should be approved;
- To review the annual management's discussion and analysis, the financial information contained in the annual results news releases, and the financial information contained in the Annual Information Form (the "AIF"), to determine that they provide consistency of disclosure with the financial statements themselves, and to provide recommendations to the Board for their approval;
- To review the disclosure of Committee information contained in the AIF, and to provide recommendations to the Board for its approval;
- To review such other financial information as the Corporation may publish from time to time including financial information in prospectuses and other offering documents and financial information required by regulatory authorities, to satisfy itself that they are fairly presented in accordance with IFRS, and to provide recommendations to the Board for their approval;
- To review and monitor accounting policies and practices, including critical accounting estimates;
- To review and monitor financial and other business and organizational risk management practices, including cyber risk;
- To review and monitor any material litigation involving the Corporation;
- To satisfy itself that management of the Corporation has implemented appropriate systems of internal control over financial reporting and determine that these are operating effectively;

- To obtain reasonable assurance through discussions with management and external auditors that the Corporation's accounting systems are reliable and that internal controls are adequate. The Committee will review the evaluation of internal controls by the external auditors, including any recommendations for improvement of accounting procedures and internal controls, together with management's response.
- To satisfy itself that the external audit function has been effectively carried out in a cost effective manner and that any matter which the external auditors wish to bring to the attention of the Board has been addressed;
- To review the annual appointment of external auditors for recommendation to the Board for approval by the shareholders of the Corporation, and to review the compensation of the external auditors and provide a recommendation to the Board for approval;
- To review any new appointment to the position of chief financial officer or to any other key executive position with financial reporting responsibilities;
- To review and pre-approve any non-audit services to be provided to the Corporation or its subsidiaries by the Corporation's external auditors (provided that the Committee may adopt policies and procedures for the pre-approval of de minimus non-audit services and for the delegation of the pre-approval of non-audit services to one or more members of the Committee, in accordance with NI 52-110 Audit Committees);
- Review the Terms of Reference of the Committee on an annual basis, and recommend to the Board of Directors such amendments to such mandate as the Committee believes are necessary or desirable; and
- To satisfy itself that the interim and annual certifications by the Corporation's CEO and CFO of the Corporation's interim and annual financial statements are completed and filed in accordance with applicable securities laws and policies.

In addition, the Chair of the Committee (or in the Chair's absence, any other member of the Committee) will review and approve any earnings guidance and any news release containing financial information based on the Corporation's financial statements prior to their release (other than financial information contained in interim and annual results news releases, which are to be approved by the Committee as provided above.)

PROCEDURES

The Committee will be satisfied that adequate procedures are in place for the review of the Corporation's public disclosure of financial information extracted or derived from the Corporation's financial statements (other than the public disclosure of financial statements, MD&A and annual and interim earnings news releases and reports to shareholders referred to above under "Responsibilities") and will periodically assess the adequacy of those procedures. The Committee will establish procedures for:

- (a) the receipt, retention and treatment of complaints received by the Corporation regarding accounting, internal accounting controls, or auditing matters, and
- (b) the confidential, anonymous submission by employees of the Corporation of concerns regarding questionable accounting or auditing matters.

The Committee will review and approve the Corporation's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of the Corporation.

EXTERNAL AUDITOR

The external auditor will report directly to the Committee.

The Committee is directly responsible for overseeing the work of the external auditor engaged for the purpose of preparing or issuing an auditor's report or performing other audit, review or attest services for the Corporation, including the resolution of disagreements between management and the external auditor regarding financial reporting.

AUTHORITY

The Committee has the authority:

- (a) to engage independent counsel and other advisors as it determines necessary to carry out its duties;
- (b) to set and pay the compensation for any advisors employed by the Committee; and (c) to communicate directly with the internal and external advisors.

MEETINGS

The Committee will meet at least four times per year and additionally as necessary to discharge its responsibilities as outlined herein. Upon consultation with and approval by all parties affected, the business of the Committee may be conducted by way of a telephone conference call.

The time and place of meetings of the Committee and the procedures at such meetings shall be determined from time to time by the members thereof, provided that a quorum for meetings shall be a majority of the members of the Committee.

Notice of the time and place of and an agenda and related materials respecting every meeting shall be given in writing or electronic communication to each member of the Committee at least 48 hours prior to the time listed for such meeting, provided, however, that a member may in any manner waive a notice of a meeting and attendance of a member at a meeting is a waiver of notice of the meeting, except where a member attends a meeting for the express purpose of objecting to the transaction of any business on the grounds that the meeting is not lawfully called.

The Committee may invite such officers, directors and/or employees of the Corporation as it may see fit from time to time to attend a meeting of Committee and assist in the discussion and consideration of the matters being considered by the Committee.

The Corporation's external auditors will be invited to attend Committee meetings when appropriate, particularly if they have been asked to provide any form of service with respect to specific agenda items.

REPORTING

The minutes of all meetings of the Committee are to be provided to the Board. Oral reports by the Chair on recent matters not yet recorded in the minutes are to be provided to the Board at its next meeting.

Supporting schedules and information reviewed by the Committee will be available for examination by any directors upon request to the Chair of the Committee.

CALENDAR FOR MEETINGS

The following outlines a suggested program for regular meetings of the Committee. Prospectuses, acquisitions, or takeovers will require meetings over and above the following annual program.

MEETING PRIOR TO RELEASE OF ANNUAL FINANCIAL STATEMENTS (MARCH)

- Discuss the audited annual financial statements and auditors' report thereon and annual management's discussion and analysis in detail with the Corporation's senior officers and external auditors.
- Review and discuss critical accounting estimates and underlying assumptions with the Corporation's senior officers and external auditors.
- Review and confirm the scheduled filing of the annual certifications by the Corporation's CEO and CFO of the annual financial statements.
- Review the financial information contained in the annual results news release.
- Review the financial information and the disclosure of Committee information contained in the AIF.
- Review a summary provided by the Corporation's senior officers of the status of any material pending or threatened litigation, claims and assessments.
- Review the Terms of Reference for the Committee.
- Review and assess the adequacy of the procedures for the review of the Corporation's public disclosure of financial information extracted or derived from the Corporation's financial statements.
- Review and assess the adequacy of the procedures for (a) the receipt, retention and treatment of complaints received by the Corporation regarding accounting, internal accounting controls, or auditing matters, and (b) the confidential, anonymous submission by employees of the Corporation of concerns regarding questionable accounting or auditing matters.
- Discuss in private with the external auditors matters affecting the conduct of their audit and other corporate matters.
- Discuss in private with the Corporation's Controller the internal controls over financial reporting.

- Discuss in private with the Corporation's senior officers the level and timeliness of service provided by the auditors and whether they recommend the reappointment of the auditors.
- Provide the Board a recommendation as to whether the annual financial statements and management's discussion and analysis, the financial information contained in the annual results news release, and the financial information and disclosure of Committee information contained in the AIF should be approved.
- Recommend to the Board each year the retention or replacement of the external auditors and their compensation.

MEETING PRIOR TO RELEASE OF FIRST QUARTER RESULTS (MAY)

- Obtain information on any changes in financial reporting requirements that may affect the current year's financial statements.
- Review interim financial statements, interim management's discussion and analysis, the interim review report of the external auditors, and the financial information contained in the interim results news release and interim report to shareholders with the Corporation's senior officers and the external auditors and provide recommendations to the Board for their approval prior to their release.
- Review and confirm the scheduled filing of the interim certifications by the Corporation's CEO and CFO of the interim financial statements.
- Obtain information on how the Corporation's senior officers monitor the effectiveness of the Corporation's financial reporting controls. Inquire into any significant changes planned regarding systems or controls within the next year.
- Review reports from senior officers outlining any significant changes in financial or other risks facing the Corporation.
- Review the management letter of the external auditors and the Corporation's responses to the suggestions made.

Obtain and review an annual report on cyber security from the Corporation's IT Manager.

MEETING PRIOR TO RELEASE OF SECOND QUARTER RESULTS (AUGUST)

- Review interim financial statements, interim management's discussion and analysis, the interim review report of the external auditors, and the financial information contained in the interim results news release and interim report to shareholders with the Corporation's senior officers and the external auditors and provide recommendations to the Board for their approval prior to their release.
- Review and confirm the scheduled filing of the interim certifications by the Corporation's CEO and CFO of the interim financial statements.

- Review reports from senior officers outlining any significant changes in financial or other risks facing the Corporation.

MEETING PRIOR TO RELEASE OF THIRD QUARTER RESULTS (NOVEMBER)

- Review interim financial statements, interim management's discussion and analysis, the interim review report of the external auditors, and the financial information contained in the interim results news release and interim report to shareholders with the Corporation's senior officers and the external auditors and provide recommendations to the Board for their approval prior to their release.
- Review and confirm the scheduled filing of the interim certifications by the Corporation's CEO and CFO of the interim financial statements.
- Review reports from senior officers outlining any significant changes in financial or other risks facing the Corporation.
- Review the terms of engagement of the external auditors and the audit planning summary.
- Obtain summaries of complex financings and other significant transactions, and other potentially difficult matters whose treatment in the annual financial statements merits advance consideration.
- Obtain draft skeleton financial statements and draft notes to financial statements and assess, on a preliminary basis, the reasonableness of the financial statements in light of presentations by the chief financial officer.

MEETING(S) TO BE CALLED AS REQUIRED

- Review the financial information contained in any prospectus or other offering document prior to its release.
- Review any significant accounting policy changes.
- If there is a plan to change auditors, review all issues related to the change and the steps planned for an orderly transition.
- Review any new appointment to the position of chief financial officer or to any other key executive position with financial reporting responsibilities.

STANDARD AGENDA ITEMS

- Questions for Management and Auditors
- Questions for Private Discussion with External Auditors (Members of Management not present)
- Questions for Private Discussion with Management (External Auditors not present)

- Report from the Chair of the Committee on (a) any complaints received by the Corporation regarding accounting, internal accounting controls, or auditing matters, and (b) any confidential, anonymous submissions by employees of the Corporation of concerns regarding questionable accounting or auditing matters (Management and External Auditors not present).