ANNUAL INFORMATION FORM

For the year ended December 31, 2018

March 29, 2019

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PRELIMINARY NOTES

Effective Date of Information

All information in this Annual Information Form ("**AIF**") is as of December 31, 2018 unless otherwise indicated. In this AIF, unless the context otherwise requires, the terms "we", "us", "our", and similar terms as well as references to "Trevali" or the "Company" refer to Trevali Mining Corporation and its direct and indirect subsidiaries.

Cautionary Note Regarding Forward-Looking Statements

All statements contained in this AIF that are not historical facts are "forward-looking information" within the meaning of the Canadian securities legislation and "forward-looking statements" within the meaning of Section 27A of the *United States Securities Act of 1933*, as amended, Section 21E of the *United States Exchange Act of 1934*, as amended, the *United States Private Securities Litigation Reform Act of 1995*, or in releases made by the United States Securities and Exchange Commission, all as may be amended from time that, among other things, involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

In this AIF, forward-looking statements include, but are not limited to, statements with respect to the future price of metals, the estimation of Mineral Reserves and Mineral Resources, the realization of Mineral Reserve estimates, changes in Mineral Resources and conversion of Mineral Resources to Proven and Probable Mineral Reserves, mine plans, the timing and amount of estimated future production, metal grades, achieving projected recovery rates, anticipated production rates and mine life, recovery rates, operating efficiencies, costs and expenditures, including capital and operating costs, costs and timing of the development of new deposits, off-take obligations, targeted cost reductions, exploration and expansion potential, success of exploration activities, permitting and certification timelines, commodity prices, currency fluctuations, requirements for additional capital, government regulation of mining operations, environmental matters, closure obligations and unanticipated reclamation expenses, title disputes or claims, limitations on insurance coverage, the timing and possible outcome of pending litigation, expectations regarding the Company's normal course issuer the number of shares that may be purchased thereunder and the timing and terms and conditions of same, and other information that is based upon forecasts of future operational or financial results, estimates of amounts not yet determinable, and assumptions of management.

Any statements that express or involve discussions with respect to predictions, expectations, beliefs, plans, projections, objectives, assumptions, guidance, or future events or performance (often, but not always, identified by words or phrases such as "expects", "is expected", "is expecting", "budget", "scheduled", "forecasts", "anticipates", "believes", "plans", "projects", "estimates", "assumes", "intends", "strategy", "goals", "objectives", "potential", "possible" or variations thereof or stating that certain actions, events, conditions or results "may", "could", "would", "should", "might" or "will" be taken, occur or be achieved, or the negative of any of these terms and similar expressions) are not statements of historical fact and may be forward-looking statements.

Forward-looking statements are necessarily based upon a number of factors and assumptions that, if untrue, could cause actual results, performance or achievements to be materially different from future results, performance or achievements expressed or implied by such statements. Assumptions have been made regarding, among other things present and future business strategies and the environment in which we will operate in the future, including commodity prices; anticipated costs and ability to achieve goals; the Company's ability to carry on its exploration and development activities; the Company's ability to meet its obligations under property agreements, the timing and results of drilling programs; the discovery of Mineral Resources and Mineral Reserves on the Company's mineral properties; the timely receipt of required approvals and permits, including those approvals and permits required for successful project permitting; construction and operation of the Company's projects; the costs of operating and exploration expenditures;

the Company's ability to operate in a safe, efficient and effective manner; the Company's ability to obtain financing as and when required and on reasonable terms; the Company's ability to continue operating; dilution and mining recovery assumptions; assumptions regarding stockpiles; the success of mining, processing, exploration and development activities; the accuracy of geological, mining and metallurgical estimates; no significant unanticipated operational or technical difficulties; maintaining good relations with the communities where our mines are located; no significant events or changes relating to regulatory, environmental, health and safety matters; certain tax matters; and no significant and continuing adverse changes in general economic conditions or conditions in the financial markets (including commodity prices, foreign exchange rates and inflation rates). Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used.

Forward-looking statements are subject to known and unknown risks, uncertainties and other important factors that may cause our actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking statements, including but not limited to: risks related to the integration of acquisitions; risks related to joint venture operations; volatility of the price of zinc, lead, silver and other metals; discrepancies between actual and estimated production, Mineral Reserves and Mineral Resources, grade and metallurgical recoveries; failure to replace Mineral Reserves; mining operational and development risks; currency fluctuations; general economic conditions; inflation risks; actual results of current exploration activities; actual results of current reclamation activities; restrictions on operations; liquidity risks; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; risks relating to recently opened mines; delays, suspensions or technical challenges associated with capital projects; risks relating to proceeding to production decision without a technical report; risks relating to reliance on historical data; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry; delays or failure to obtain (or retain) permits or governmental approvals; delays or failure to obtain required financing; delays or failures in the completion of development or construction activities; taxation risks; title risks; opposition from community or indigenous groups; compliance with laws, including environmental laws; exchange controls; higher prices for fuel, steel, power, labour and other consumables; political or economic instability and unexpected regulatory changes; as well as those factors discussed in the section entitled "Risk Factors" in this AIF.

Although the Company has attempted to identify important factors that could affect the Company and may cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated, or intended. Forward-looking information contained herein is made as of the date of this AIF based upon the opinions and estimates of management on the date statements containing such forward-looking information are made, and the Company disclaims any obligation to update any forward-looking statements or forward-looking information, whether as a result of new information, estimates or opinions, future events or results or otherwise or to explain any material difference between subsequent actual events and such forward-looking statements, except to the extent required by applicable law. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements.

Currency and Exchange Rate Information

We report our financial results and prepare our financial statements in United States dollars. Unless otherwise indicated, all references in this AIF to "**dollars**", "**US$**", or to "**$**" are to United States dollars. Trevali operates in various jurisdictions and makes references to Canadian dollars as "CAD" or "C$", Peruvian soles as "PEN", Namibian dollars as "NAD" and West African Franc as "XOF".

The following table sets forth the high and low exchange rates for one US dollar expressed in Canadian dollars for each period indicated, the average of the exchange rates for each period indicated and the

exchange rate at the end of each such period, based upon the daily exchange rates provided by the Bank of Canada:

United States Dollars into Canadian Dollars

	2018	2017	2016
High	$1.3642	$1.3743	$1.4589
Low	$1.2803	$1.2128	$1.2544
Rate at end of period	$1.3642	$1.2545	$1.3427
Average rate for period	$1.2957	$1.2986	$1.3248

Scientific and Technical Information

Unless otherwise indicated, all mineral resource and mineral reserve estimates included in this AIF have been prepared in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("**NI 43-101**"), and the Canadian Institute of Mining, Metallurgy and Petroleum (the "**CIM**") – *CIM Definition Standards on Mineral Resources and Mineral Reserves*, adopted by the CIM Council, as amended (the "**CIM Standards**"). NI 43-101 are rules and codes of practice developed by the Canadian Securities Administrators that established minimum standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. The terms "mineral reserve", "proven mineral reserve" and "probable mineral reserve" are Canadian mining terms as defined in accordance with NI 43-101 and the CIM Standards. These definitions differ materially from the definitions in SEC Industry Guide 7 ("**SEC Industry Guide 7**") under the United States *Securities Exchange Act of 1934*, as amended. Under U.S. Securities and Exchange Commission (the "**SEC**") Industry Guide 7 standards, a "final" or "bankable" feasibility study is required to report reserves, the three-year historical average price is used in any reserve or cash flow analysis to designate reserves and the primary environmental analysis or report must be filed with the appropriate governmental authority. In addition, the terms "mineral resource", "measured mineral resource", "indicated mineral resource" and "inferred mineral resource" are defined in and required to be disclosed by NI 43-101 and the CIM Standards; however, these terms are not defined terms under SEC Industry Guide 7 and are normally not permitted to be used in reports and registration statements filed with the SEC. Investors are cautioned not to assume that all or any part of mineral deposits in these categories will ever be converted into reserves. "Inferred mineral resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or pre-feasibility studies, except in very limited circumstances. Investors are cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable. Disclosure of "contained metal" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade without reference to unit measures. Mineral resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent resource estimates. Mineral resources may also be affected by subsequent assessments of mining, environmental, processing, permitting, taxation, socio-economic, and other factors. Actual recoveries of mineral products may differ from reported mineral reserve and mineral resource estimates due to inherent uncertainties in acceptable estimating techniques. In particular, inferred mineral resources have a great amount of uncertainty as to their existence, economic, and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category of mineral resource. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Investors are cautioned not to assume that all or any part of the mineral deposits in these categories will ever be converted into proven and probable mineral reserves.

Except where indicated, the disclosure contained in this AIF of a scientific or technical nature has been summarized or extracted from the NI 43-101 compliant technical reports referenced under the respective

sections describing each of the Company's material mineral properties (collectively, the "**Technical Reports**"). See *"Mineral Properties"*. Readers should consult these reports to obtain further particulars regarding the Company's material mineral properties. Readers are cautioned that the summary of technical information in this AIF should be read in the context of the qualifying statements, procedures and accompanying discussion within the complete Technical Reports and the summary provided herein is qualified in its entirety by such Technical Reports. Capitalized and abbreviated mining terms appearing in the summaries under *"Mineral Properties"* and not otherwise defined herein shall have the meanings ascribed to such terms in the respective Technical Reports.

Information of a scientific or technical nature in this AIF arising since the date of the respective Technical Reports has been prepared under the supervision of Dr. Mark D. Cruise, EurGeol, Trevali's President and Chief Executive Officer, Yan Bourassa, P.Geo., Trevali's Vice President, Mineral Resource Management and Daniel Marinov, P.Geo., Trevali's Vice President, Exploration, each of whom is a "qualified person" under NI 43-101.

General Mining Industry Information

Information contained in this AIF concerning the mining industry and general expectations concerning the mining industry are based on estimates prepared by the Company using data from publicly available industry sources as well as from market research and industry analysis and on assumptions based on data and knowledge of this industry which the Company believes to be reasonable. However, this data is inherently imprecise, although generally indicative of relative market positions, market shares and performance characteristics. While the Company is not aware of any misstatements regarding any industry data presented herein, the industries involve risks and uncertainties and are subject to change based on various factors.

Non-IFRS Measures

This AIF refers to certain non-IFRS financial performance measures including Operating Cost per tonne, C1 Cash Cost per pound and All-in Sustaining Cost ("AISC"). These measures are not recognized under IFRS as they do not have any standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other issuers. Management uses these measures internally to evaluate the underlying operating performance of the Company for the reporting periods presented. The use of these measures enables management to assess performance trends and to evaluate the results of the underlying business of the Company. We understand that certain investors, and others who follow the Company's performance, also assess performance in this way. We believe that these measures reflect our performance and are useful indicators of our expected performance in future periods. This data is intended to provide additional information and should not be considered in isolation or as a substitute for measures of performance prepared in accordance with IFRS.

<u>Operating Cost per tonne</u>

This measures the mine site cash operating cost per tonne milled. This measure includes mine operating production expenses such as mining, processing, administration, indirect charges such as surface maintenance and camp expenses, and inventory stock movement divided by tonnes milled. Operating Cost per tonne does not include smelting and refining, distribution (freight), royalties, by-product revenues, depreciation, depletion, amortization, reclamation, and capital sustaining and exploration expenses.

<u>C1 Cash Cost per pound</u>

This measures the cash costs to produce a pound of payable zinc. This measure includes mine operating production expenses such as mining, processing, administration, indirect charges (including surface maintenance and camp), and inventory stock movement, smelting, refining and freight, distribution, royalties, and by-product metal revenues divided by pounds of payable zinc produced. C1 Cash Cost per

pound does not include depreciation, depletion, and amortization, reclamation expenses, capital sustaining and exploration expenses.

AISC per pound

This measures the cash costs to produce a pound of payable zinc plus the sustaining capital costs to maintain the mine and mill. This measure includes the C1 Cash Cost per pound and sustaining capital costs divided by pounds of payable zinc produced. AISC per pound does not include depreciation, depletion, and amortization, reclamation and exploration expenses.

Adjusted working capital

This measures the working capital at December 31, 2018 after adjusting for the temporary reclassification of the carrying value of the Facility from non-current to current liabilities

CORPORATE STRUCTURE

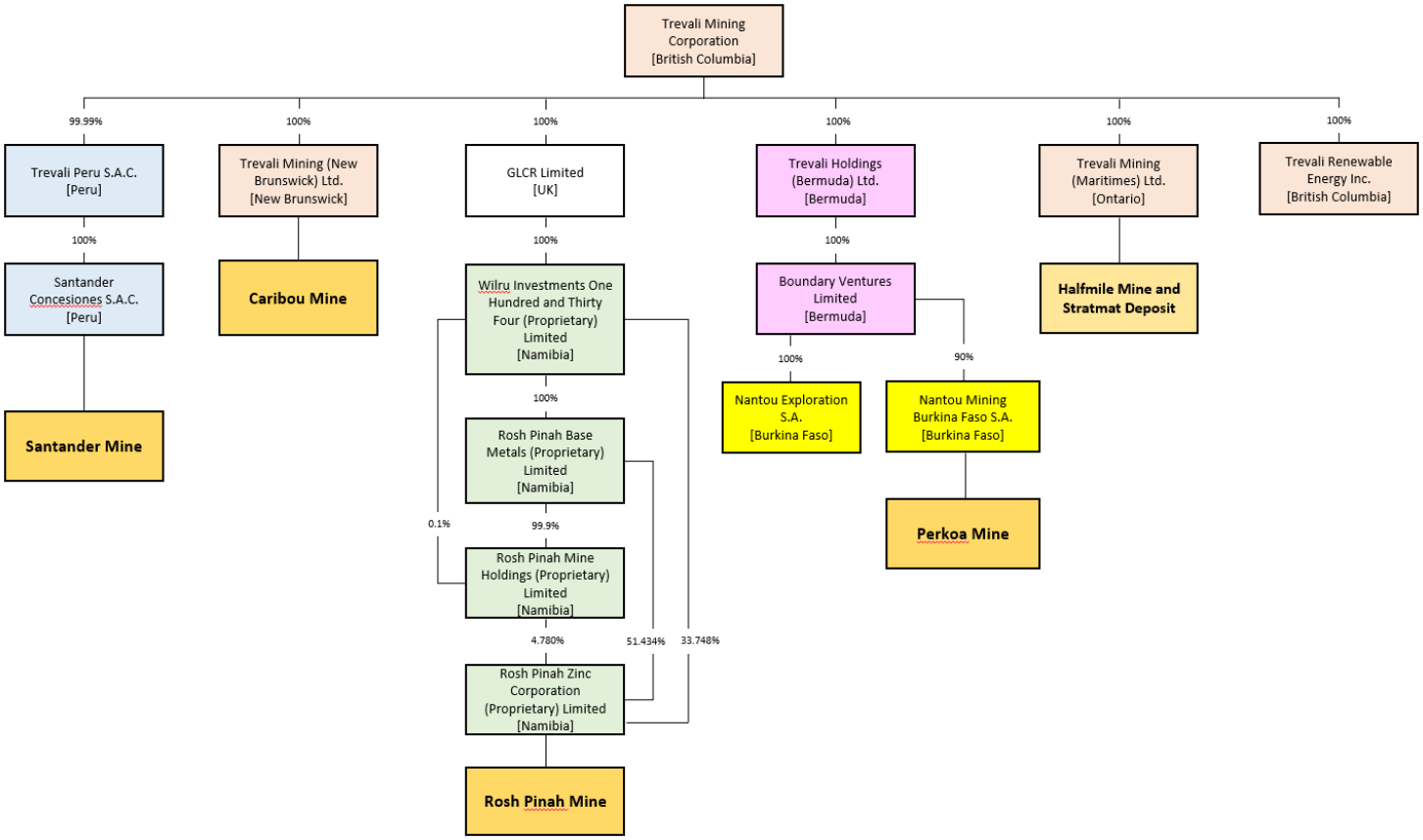
Name, Address and Incorporation

The name of the Company is Trevali Mining Corporation. The Company's head office is located at 1199 West Hastings Street, Suite 1400, Vancouver, British Columbia V6E 3T5, Canada. The Company's registered office is located at 885 West Georgia Street, Suite 2200, Vancouver, British Columbia V6C 3E8.

The Company was incorporated under the *Business Corporations Act* (British Columbia) on June 16, 1964 as "Christina Resources Corp." On December 18, 1985, the Company changed its name to "Airborne Data Marketing Ltd." On December 3, 1986, the Company changed its name to "International Airborne Systems Company". On September 22, 1992, the Company changed its name to "AVNAV Technologies Inc." On December 31, 1993, the Company amalgamated with GWS Enterprises Inc. to form "Gateway Waste Systems Inc." On November 1, 1995, the Company changed its name to "Gateway Technologies Company". On July 6, 2006, the Company changed its name to "Trevali Resources Corp." and consolidated its share capital on a 2 for 1 basis. On April 7, 2011, the Company completed a plan of arrangement with Kria Resources Ltd. and changed its name to "Trevali Mining Corporation".

Intercorporate Relationships

In this AIF, unless the context otherwise requires, the terms "we", "us", "our", and similar terms as well as references to "Trevali" or the "Company" means Trevali Mining Corporation, together with its subsidiaries. The following diagram sets forth the Company's intercorporate relationships with its active subsidiaries, including the jurisdiction of incorporation or organization and the Company's direct and indirect voting interest in each of these subsidiaries as at March 29, 2019.



DEVELOPMENT OF THE BUSINESS

Our Business

Trevali is a natural resource company engaged in the acquisition, exploration, development and production of mineral properties. We are one of the top zinc producers in the world. Trevali is focused on growing production, increasing cash flow and enhancing value for its shareholders.

We produce zinc concentrates from the Perkoa mine in Burkina Faso (the "**Perkoa Mine**"), and zinc and lead-silver concentrates from the Rosh Pinah mine in Namibia (the "**Rosh Pinah Mine**"), the Caribou mine in the Bathurst Mining Camp, northern New Brunswick, Canada (the "**Caribou Mine**") and the Santander mine in Peru (the "**Santander Mine**"). In addition, Trevali owns the Halfmile and Stratmat Properties ("**Halfmile-Stratmat**") and the Restigouche deposit in New Brunswick, Canada, the Ruttan mine in northern Manitoba, Canada and an effective 44% interest in the Gergarub project in Namibia, as well as an option to acquire a 100% in the Heath Steele deposit located in New Brunswick, Canada.

Trevali is a reporting issuer in all of the provinces of Canada and its common shares (the "**Common Shares**") are listed on the Toronto Stock Exchange (the "**TSX**") under the symbol "TV", the Bolsa da Valores de Lima in Peru under the symbol "TV", and the Frankfurt Stock Exchange under the symbol "4TI". The Common Shares also trade on the OTCQX in the United States under the symbol "TREVF".

Our Strategy and Positioning

Trevali's strategy focuses on growing production from our mines through exploration, operational excellence and responsible capital allocation, thereby increasing cash flow per share and enhancing value for our shareholders. We pursue this strategy with a priority on the safety of our workers and a fundamental responsibility to the environment and the communities in which we operate. Our vision is to be a premier base metals mining company preferred by investors for solid performance and by communities, partners and employees for mutual benefit and trust.

The positioning of our business and steps taken during the last year to strengthen the business include:

1. **Unhedged exposure to a strengthening zinc market** – Trevali is a leading player in a global zinc market that is currently experiencing historically low and declining inventory levels. Wood Mackenzie research forecasts that global zinc demand is expected to increase by 1.5% per year through 2023 on the strength of global GDP growth, and increasing demand owing to infrastructure development and the trend towards urbanization. Should these demand trends support increasing zinc prices, Trevali is well-positioned to benefit.

2. **Strong management team with renewed focus** – During the past year we have significantly bolstered our operational and corporate teams to support a focus on asset optimization and value enhancement, as discussed in further detail below.

3. **Diversified asset base with significant value enhancement opportunities** – We have a portfolio of four producing mines and are actively implementing cost and operational optimization initiatives across our asset base.

4. **Strong balance sheet** – Trevali's balance sheet as at December 31, 2018 includes $149 million in Adjusted working capital (including $65.5 million in cash and cash equivalents), providing both stability and flexibility. As at December 31, 2018, net debt and total debt of the Company is $67.0 million and $132.4 million. The strength of the balance sheet reflects management's disciplined approach to capital allocation.

5. **Strategic relationship with a global mining and zinc industry leader** – Trevali benefits from a strategic relationship with Glencore PLC ("**Glencore**") as both a commercial counterparty and a patient and aligned shareholder with a 26% equity interest in Trevali. Trevali also benefits from the considerable insight, perspective and relationships Glencore provides as one of the most significant global commodity companies.

Combined, these characteristics position Trevali for growth and value creation.

Looking ahead, our objectives include:

- Increasing production and improving our cost position through strategic allocation of capital
  - For example, at Rosh Pinah, Trevali's lowest operating cost and longest life mine, we are evaluating a capital-efficient increase in mill throughput that will not only boost production but is anticipated to improve efficiencies and enhance its position as the Company's lowest cost mine; and
  - The heavy fuel oil project at the Perkoa Mine is expected to be commissioned in the first half of 2019 which will decrease operating costs.
- Investing in brown-field and regional exploration with the objective of extending mine life
  - All our deposits remain open for expansion with exploration drilling ongoing
- Evaluating accretive investment opportunities
  - This includes considering further purchases under our normal course issuer bid which we have in place for up to a maximum aggregate purchase price of C$20 million.

Three-Year History

Significant Developments

2019 to Date

On March 28, 2019, the Company reported its Mineral Reserves and Mineral Resources estimates for each of the Perkoa Mine, the Rosh Pinah Mine, the Caribou Mine and the Santander Mine, as well as certain of its exploration assets, effective December 31 2018. On a consolidated basis, total proven and probable mineral reserves were 2.83 billion pounds of contained zinc. Contained lead totaled 494 million pounds while silver mineral reserves totaled 16.1 million ounces. The Company's exploration activities successfully replaced and increased the measured and indicated mineral resources at all four mines and at higher grades at Santander and Caribou. Total measured and indicated mineral resources increased to 7.4 billion pounds of contained zinc representing a 13% increase over the prior year. Total measured and indicated mineral resources also included 1.7 billion pounds of contained lead and 55 million ounces of contained silver, with total inferred mineral resources comprising an additional 0.8 billion pounds of contained lead and 28 million contained ounces of silver. For additional information, refer to the news release entitled "Trevali Provides Mineral Reserve and Mineral Resource Update".

On March 13, 2019, the Company announced the appointment of Jessica McDonald as Chair of the Board of Directors. An independent Director of Trevali since 2017, Ms. McDonald has extensive leadership experience including roles as both a Board Chair and Chief Executive Officer at large and complex organizations. Ms. McDonald's appointment as Chair will ensure continued focus, stability and strong governance of Trevali, and she has a track record of success leading organizations with diverse operational and business units. In December 2017 she was appointed Chair of the Board of the Canada Post Group of Companies, which includes a majority shareholding of Purolator Courier, and subsidiaries Innovapost and SCI Logistics. She assumed the additional role of interim Chief Executive Officer of Canada Post from March 2018 to March 2019 in order to steward the organization as it confronted a number of organizational, financial and strategic challenges. Previously she served as Chief Executive Officer of BC Hydro, a clean energy utility with more than $5.5 billion in annual revenues. As noted in Trevali's news release announcing this appointment, Ms. McDonald will lead a Board "focused on responsible capital allocation and enhancing value for shareholders."

On February 20, 2019, the Company announced its financial results for the year ended December 31, 2018. The Company reported concentrate sales revenue of $402.6 million, an increase of approximately 22% from 2017, having produced 407 million payable pounds zinc, in-line with guidance of 400–427 million pounds established in early 2018. Lead production was 41.7 million payable pounds and silver production was 1.3 million ounces. The Company also reported a net loss of $231 million, or $0.27 per share, following non-cash impairment charges before tax of $312 million related to historic acquisition and construction costs and which was primarily driven by the decline in the price of zinc.

On January 17, 2019, we announced that as part of the Company's ongoing transformation, vision and strategy to be a global base metals mining company, Dr. Mark Cruise planned to step down as President and Chief Executive Officer and Mr. Mike Hoffman planned to step down as Chair of the Board of Directors of the Company. As noted above, Mr. Hoffman subsequently stepped down as Chair of the Board on March 12, 2019 and Ms. McDonald was appointed to this role. Dr. Cruise is continuing in his role until a new Chief Executive Officer is appointed in order to ensure a smooth transition to a new leadership team.

2018

During 2018, the Company made a number of significant additions to strengthen its executive leadership team, including the appointment of a new Chief Financial Officer, a new Senior Vice President, Corporate

Development & Investor Relations, a new Vice President, General Counsel and Corporate Secretary, a new Vice President, Mineral Resource Management and a new Vice President, Human Resources.

In addition, we continued to sharpen our operational focus by facilitating the transfer of skills, practices and knowledge across our operations, implementing best practices and continuously improving efficiencies. In 2018, for example, we transferred underground operational skills and practices from our Santander mine to Rosh Pinah to enhance ground support and safety. At Caribou, we transferred underground geotechnical and cemented rock fill experience gained at Perkoa to reduce dilution and improve rock stability. From Rosh Pinah and Caribou, we transferred systems tracking and mine planning protocols to the other operations. In order to improve cash flow stability and predictability, we are focused on enhanced concentrate transportation logistics and improving mine to mill planning and oversight.

During 2018, the Company continued to advance the ongoing efficiency improvement projects at Perkoa and Rosh Pinah. Several ongoing projects such as the new high-efficiency, heavy fuel oil power plant at Perkoa and a new filter press, flotation and grinding circuit modifications at Rosh Pinah are expected to be completed in 2019. The completion of these projects is expected to reduce operating costs. In addition, further to the Company's announcement on October 22, 2018, a review of the mining method at Caribou is ongoing.

On November 15, 2018, the Company announced that the Toronto Stock Exchange had accepted the Company's notice to implement a normal course issuer bid ("**NCIB**"). The approval allows the Company to purchase, for cancellation, up to 40,000,000 common shares having a maximum aggregate purchase price of C$20 million, over a twelve-month period, commencing on November 19, 2018. As of the date of this AIF, the Company has repurchased and cancelled 13.6 million common shares at a cost of C$5.0 million. The NCIB will expire no later than November 18, 2019.

On September 18, 2018, the Company entered into an amended and restated credit agreement with a syndicate of lenders for a new $275 million Revolving Credit facility (the "**Facility**"), which replaced the $160 million term and $30 million revolving credit facility entered into in August 2017. The Facility includes standard finance terms and conditions, including with respect to fees, representations, warranties, covenants and conditions precedent to additional draws under the Facility. The Facility will result in reduced interest expense.

On May 31, 2018, the Company increased its beneficial ownership in Rosh Pinah from 80% to 90.0%, which also increased our indirect ownership interest in the Gergarub deposit from 39% to 44%.

On May 31, 2018, the Company filed updated Technical Reports for each of the Perkoa Mine and the Rosh Pinah Mine, and on June 4, 2018, we filed an updated technical report for the Caribou Mine.

On April 27, 2018, the Company entered into an option agreement with Puma Exploration Inc. ("**Puma**"), pursuant to which Trevali had an option to acquire an interest in the Murray Brook Project by providing approximately $5.5 million in financing for Puma to enable it to close its acquisition of the project, ultimately leading to a 75:25 ownership interest in the Murray Brook Project between the Company and Puma, respectively, and a 51:49 ownership in the Murray Brook East Property, respectively. In March 2019, the Company terminated the option agreement and no longer has a right to acquire an interest in the Murray Brook Project.

2017

2017 was a transformational year for the Company as it acquired interests in the Rosh Pinah and Perkoa Mine, making Trevali one of the world's largest zinc miners.

On March 13, 2017, the Company entered into definitive agreements with Glencore PLC ("**Glencore**") and certain of its subsidiaries to acquire a portfolio of zinc assets from Glencore (collectively, the "**Glencore**

Assets"), including an 80% interest in the Rosh Pinah Mine in Namibia, a 90% interest in the Perkoa Mine in Burkina Faso, an effective 39% interest in the Gergarub project in Namibia, an option to acquire a 100% interest in the Heath Steele property in Canada and certain related exploration properties (the "**Glencore Acquisitions**").

On April 2, 2017, the Company completed a bought deal private placement of subscription receipts (the "**Subscription Receipt Financing**") for gross proceeds of C$264.55 million. Each subscription receipt represented the right to exchange, without payment of additional consideration or further action, one Common Share upon closing of the Glencore Acquisitions and upon the satisfaction or waiver of the escrow release conditions. All of the subscription receipts were exchanged for Common Shares on August 31, 2017.

On August 31, 2017, the Company completed the Glencore Acquisitions (with an effective date of April 1, 2017) for an aggregate purchase price of $418 million which was comprised of $245 million in cash (the "**Cash Consideration**") and an aggregate of 193,432,310 Common Shares with an estimated fair value of C$244 million (the "**Share Consideration**"). The Cash Consideration was funded through a combination of: (i) net proceeds from the Subscription Receipt Financing, and (ii) advances under a $160 million senior secured term loan and a $30-million senior secured revolving working capital loan, which have both subsequently been replaced by the Facility referred to above under "Three Year History – Significant Developments – 2018". In addition to funding a portion of the Cash Consideration, a portion of the term facility was used to refinance debt obligations of Trevali's wholly-owned subsidiary, Trevali Peru S.A., owing to Glencore and its affiliates.

As part of the Glencore Acquisitions, subject to certain conditions set out in an investor rights and governance agreement (the "**Investor Rights Agreement**"), Glencore was granted certain board nomination rights, the right to participate in any future equity offerings by the Company in order to maintain its *pro rata* ownership in Trevali and consent rights on any future material asset sales. Pursuant to the Investor Rights Agreement, Glencore agreed to a 36-month standstill (the "**Standstill**") and to hold the Share Consideration for a period of at least 24 months following the closing of the Glencore Acquisitions. The Standstill prohibits Glencore from taking certain specified actions without Trevali's approval, including, among other things, launching a takeover bid or increasing its ownership in Trevali.

Upon closing of the Glencore Acquisitions, Mr. Dan Myerson was appointed to the Board pursuant to the terms of the Investor Rights Agreement. Effective October 11, 2017, each of Ms. Jessica L. McDonald and Messrs. Russell Ball and Dan Isserow were appointed to the Board following the voluntary resignations of Ms. Catherine Gignac and Messrs. David Huberman and David Korbin. In addition, following the changes to the Board, Mr. Mike Hoffman was appointed Chair of the Board, succeeding Mr. David Huberman.

On November 28, 2017, the Company announced new senior executive appointments and modifications to its corporate team as part of the Company's ongoing optimization and asset integration process following the Glencore Acquisitions, including the appointment of a new Chief Operating Officer, a new Senior Vice President, Major Projects & Technical Support, and a new Senior Vice President, Business Initiative / Development.

Other developments during 2017 included:

- On February 1, 2017, the Company announced that the planned transition at the Caribou Mine to an owner-operated model would include the procurement of a new underground mining fleet and that it had committed to an investment of approximately C$20 million for the supply and

maintenance of a fleet of mining equipment during the first half of 2017. Delivery of the fleet commenced during the second quarter of 2017 and was completed later that year.

- On March 31, 2017, the Company reported updated mineral resources and mineral reserves for the Santander Mine in Peru effective March 31, 2017.
- On July 27, 2017, the Company announced that it received the Mining Lease for the former Restigouche zinc-lead-silver mine located approximately 20 kilometres west-southwest of the Caribou Mine in the Bathurst Mining Camp of New Brunswick.

2016

On July 7, 2016, the Company announced that the Caribou Mine had achieved commercial production effective July 1, 2016.

On March 16, 2016, the Company completed a C$14.95 million marketed equity financing. The net proceeds from the financing were used for ongoing commissioning and ramp-up expenditures at the Caribou Mine, as well as for working capital and general corporate purposes.

On February 29, 2016, April 26, 2016, and November 4, 2016, the Company completed non-brokered equity financings for aggregate gross proceeds of C$6.5 million on a "flow-through" basis under the *Income Tax Act* (Canada). The proceeds from these financings were spent on qualifying Canadian exploration expenditures at the Company's exploration properties in New Brunswick, Canada.

DESCRIPTION OF THE BUSINESS

Selected Disclosure Regarding the Company and its Business in Burkina Faso

In addition to information set out elsewhere in this AIF, the disclosure under this heading "Selected Disclosure Regarding the Company and its Business in Burkina Faso" provides investors selected summary information about the Company and its business in Burkina Faso, including Trevali's understanding of the Republic of Burkina Faso and applicable laws of Burkina Faso currently in force.

The Republic of Burkina Faso

Burkina Faso is a sub-Saharan country located in West Africa and has a land area of 274,200 square kilometres. It is a land-locked country and is bordered by six countries: Mali to the north, Niger to the east, Benin to the southeast, Togo and Ghana to the south, and Ivory Coast to the southwest. Burkina Faso has a population of approximately 19.5 million people. The city of Ouagadougou is the capital with a population of approximately 1.5 million people.

Approximately 80% of the labour force is engaged in crop and livestock farming and fishing. Industrial activity has traditionally been concentrated on processing farm commodities, primarily cotton, which accounts for approximately one-third of the country's gross domestic product. In recent years, gold mining has become another important source of economic activity in Burkina Faso.

Government Organization

Burkina Faso's political history, like that of most West African countries, has swung between civil and military governments since it gained its independence from France in 1960. In October 2014, there was a civil uprising to remove longtime president Blaise Compaoré and a brief and ultimately unsuccessful military coup in September 2015 that was loyal to Compaoré. In November 2015, voters in Burkina Faso democratically elected Mr. Roch Marc Christian Kabore president, replacing the transitionary civilian government that had been installed following the events of 2014. The next election is scheduled to be held in November 2020.

Burkina Faso has a republic form of government and the executive branch consists of an elected President with a five-year term (maximum of two terms) who is both the head of state and the head of the government. The President appoints the Prime Minister with consent of the National Assembly. The President appoints the Council of Ministers upon recommendation from the Prime Minister. The legislative branch consists of a National Assembly of 127 members who are elected for five-year terms in multi-seat constituencies by proportional representation. In January 2018, the Prime Minister and all members of his cabinet resigned from office, and a new Prime Minster and cabinet were subsequently appointed by the President.

At the regional level, Burkina Faso is a member of the West African Monetary and Economic Union (WAEMU) whose currency is the West African CFA Franc and a member of the Economic Community of West African States (ECOWAS). Burkina Faso also adheres to the Treaty on the Harmonization of Business Law in Africa (OHADA).

Burkina Faso's legal system is based on the French civil law system and customary law.

Currency

The official monetary unit of Burkina Faso is the West African CFA franc, which is currently fixed at the rate of 655.957 CFA francs per euro. There are no restrictions on the convertibility or transfer of funds.

Mining Industry

In 2003, Burkina Faso significantly reformed its mining legislation to attract foreign investment, which resulted in a mining boom. Mining, particularly gold mining, now plays an important role in the economy of Burkina Faso with several major international companies taking part in exploration and mining activities. As the fourth largest gold producer in Africa, Burkina Faso has seven major gold mines although there have been several new gold discoveries in recent times that are likely to prompt future development. Some of the major companies exploring, developing or mining gold in Burkina Faso include Barrick Gold Corporation (as successor to Randgold Resources Ltd.), IAMGOLD Corporation, B2Gold Corp., SEMAFO Inc., Orezone Gold Corporation, Cluff Gold plc, Endeavour Mining Corp., Teranga Gold Corporation, and Roxgold Inc. The Perkoa Mine is the only zinc mine in Burkina Faso.

Mineral Rights

In Burkina Faso, the State owns the title to all mineral rights. Mining in Burkina Faso is mainly regulated by Burkina Faso's 2 Law No. 31–2003/AN, dated May 8, 2003 Mining Code (the "2003 Burkina Faso Mining Code"), which was amended by decrees in 2005, 2008, 2010, and 2015. The version of the mining code applicable to Nantou Mining's Perkoa operations is the 2003 Burkina Faso Mining Code.

The 2003 Burkina Faso Mining Code provides that prior to the issuance of mineral rights a mining convention must be signed by the State of Burkina Faso and the future holder of the mineral right. The mining convention between Nantou Mining and the Government of Burkina Faso, which was signed by the Minister of Mines of Burkina Faso on August 27, 2008 (the "**Perkoa Mining Convention**"), sets out the fiscal and legal terms with respect to the operation of the Perkoa Exploitation Permit, including taxation rates applicable to the project, per the 2003 Burkina Faso Mining Code. The Perkoa Mining Convention is valid for 20 years commencing on the date of the grant and may be renewed for subsequent periods of five years, until the mining reserves have been depleted.

The Perkoa Mining Convention provides for the minimum exploration expenses to be incurred and the size of the interest of the State in the project if the property is brought into production, which is typically a 10% free carried interest that must be maintained when there is an increase in the capital of the exploitation company. The government also collects various taxes and duties on the imports of fuels, supplies, equipment, and outside services. In addition, there is a 3% NSR royalty payable to the government on all base metal production in Burkina Faso. In the case of Nantou Mining, the Burkina Faso Government has a

10% free carried equity interest in Nantou Mining in accordance with the 2003 Burkina Faso Mining Code, with Trevali controlling the remaining 90%. The Perkoa Exploitation Permit, held by Nantou Mining, was granted on March 20, 2007 and formally grants Nantou Mining the rights to develop and operate the Perkoa Mine. It is scheduled to expire on March 20, 2027, but is eligible for renewal.

The Perkoa Exploitation Permit is surrounded by the Perkoa Exploration Permits (as defined herein), which are held by Nantou Exploration (as defined herein), which is indirectly owned 100% by Trevali. The 2003 Burkina Faso Mining Code gives the exploration permit holder the exclusive right to explore for the minerals requested on the surface and subsurface within the boundaries of the exploration permit. The exploration permit also gives the holder the exclusive right, at any time, to convert the exploration permit into a mining exploitation permit in accordance with the law. Exploration permits are valid for a period of three years from the date of issue and may be renewed for two more consecutive terms of three years each for a total of nine years; however, on the second renewal, at least 25 per cent of the original area must be relinquished. The third renewal application for the Perkoa Exploration Permits has been approved and exploration expenditures will be required in order to maintain the permits in good standing. Should an exploitation permit for any portion of the Perkoa Exploration Permits be granted, the State will receive a 10% equity interest in the new exploitation company in accordance with the 2003 Burkina Faso Mining Code, and the Company will be required to enter into a new mining convention for the new mine.

Pursuant to article 78 of the 2003 Burkina Faso Mining Code, only holders of mining exploitation permits are required to maintain a fiduciary account with an accredited bank to hold funds for reclamation of mining properties. As a result, Trevali is required to maintain a reserve for future reclamation in connection with the Perkoa Exploitation Permit. The 2003 Burkina Faso Mining Code also guarantees a stable fiscal regime for the life of any mine developed. The 2003 Burkina Faso Mining Code also provides that work towards development and mining must be started within two years from the date a mining permit is granted and must conform to the feasibility study.

The mining convention guarantees stabilization of financial and customs regulations and rates during the period of the exploitation to reflect the rates in place at the date of signing. The 2003 Burkina Faso Mining Code states that no new taxes can be imposed with the exception of mining duties, mining taxes and mining royalties. However, the title holder can benefit from any reductions of tax rates during the life of the exploitation license.

The new Mining Code was approved by the transitional government and came into effect on June 16, 2015. The application decrees were completed in 2017 and the new Mining Code is operational. The changes to the Mining Code include the introduction of a 1 per cent levy on revenues derived from business in Burkina Faso to serve the development of local communities, the elimination of the reduced corporate tax rate, resulting in a tax increase from 17.5 to 27.5 per cent and a priority dividend payable to the State of Burkina Faso; however, the new Mining Code does not apply to the Perkoa Mine.

Selected Disclosure Regarding the Company and its Business in Namibia

In addition to information set out elsewhere in this AIF, the disclosure under this heading “Selected Disclosure Regarding the Company and its Business in Namibia” provides investors selected summary information about the Company and its business in Namibia, including Trevali’s understanding of the Republic of Namibia and applicable laws of Namibia currently in force.

The Republic of Namibia

Namibia is a sub-Saharan country located in southwest Africa and has a land area of 825,615 square kilometres. It is bordered by Angola and Zambia to the north, South Africa and Botswana to the east, and the Atlantic Ocean coast to the west. Namibia has a population of approximately 2.6 million people. The city of Windhoek is the capital with a population of approximately 325,000 people. The large, arid Namib Desert has resulted in Namibia being one of the least densely populated countries in the world.

The largest economic sectors are mining (diamonds, uranium, gold, silver, and base metals), agriculture, herding, manufacturing, and tourism. Namibia's economy is tied closely to South Africa's due to their shared history.

Government Organization

Namibia gained its independence from South Africa in 1990 and has a stable multi-party parliamentary democracy form of government. The Executive branch consists of an elected President with a five-year term (maximum of two terms) who is both the head of state and the head of the government. The President appoints the Prime Minister and the Cabinet. At the time of this AIF, the current President is Mr. Hage Geingob who was elected in 2014. The next election is to be held in November 2019.

The legislative branch consists of a National Assembly of 104 members and the National Council of 42 members. In the National Assembly, 96 members are elected in multi-seat constituencies by proportional representation vote for five-year terms and eight non-voting members are appointed by the President. The National Council primarily reviews legislation passed and referred by the National Assembly, who members are indirectly elected by the 14 regional councils to serve five-year terms.

Currency

The official monetary unit of Namibia is the Namibian dollar (NAD or N$), which is currently fixed at the rate of 1 NAD per South African rand. Namibia is part of the South African Rand Common Monetary Area ("**CMA**"). Exchange controls in the CMA require that dividends, loans, repayment of loans and payment of all invoices to parties outside the CMA by companies registered in the CMA require prior approval by the Bank of Namibia. The Company has never experienced any issues as a result of these exchange controls, however, there can be no assurance that the Company will obtain the requisite approvals in the future to repay loans or pay invoices to parties outside the CMA, including the Company's related subsidiaries that are not residents of the CMA. Exchange controls may restrict the Company from repatriating funds and using those funds for other purposes.

Mining Industry

Mining contributes to approximately 25% of Namibia's income and is the largest contributor to the economy. Namibia has various natural resources being exploited, including diamonds, uranium, copper, gold, lead, tin, lithium, cadmium, zinc, salt, and vanadium. Five major companies account for 95% of the mining income, with diamond and uranium mining being the two most vital industries in Namibia. Namibia has two significant uranium mines, which together provide for roughly 5% of the world's uranium oxide mining output.

Mineral Rights

In Namibia, all mineral rights to the property are vested in the State. The minerals industry in Namibia is administered by the Minister of the Namibian Ministry of Mines and Energy (MME), assisted by the Mining Commissioner and the Minerals Board of Namibia. Mining in Namibia is mainly regulated by the Minerals (Prospecting and Mining) Act 33 of 1992 as amended in 2008 (the "**Namibia Minerals Act**"). The mining act provides for six types of authorizations and permits:

- A Non-Exclusive Prospecting Licence (NEPL) exploration authorization valid for six months that is non-renewable;
- A small scale Mining Claims (MC) authorization that it only available to Namibian citizens for artisanal mining and is valid for three years renewable indefinitely for two years each time;
- A Reconnaissance Licence (RL) authorization designed for regional exploration, mainly remotely sensing, exploration that is valid for six months that is non-renewable;

- An Exclusive Prospecting License (EPL) exploration authorization valid for three years that may be renewed twice for two-year periods,
- A Mineral Deposit Retention License (MDRL) authorization that allows an exploration company in certain circumstances to retain tenure on a prospecting licence, mining licence or mining claim without mining obligations that is valid for five years, with two-year renewal periods; and
- A Mining License (ML) exploitation permit valid for 25 years or the life of mine, with renewal valid for five-year periods.

There are also a number of other applications and permits that govern the transfers and joint ventures of licenses, export permits, and other matters.

The Namibia Minerals Act levies a royalty of 3% on the net sales of zinc production. A value added tax (VAT) of 15% applies to domestic goods and services and 16.5% to imported goods and services. A refund on the 15% VAT on domestic goods and services is available. The Income Tax Amendment Act (2015) has introduced a 10% withholding tax on interest payable to non-resident lenders.

Selected Disclosure Regarding the Company and its Business in Peru

In addition to information set out elsewhere in this AIF, the disclosure under this heading “Selected Disclosure Regarding the Company and its Business in Peru” provides investors selected summary information about the Company and its business in Peru, including Trevali’s understanding of the Republic of Peru and applicable laws of Peru currently in force.

The Republic of Peru

Peru is a country located in western South America and has a land area of approximately 1.3 million square kilometres. It is bordered in the north by Ecuador and Colombia, in the east by Brazil, in the southeast by Bolivia, in the south by Chile, and in the west by the Pacific Ocean. Peru has a population of approximately 32.5 million people. The city of Lima is the capital with a population of approximately 12 million people.

Services account for more than half of Peruvian gross domestic product, followed by manufacturing and mining. Peru's main exports are copper, gold, zinc, textiles, and fishmeal. Its major trade partners are the United States, China, Brazil, and Chile. Since 2006, Peru has signed trade deals with the United States, Canada, Singapore, China, Korea, and Japan, in addition to concluding negotiations with the European Free Trade Association (EFTA) and Chile.

Government Organization

Peru has a stable multi-party constitutional republic form of government and there have been continuous democratic elections since 1980. Under the current Political Constitution of 1993, the President is the head of state and government for five years and cannot serve consecutive terms, but allows for unlimited non-consecutive terms. The President designates the Prime Minister and the rest of the Council of Ministers. The last presidential runoff election was held on April 10, 2016, and newly elected President Pedro Pablo Kuczynski formally assumed office on July 28, 2016. President Kuczynski is a former Peruvian minister of mines, a pro-trade economist with strong connections to the extractive industries, and ran on an election platform of fostering growth in the mining sector, but with consideration for social and environmental issues. President Kuczynski tendered his resignation on March 21, 2018 as a result of investigations into the country’s construction industry. The former Vice President, Mr. Martin Vizcarra, was sworn in as the President of Peru on March 23, 2018.

Congress is unicameral with 130 members elected for five-year terms. Either the executive or the legislative branch may propose bills, which become law after being passed by Congress and promulgated by the President. Judges are appointed by the National Council of the Judiciary.

Currency

The official monetary unit of Peru is the Neuvo Sol (PEN). Peru has a free-floating exchange rate and there are no restrictions or limitations on holding bank accounts in foreign currency or to remit funds abroad.

Mining Industry

Mining has been the dominant sector of the Peruvian economy over the past 20 years due to its abundance of natural resources and an attractive legal and tax regime designed to support the industry. As a result of significant foreign investment, Peru has become a global leader in the mining industry and is one of the world's most significant producers of base metals (copper and zinc) and precious metals (gold and silver), which accounts for more than half of the country's exports by dollar value.

Mineral Rights and Laws

The General Mining Law of Peru is the primary body of law pertaining to environmental regulation of exploration and mining activities. The General Mining Law is administered by the Ministry of Energy and Mines ("**MEM**"). The mining concessions framework, which has been in place since 1992, establishes that mining titles are irrevocable and perpetual for as long as the titleholder remains up to date with payments of the *derecho de vigencia* (validity rights) fees to MEM.

In Peru, the General Mining Law allows mining companies to obtain clear and secure title to mining concessions. The surface land property is distinct from the natural resource. The government retains ownership of all subsurface land and mineral resources, but the titleholder of the concessions retains ownership of extracted mineral resources. Peruvian law requires that all operators of mining areas have an agreement with the owners of the land surface above the mining rights or to establish an easement upon such surface for mining purposes. The same mining concession is valid for exploration and for exploitation.

Mining rights in Peru can be transferred by their private holders with no restrictions or requirements other than to register the transaction with the Public Mining Register. The sale of mineral products is also unrestricted, so there is no obligation to satisfy the internal market before exporting products.

Peru has enacted a regime of environmental laws whereby MEM and the Environmental Ministry have issued regulations mandating environmental standards for the mining industry. Under these standards, new mining development and production requires mining companies to file and obtain approval for an environmental impact study, which incorporates technical, environmental and social matters, before being authorized to commence operations.

The Environmental Evaluation and Oversight Agency ("**OEFA**") monitors environmental compliance. OEFA has the authority to carry out audits and levy fines on companies if they fail to comply with prescribed environmental standards. The following permits are generally needed for a project: Certificate for the Inexistence of Archaeological Remains; Environmental Impact Assessment; Mine Closure Plan; Establishment of a financial guarantee for closure; Beneficiation Concession; Mining Transportation Concession; Permanent Power Concession; Water Usage Permits; Easements and Rights-of-way; District and Provincial Municipality Licenses and Construction and Operation Permits.

A titleholder must pay a *vigencia* (annual maintenance fee) of US$3.00 per hectare per year for each concession held or a pending application (*petitorio*). Fees are payable at the time of acquisition and by June 30th of each successive year to maintain the concession in good standing.

Mineral concessions granted on or before October 10, 2006, are subject to compliance with one of the following alternative obligations: The concession holder must sustain a minimum level of annual commercial production of greater than US$100 per hectare in gross sales before the end of the sixth year of the grant of concession; or if the concession has not been put into production within that period (by the first semester

of the seventh year), the annual rental increases to US$9.00 per hectare until the minimum production level has been met. If by the start of the 12th year, the minimum production level has still not been achieved, then the annual rental increases to US$23.00 per hectare thereafter. The concession holder may obtain clearance from paying the penalty if it can be demonstrated that during the previous year the holder "invested" an equivalent of no less than 10 times the penalty for the total concession. This investment must be documented along with the copy of the *declaracion jurada de impuesto a la renta* (annual tax statement) and the payment of the annual *derecho vigencia* fees. The concession will terminate if the annual rent is not paid for three years in total or for two consecutive years. The term of a concession is indefinite provided it is properly maintained by payment of the rental fees.

Other Information

Legal Rights in Foreign Jurisdictions

The Company has satisfied itself as to the Company's (or its subsidiaries') ownership and retention of its property interests by engaging local counsel to provide advice to it regarding the acquisition, ownership, and retention of its permits, property interests, and rights in respect of its material mineral properties and by direct communications with local government officials. The Company works with its legal counsel on an ongoing basis to ensure that all related matters are attended to on a timely basis.

The Company also relies on input and recommendations by qualified persons, who have completed reviews of the Santander Mine in Peru, the Perkoa Mine in Burkina Faso, and the Rosh Pinah Mine in Namibia, and through consultants who are engaged by the Company in connection with the Company's permitting, licensing, and regulatory approval application process, to confirm it has all material permits, business licenses, and other regulatory approvals needed to carry on business in jurisdictions of its material mineral properties. The Company also consults regularly with legal advisors in Peru, Burkina Faso, and Namibia, including to confirm that all applicable permitting requirements for its operations have been obtained and, from time to time, retains local legal advisors to provide updated title opinions, as appropriate.

Foreign Corporate Structure

The Company's registered office is in Canada and its business in Peru, Burkina Faso, and Namibia is carried on through wholly-owned or majority-owned directly and indirectly held subsidiaries in Peru, Namibia, England and Wales, and Bermuda. Each of these subsidiaries maintains local offices, where corporate minute books and other books and records are maintained. The Board has effective control over all of its subsidiaries in and their respective material assets, including bank accounts, through its controlling ownership of these entities, with the exception of the Gergarub Project in Namibia, where the joint-venture partner has the controlling interest. In addition, as the sole controlling shareholder, the Company has the ability to appoint, direct, supervise, and remove all officers and directors of its subsidiaries with the exception of Rosh Pinah Zinc Corporation ("**RPZC**") and Nantou Mining Burkina Faso SA ("**Nantou Mining**"). With respect to RPZC, Trevali has four directors appointed and the joint venture partners have three directors appointed. With respect to Nantou Mining, Trevali has three appointed directors and the State of Burkina Faso has two directors.

Corporate Governance

Many of the Company's directors and executive officers have significant experience conducting business in Canada, Peru, Burkina Faso, and Namibia, gained through their years of service to the Company in their respective roles or principal occupations, as applicable. Certain directors and executive officers have also travelled to Canada, Peru, Burkina Faso, and Namibia on several occasions for various purposes related to the Company's business, including meeting with government officials and representatives from banking and investment firms. Directors and executive officers of the Company visit the Company's operations as they deem to be necessary, often several times a year, to properly manage the Company's business and meet with local management.

As a part of carrying out the responsibilities of their respective offices, it is necessary for the directors and executive officers of the Company to familiarize themselves with the laws, requirements and roles of governments, local business culture and practices, and any differences in banking systems and controls in and between jurisdictions in relation to the Company's foreign operations. Directors and executive officers become aware of these matters on an on-going basis through their skills, experience, education, knowledge, and a combination of written materials, meetings, site visits, legal and other professional advice, and other briefings and training, as appropriate.

Information is typically communicated to the Company's head office from its other locations of business through typical methods in the English language. There are, however, circumstances where communications and documents relating to the Company's business in foreign jurisdictions are received by the Company in the local language, typically Spanish in Peru, Afrikaans in Namibia, and French in Burkina Faso. Items that are deemed material, including legal documents and communications from government officials, are translated into the English language.

Products and Markets

The Company's principal product is zinc, which is primarily used as an industrial metal. The Company also produces lead, silver, and gold as byproducts of zinc production. The annual average price for zinc was up 1% in 2018 compared to 2017, while lead and silver prices were down 3% and 8%, respectively.

We believe strong fundamentals supportive of higher prices are present in the zinc market. Wood Mackenzie research forecasts global zinc demand to increase by 1.5% per year through 2023, equivalent to approximately 240,000 tonnes per year. Demand for zinc is expected to be driven by GDP growth, urbanization and infrastructure development, and as a "mid-cycle" commodity with expanding markets for consumer goods. While mined zinc supply is increasing, the pace of growth has continued to fall short of market expectations. Despite this mine supply growth, refined supply has failed to keep pace as low metal prices and treatment charges and more stringent environmental compliance requirements in China have limited the ability of smelters to respond and increase output. The combined impact has kept the zinc metal market in a deficit position, with exchange inventories continuing to decline. Refined metal stocks are at historically low levels, further supporting higher zinc prices in the near-term.

Sales and Refining

For the year ended December 31, 2018, production from the Perkoa Mine, the Rosh Pinah Mine, the Caribou Mine and the Santander Mine was as follows:

Payable Production	Perkoa	Rosh Pinah	Caribou	Santander	Total
Zinc (million pounds)	184.0	94.2	72.0	56.8	407.0
Lead (million pounds)	-	8.5	25.3	7.9	41.7
Silver (thousand ounces)	-	115.0	697.0	480.0	1,292.0

The Company benefits from life-of-mine concentrate off-take agreements with Glencore for all concentrates from its current operations. Glencore also holds a right of first refusal for any future concentrate sales from the Company's other properties. Consequently, the Company does not presently foresee any issues with securing buyers for any future concentrate production.

Employees

As at December 31, 2018, the Company had the following number of employees and contractors:

Location	Employees	Contractors
Perkoa	351	390
Rosh Pinah	448	159
Santander	61	556
Caribou	249	111
Corporate	32	0
Total	**1,141**	**1,216**

The Company has successfully negotiated two long-term union agreements, at Rosh Pinah and Caribou.

Specialized Skill and Knowledge; Competition for Labour

The nature of the Company's business requires specialized skills and knowledge. During the past year the Company has bolstered its corporate and operational teams to implement cost and operational optimization initiatives aimed at enhancing the value of Trevali's diversified asset base. The Company operates mining operations in Canada, Peru, Burkina Faso, and Namibia that require technical expertise in the areas of geology, engineering, mine planning, metallurgical processing, mine operations, community and governmental relations, and environmental compliance. Despite generally good labour relations, competition for skilled workers in the resource sector results in employee turnover at the Company's operations and a need to constantly recruit and train new employees. This competition for qualified employees occasionally results in workforce shortages, which can often be supplemented with costlier contract labour. The Company's success is heavily dependent on its key personnel and on the ability to motivate, retain and attract highly skilled employees.

Corporate Social Responsibility

We believe that responsible corporate behavior is essential to successfully executing our business strategy, which we pursue with the utmost priority on the safety of our people and a fundamental responsibility to the environment and the communities in which we operate. We provide all our people with the necessary equipment, tools and training to conduct their work safely through a continuously improved and structured Trevali safety management framework. Our environmental and social management system proactively guides statutory compliance and responsible stewardship of the land, air and water in which we interact. We seek to build meaningful partnerships with our communities in which we operate and believe that these interactions, consultations and communication must be ethical. We embrace the complexity, diversity, cultural heritage and customs of our people. We operate in compliance with applicable laws and regulations pertaining to our operations, which provides the license to operate, protection of our reputation and value for our shareholders.

To ensure we conduct our business in a responsible manner we developed the Trevali Safety Management Framework and the Trevali Environmental Social Management System in 2018, that together govern and provide a consistent and formal approach to risk management. All of our operational subsidiaries have a management system that is aligned with the aforementioned corporate management systems, and we have implemented and maintain a company wide Health, Safety, Environment and Community information system for the recording, managing and tracking health, safety, environmental and community incidents, audits, inspections, hazards and risks and permitting obligations.

Environmental and Social

We are committed to responsible stewardship of the land, air and water in which we interact and to building meaningful partnerships with our communities in which we operate. Through implementation of the Trevali Environmental Social Management System we are committed to:

- operating in compliance with all statutory requirements within the countries that we operate;
- operating with integrity, reliability, transparency and mutual respect;
- building partnerships with our communities;
- ethical interactions and consultations that are mutually beneficial, free from discrimination and take cognisance of human rights;
- excellence in environmental, social and community management while operating efficiently
- responsible stewardship of the people, air, land and water in which we interact; and
- implementing social and environmental planning for closure that is self-sustaining for present and future generations.

During 2018 we incorporated principles for social performance and have advance our system to reflect this, which includes the identification of stakeholders within the jurisdictions is which we operate, promoting active consultation with these stakeholders, promoting the use of a grievance mechanisms to aid in the tracking and constructive feedback on grievances, the development of local development plans and the establishment of social performance criteria.

Safety and Health

Our primary focus is the health and safety of our people who work at our assets. As part of the Trevali Safety Management Framework we are committed to:

- a proactive safety culture that comprises of personal responsibility, accountability and teamwork;
- providing our people with the necessary equipment, tools and training to conduct the work safely
- operating safely in compliance with all statutory requirements within the countries that we are operate;
- working in partnership with key stakeholders and regulatory authorities;
- working in an inclusive environment free from harassment and discrimination, and taking cognisance of human rights through ethical business decisions and actions;
- understanding working safely is a key step in operational efficiency; and
- continually improving the Trevali Safety Management Framework to achieve an injury and occupational disease free workplace.

During 2018 we focused on setting key performance indicators from a leading and lagging perspective as an opportunity for overall safety improvement at our operational assets. We are saddened by the fatality that took place at our Perkoa Mine in 2018 and have strengthened and improved systems and procedures across the group. Our Rosh Pinah Mine had a noteworthy achievement of zero lost time injuries during 2018. We as a group are continuing to strengthen our critical controls and conducting robust incident investigations to ensure that the lessons learned are shared across the group and the risks are managed accordingly for future tasks.

Sustainability Reporting

We will publish our inaugural sustainability report in the second quarter of 2019, that will present the material topics for Trevali and will discuss the goals for environmental, social, health and safety and corporate governance to be reported on in subsequent reports.

MINERAL PROPERTIES

The Company considers each of the Perkoa Mine, the Rosh Pinah Mine, the Caribou Mine and the Santander Mine (collectively, the "**Material Properties**") to be material mineral projects for the purposes of NI 43-101. Set forth below is certain scientific and technical information in relation to the Material Properties.

PERKOA MINE

The scientific and technical information included in the following section has been derived from or is based upon the technical report entitled "*Technical Report on the Perkoa Mine, Burkina Faso*" by Roscoe Postle Associates Inc. and dated April 12, 2018 (effective December 31, 2017) (the "**Perkoa Technical Report**"), prepared under the supervision of Torben Jensen, Ian T. Blakley, Tracey Jacquemin, and Avakash A. Patel. Each of Messrs. Jensen, Blakley and Patel is an independent "qualified person" under NI 43-101. Ms. Jacquemin is a "qualified person" under NI 43-101 but is not independent of the Company as she is an employee of the Company. Non-material updates since the date of the Perkoa Technical Report are based on the Company's previously filed financial statements and MD&As.

Summary

The Perkoa underground mine and the 2,000 tonne per day milling operation is located in the Sanguie Province, approximately 120 kilometres west of the capital city of Ouagadougou, Burkina Faso. The Perkoa Mine has been in commercial operation since 2013 and currently produces a zinc concentrate. As at December 31, 2018, the mine contained 1.43 billion pounds of contained zinc in measured and indicated mineral resources, and an additional 271 million pounds of contained zinc in inferred mineral resources (see "Mineral Resource and Mineral Reserve Estimates" below). The mine's production exceeded the upper end of initial 2018 guidance by 12%, producing 184 million payable pounds of zinc, with site operating costs of $105 per tonne, within guidance. For 2019, production guidance is 151-168 million payable pounds of zinc and site operating cost guidance is $106-117 per tonne.

Property Description, Location and Access

The Perkoa Mine is located in the Sanguié Province, approximately 120 kilometres west of the capital city of Ouagadougou, Burkina Faso. Driving time from Ouagadougou is approximately 2.5 hours along paved roads, except for the last 7 kilometres, which are on graded laterite road. The project is located about 35 kilometres northwest of Koudougou, the country's third largest town, and is linked by road to the neighbouring states of Mali, Côte d'Ivoire, Ghana, Niger, Benin, and Togo and by rail to Abidjan, the capital of Côte d'Ivoire.

Trevali is the indirect owner of 90% of the shares in the capital of Nantou Mining Burkina Faso S.A. ("**Nantou Mining**"), the entity that owns the Perkoa Mine. The Perkoa Mine consists of one exploitation permit (the "**Perkoa Exploitation Permit**"), which contains the Perkoa main zone deposit (the "**Perkoa deposit**") and two exploration permits (the "**Perkoa Exploration Permits**"), all located on contiguous ground. The exploitation and exploration permits comprising the Perkoa Mine are subject to the 2003 Burkina Faso Mining Code.

The Perkoa Exploitation Permit was granted on March 20, 2007 and formally grants Nantou Mining the rights to develop and operate the Perkoa Mine. It is scheduled to expire on March 20, 2027. The total area of the Perkoa Exploitation Permit is 6.24 square kilometres and the permit is of sufficient size for the mining operations. Trevali indirectly holds 90% of the share capital of Nantou Mining while the State of Burkina Faso holds 10%, in accordance with the 2003 Burkina Faso Mining Code. This 10% State participation must be maintained when there is an increase in the capital of Nantou Mining. The government also collects various taxes and duties on the imports of fuels, supplies, equipment, and outside services. In addition, there is a 3% NSR royalty payable to the government on all base metal production.

The Mining Convention between Nantou Mining and the Government of Burkina Faso was signed by the Minister of Mines of Burkina Faso on August 27, 2008 and sets out the fiscal and legal terms with respect to the operation of the Perkoa Exploitation Permit, including taxation rates applicable to the project as per the 2003 Burkina Faso Mining Code. The Convention is valid for 20 years ending August 25, 2028 and may be renewed for subsequent 5-year periods.

The Perkoa Exploitation Permit is surrounded by the Poa Exploration Permit and the Guido Exploration Permit (collectively, the "**Perkoa Exploration Permits**"), which cover a total area of 231.83 square kilometres. The Poa and Guido Exploration Permits were originally granted to Blackthorn Resources Limited ("**Blackthorn**") on July 10, 2007 and were subsequently transferred to Nantou Exploration on March 2, 2015. An exceptional renewal application for the Perkoa Exploration Permits was approved on October 26, 2017 and backdated to July 10, 2016. The Perkoa Exploration Permits are now valid until July 10, 2019 and exploration expenditures will be required in order to maintain the permits in good standing. The 2003 Burkina Faso Mining Code gives the exploration permit holder the exclusive right to explore for the minerals requested on the surface and subsurface within the boundaries of the exploration permit. The Perkoa Exploration Permits are held by Nantou Exploration S.A. ("**Nantou Exploration**"), which is owned 100% by Trevali; however, should an exploitation permit for any portion of the Perkoa Exploration Permits be granted, the State would receive a 10% interest in the new exploitation company that will need to be established. A new mining convention would have to be negotiated in accordance with the new Mining Code entered into in 2015 and according to the 2015 Mining Code the State would be entitled to purchase an additional equity interest.

Nantou Mining has all required permits to conduct the work on the property and the Perkoa Exploitation Permit is of sufficient size for the mining operations. Surface rights in the area of the Perkoa Exploitation Permit belong to the State of Burkina Faso. Utilization of the surface rights is granted by the Perkoa Exploitation Permit under the condition that the current users are properly compensated. All the taxes relating to Nantou's Mining Rights have been paid to date and the concession is in good standing. The Company is not aware of any undisclosed environmental liabilities on the property. The contiguous exploitation and exploration permits that cover the Perkoa Mine are herein referred to as "Perkoa".

Other than as described above, the Company is not aware of any rights, agreements or encumbrances to which Perkoa is subject that would adversely affect the value of the property or Trevali's ownership.

History

The Perkoa area has been explored by a number of companies since 1979. The initial exploration was undertaken between 1979 and 1982 by Bureau des Mines et de la Geologie de Burkina ("**BUMIGEB**"), the Burkina Faso state run geological research and mining company, as part of a wider United Nations Development Program research program. This was followed by further exploration by La Société Minière et Métallurgique de Peñarroya and BUMIGEB, Boliden AB, Billiton Plc (now BHP plc) and Metorex (Pty) Limited, before AIM Resources Ltd. ("**AIM Resources**"), which subsequently changed its name to Blackthorn, took over the project in 2005.

Between 2005 and 2008, AIM Resources completed drilling for exploration and metallurgical testwork and produced a Bankable Feasibility Study in December 2005 ("**Perkoa BFS**") that was completed by Snowden Mining Industry Consultants.

In March 2007, AIM Resources was awarded the Perkoa Exploitation License and commenced construction of a 525,000 tonne per annum mining operation based upon the Perkoa BFS. In July 2008, construction was halted and Perkoa was placed on a care and maintenance program due to declining zinc prices.

In late 2010, a joint venture between Blackthorn (39.9%) and Glencore (50.1%) was formed and construction resumed in December 2010 with the first delivery of zinc concentrate occurring in early 2013. In March 2013, Blackthorn reached an agreement with Glencore to provide additional equity funding to the project. Blackthorn elected not to fund its equity share of the funding and, as a result, its interest in the Project was diluted from 39.9% to 27.3%. In May 2014, Blackthorn and Glencore reached an agreement whereby Glencore acquired Blackthorn's remaining 27.3% interest in Perkoa, thereby allowing Blackthorn to exit Perkoa and increasing Glencore's interest to 90%. In 2017, Trevali acquired Glencore's 90% interest in Perkoa.

Geological Setting, Mineralization and Deposit Types

The Perkoa deposit lies in a felsic to intermediary series of volcanic and volcanoclastic rocks, within the Paleoproterozoic Birimian Supergroup of West Africa. The prospective Birimian-aged rocks in Burkina Faso are the same sequences that host major gold deposits in Burkina Faso and in the neighbouring countries of Ghana and Mali. The Birimian Supergroup of West Africa is renowned for their gold mineralization; however, known occurrences of base metals are scarce. The Perkoa deposit represents the only significant zinc-silver massive sulphide mineralization discovered in the Birimian to date and it is also the first zinc-silver massive sulphide mineralization discovered in this region. Only zinc is being recovered at the Perkoa Mine.

The Perkoa deposit has been classified as a volcanogenic massive sulphide (VMS) deposit. VMS deposits are lenses and sheets of massive sulphide that form from seafloor hydrothermal systems where metal rich fluids precipitate on (exhalative) or near the seafloor (sub-seafloor replacement.). The Perkoa mineralization occurs as a series of stacked, northeast-southwest striking tabular VMS lenses hosted, and separated by, tuffaceous material that has been overturned with an average dip of approximately 70°. The deposit is unusual for its high concentrations of zinc and barium mineralization, and relatively low levels of lead and copper.

Exploration

A joint venture between Blackthorn and Glencore explored the potential of the Perkoa deposit and four exploration permits (Poa, Guido, Seboun, and Sepaogo) from 2010 to 2014. A significant amount of exploration work has also been carried out at Perkoa by previous operators that can also be used for target generation.

Exceptional renewal applications for the Poa and Guido Exploration Permits were approved on October 26, 2017 for a period up to July 10, 2019. Exploration expenditures for 2018 were $3.28M covering both in-mine and regional exploration aiming to discover new sources of mine feed and maintain the exploration permits in good standing. The application for renewal of Poa and Guido will be submitted in advance of their expiration.

The areas covered by the exploration licences, as well as other areas along the Perkoa Mine Horizon, are considered highly prospective for base metal mineralization. Perkoa is a VMS deposit, a style of mineralisation which usually occurs in clusters and thus the potential for another similar VMS deposit to exist within close proximity to Perkoa is considered to be very high. Located within the Birimian, a world class gold mining district, and only 88 kilometres along strike from the historic high grade, Poura Gold Mine, there is also potential for gold mineralisation to be discovered.

Since September 2017, exploration work programs in Burkina Faso are carried out under the guidance of Daniel Marinov, Trevali's Vice President of Exploration. Mr. Marinov is a "qualified person" under NI 43-101.

Drilling

As at December 31, 2018, the Perkoa drill hole database contains 408 holes, totaling 96,3556 metres, from 138 surface and 270 underground diamond core holes. In addition, there are 56 geotechnical drill holes totaling 1,488 metres. Approximately 23,000 metres of drilling was completed prior to 2005 by previous operators.

Drilling Type	2018 Drill Holes (#)	Total Drill Holes (#)	2018 Drilling (metres)	Total Drilling (metres)
Surface	5	138	2,673	44,988
Underground	43	270	13,145	51,368

Drilling Type	2018 Drill Holes (#)	Total Drill Holes (#)	2018 Drilling (metres)	Total Drilling (metres)
Geotechnical	-	56	-	1,488
Total	**48**	**464**	**15,818**	**97,844**

2018 Perkoa In-Mine Exploration

During 2018, 6,971 metres of underground infill drilling were completed to upgrade the mineral resources to measured and indicated mineral resources between the 400-580 levels.

The mineralization at Perkoa remains open at depth. In detail, 7,760 metres of underground exploration drilling was completed during 2018 of which 6,548 metres were targeting new inferred resources below the 640 level. The remaining 1,211 metres of underground drilling was targeting new mineralization, and evidence of other major zinc bearing horizons were identified and will be followed up in 2019. Supporting the underground inferred drill program, a short directional surface program was initiated with 1,798 metres completed in total, which shows the system remains open at depth.

2018 Perkoa Regional Exploration

The focus of the 2018 regional exploration was on the airborne VTEM geophysical targets and assessment of these targets using ground truthing, surface geophysics (EM) and geochemistry. Air Core drilling for geochemical sampling of the regolith to a average depth of 28 metres with a total of approximately 3,300 samples at nine prospects completed in 2018. Ground EM surveys have also been completed at two prospects. Following positive anomalous results from that exploration phase, 18 surface diamond drill holes were drilled for a total of 6,316 metres at five targets. Where possible, after completion all drillholes have been surveyed with Bore Hole Electro-Magnetic surveys (BHEM).

At the AF1 prospect, a large hydrothermal system has been identified with similar footwall quartz-sericite-pyrite (QSP) alteration to that which underlies Perkoa. Locally, the pervasive QSP alteration is greater than 200 metres wide. The application of modern exploration techniques identified the AF1 South target. Follow-up drill testing during 2018 intersected a narrow zinc bearing VMS deposit. At the Byrhado prospect no significant intercepts were encountered, but assay results are still outstanding to review any anomalous geochemical alteration within the volcanics/volcaniclastics and interbedded andesites & tuffs with graphitic argillite.

2019 Perkoa Exploration Outlook

The planned 2019 in-mine diamond drilling program consists of approximately 10,000 metres of underground conversion drilling planned to define resources to the measured and indicated category from below the 640 levels within the hanging wall lens. The main focus of the 2019 exploration program at Perkoa will be the discovery of new VMS deposits. The application of BHEM and lithogeochemistry will be key to vectoring towards potential new mineralization with identification of target conductivity/orientation and increasing alteration intensity.

Regional exploration around the Perkoa deposit will focus on discovering the next VMS deposit in the camp. A number of high priority targets generated from historic VTEM surveys will be verified by ground EM surveys and will initially be tested by air core drilling. Surface diamond drilling is planned to test the main targets once the initial phase of air core drilling has been completed.

Sampling, Analysis and Data Verification

Drill core is delivered to the surface core processing facility by the drilling contractor. Core is carefully logged with geological and geotechnical information being recorded by visual determination and estimations. SG measurements for every sample are recorded on site at Perkoa by weighing in air and water. Blind selected

samples have been sent to a third-party laboratory for validation of SG measurements. Core is photographed in a wet state under natural light.

NQ core is split into half along the marked axial planes using a diamond saw. A geologist samples half of the split core in interval limits of 0.25 to 1.5 metres. Samples do not cross lithologies. The sampled core pieces are packed in new small sample plastic bags and tagged with duplicate labeled sample tickets. The geologist ensures that the QA/QC processes are followed during sample submission.

From 2013 to 2017, core samples were sent to SGS Ouagadougou for crushing and pulverizing, and the pulps were then sent to SGS South Africa for analysis. A decision was made in early 2017 to change the analytical laboratory from SGS South Africa to SGS Canada to facilitate improved sample turn-around times. Following an in-country sample preparation laboratory review held in August 2017, the laboratory was changed to ALS. All new assays are now prepared (crushed and dried) at ALS in Ouagadougou prior to being sent to ALS in Vancouver for analysis.

ALS has internal QA/QC procedures to ensure the results are accurate. The onsite Perkoa Mine laboratory analyses are used only for mine production sampling (channel samples, face samples, stockpile samples) and for process plant sampling utilizing X-ray florescence (XRF) spectroscopy. Plant metallurgical samples, which arrive in liquid state, are kept separate from geology samples at all stages of preparation and analysis. This laboratory is not certified and assays are not used in the Mineral Resource estimate. However, the Perkoa Mine Laboratory's XRF assays are used to determine concentrate grades. Composite samples are sent to Alfred H. Knight International Ltd. for independent confirmation.

No information is available on the sample preparation, assay laboratory, or QA/QC for the pre-2005 drill holes. Samples collected by Blackthorn from 2008 to 2011 were analyzed by ALS in Vancouver, Canada after sample preparation in Ouagadougou, Burkina Faso. The first channel and face samples collected onsite on mining levels 70 to 130 were all analyzed by ALS in Vancouver, Canada after sample preparation in Ouagadougou, Burkina Faso. All samples assayed thereafter for channel and face samples were analyzed at the onsite mine laboratory by pressed pellet XRF analysis.

QA/QC procedures are performed systematically at the mine. Blank and standard samples are systematically inserted on a regular sample batch interval at the rate of every 25 samples, and are routinely evaluated when results are received. SGS also inserted a suite of internal laboratory blanks and certified reference material standards at a frequency of approximately 14%. The commercial geochemical analytical laboratories in Burkina Faso and South Africa, and more recently Vancouver, comply with international standards for specific registered tests for the minerals industry and follow strict, industry recognized, QA/QC protocols. Audits of the assaying labs are performed occasionally.

Drill and mine samples are handled and transported only by Nantou Mining personnel or contractors. Core samples are conveyed to Ouagadougou by Nantou Mining transportation personnel or by courier. Pulp sample transport is the responsibility of SGS / ALS who rely on commercial carriers. Assay results are sent electronically to the Drill Database Administrator and are also accessible on the ALS Webtrieve system which is securely accessed via the internet. A 5% zinc cut-off grade is used for calculation of composite intervals.

Mineral Processing and Metallurgical Testing

The Perkoa deposit is amenable to conventional sulphide flotation, as determined by lab scale testing conducted in 1987, 1998 and 2005 by prior operators prior to mine construction. The main sulphide constituents are sphalerite, pyrite, pyrrhotite and barite with trace quantities of quartz, chlorite and muscovite. The silicates are liberated from the sulphides at a coarse crush size. The sphalerite is liberated from the iron sulphides at a relatively coarse grind of 65% passing 75 microns.

Based on Bond Work Index test work conducted as part of the 2005 Perkoa BFS, the orebody can be classified as soft, with the mining waste being harder. Variability testwork has shown that some areas within the orebody respond better to flotation than others; however, the relative proportions of "good" and "poor" ores has not been quantified. Test work was based on the entire bulk composite that was made up from the samples and included these poor response ores and therefore reflects an "average" response.

In the 2005 Perkoa BFS, the flotation response of the ore was generally good and a simple rougher stage is required to make good zinc recoveries greater than 95% at concentrate grades greater than 50% zinc. It is, however, necessary to have a relatively low percentage of solids in the slurry fed to the flotation plant to minimize the interaction of gangue with the fast floating sphalerite.

Test work completed in 2017 at XPS Materials Testing Laboratory in Sudbury, Ontario, indicates that iron sulphide zonation within the orebody and specifically areas with an increased pyrrhotite content can negatively impact recovery and concentrate grade. Future work will focus on enhanced geological modeling of these areas in order to aid mine scheduling in order to minimize any potential impacts on plant performance.

Mineral Reserve and Mineral Resource Estimates

The table below shows the Mineral Resource Estimates for the Perkoa Mine as at December 31, 2018:

		Grade			Metal		
Category	**Quantity**	**Zn**	**Pb**	**Ag**	**Zn**	**Pb**	**Ag**
	Mt	**%**	**%**	**g/t**	**M lbs**	**M lbs**	**K oz**
Measured	1.94	15.36	-	-	656	-	-
Indicated	2.94	11.87	-	-	770	-	-
Measured & Indicated	4.88	13.26	-	-	1,427	-	-
Inferred	1.21	10.21	-	-	271	-	-

(1) All Mineral Resources have been estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") — Definition Standards adopted by CIM Council on May 10, 2014 (the "CIM Definition Standards"). Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Numbers may not add up due to rounding. The Mineral Resource is shown at 100% ownership, Trevali holds a 90% joint venture interest in the Perkoa Mine.

(2) The Perkoa Technical Report is the current technical report for the Perkoa property.

(3) The Perkoa Underground Mine Mineral Resource estimate is reported based on zinc equivalent cut-off grade of 5% Zn with a zinc prices of US$1.13 per pound. The Perkoa Underground Mine Mineral Resource estimate has been prepared by the mine geology department and non-independent Resource geology consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Yan Bourassa (P.Geo.), a Qualified Person as defined in NI 43-101. Mr. Bourassa is Vice President, Mineral Resource Management of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Perkoa Mine as at December 31, 2018:

		Grade			Metal		
Category	**Quantity**	**Zn**	**Pb**	**Ag**	**Zn**	**Pb**	**Ag**
	Mt	%	%	g/t	M lbs	M lbs	K oz
Proven	1.22	14.44	-	-	388	-	-
Probable	1.87	11.55	-	-	477	-	-
Proven & Probable	3.09	12.69	-	-	865	-	-

(1) All Mineral Reserves have been estimated in accordance with the CIM Definition Standards. Numbers may not add due to rounding. The Mineral Reserve is shown at 100% ownership, Trevali holds a 90% joint venture interest in the Perkoa.

(2) The Perkoa Technical Report is the current technical report for the Perkoa property.

(3) The Perkoa Underground Mine Mineral Reserve estimate is reported based on planned stopes with a net smelter return cut-off grade of US$100/tonne, with a zinc price of US$1.13 per pound. The Perkoa Underground Mine Mineral Reserve estimate has been prepared by non-independent Mine engineering consultants to the company with an effective date of December 31,

2018, under the supervision of and approved by Professional Engineer Barbara Rose (P.Eng.), a Qualified Person as defined in NI 43-101. Ms. Rose is Principal Mine Engineer of the Company and accordingly, is not independent.

Mining Operations

The Perkoa Mine is now an underground operation, however, a small open pit was mined to reach near surface material during initial start-up to increase plant throughput as the underground mine ramped up production. The open pit was closed in early 2014. For the underground mine, the mining operations are carried out by a mining contractor, which supplies manpower and equipment. Nantou Mining personnel provide geological and engineering services.

Longhole stoping is being used as the primary extraction method. There are several variations on this mining method employed such as longitudinal and transverse, with both bottom-up and top-down mining sequences. The exact method chosen is dependent on the orebody geometry. Stopes are backfilled either with cemented rock fill (CRF) or waste rock.

Processing and Recovery Operations

The process plant at Perkoa is a conventional sulphide flotation plant capable of processing ore at a rate between 1,800 and 2,000 tonnes per day. The process plant includes crushing, screening, and grinding, followed by zinc flotation and filtering to produce a zinc concentrate. The process plant originally included a lead recovery circuit, which has been reconfigured to increase capacity in the zinc recovery circuit due to higher zinc head grades. Zinc concentrates are trucked 1,200 kilometres to the port of Abidjan, Côte d'Ivoire, for shipping to Europe under a life of mine off-take agreement with Glencore.

Since 2015, Nantou Mining has carried out a number of improvements to the processing plant including improved process control system (auto cell level control and airflows); improved reagent dosing controls; improved operator knowledge base; removal of commissioning and engineering deficiencies; improved water consumption monitoring; improved water balance and discharge tracking management; and improved tailings deposition and monitoring and improved power supply stability.

Infrastructure, Permitting and Compliance Activities

Existing surface and underground infrastructure at the Perkoa mine includes an 1,800 to 2,000 tonne per day process plant, a tailings storage facility, a decline and a series of ramp-connected levels, a laboratory, various administrative, workshop, and warehouse buildings and a camp for non-local personnel. Power for all areas of the mine is from diesel generators, as the supply of power from the national grid is unreliable. The mine is currently in the process of finalizing the construction of a heavy fuel oil power generating plant which is expected to reduce power costs. Water is supplied by a pipeline from a dam at Seboun, approximately 18 kilometres to the northeast of the mine. Security fencing and access control prevents inadvertent access onto the property and enhances safety.

The approved Environmental Management Plan provides the framework for Perkoa Mine's environmental management and outlines mitigation measures and monitoring programs, to reduce and manage negative impacts on the biophysical and social environment. Environmental audits must be carried out in accordance with Article 4 of Decree No. 2015-10000 of October 28, 2015 laying down detailed rules for carrying out environmental audits. As per these requirements, regular monitoring and evaluation of environmental performance through compliance audits is undertaken by BUMIGEB.

The Perkoa Mine has areas of waste disposal including tailings storage facilities, waste treatment facilities and a scats stockpile, and generates both general and hazardous waste. The mine currently has a tailings facility licensed by the Ministry of Environment that comprises three areas. At the present stage of development of mine activities, the first phase cell has been filled and is ready for closure and rehabilitation, the second cells is almost at the maximum of its nominal design storage capacity, while the third cell has

been constructed and is ready to be filled. The third cell is planned to be in operation to early 2020. During 2019 the fourth extension is planned to be constructed.

During 2018, a study was undertaken that included a detailed assessment of any acid rock drainage potential that might remain on closure. Testwork on the materials and the method of closure of the first Tailings cell is in progress and it is planned that any waste material on surface will be used and deposited as part of the Tailings closure strategy. The information derived from this study will be used to update the conceptual closure and rehabilitation plan during 2019. An update to the approved Environmental Management Plan is required for 2019.

In terms of corporate social responsibility, projects are consistent with those as required by the Environmental Management Plan. These include the construction of a community centre, primary school, as well as social expenses, including cultural displacement, construction of replacement houses, Perkoa Health and Social Promotion Centre, community water boreholes, and a literacy program.

The Perkoa Mine has a procedure in place for publicizing recruitment, signed by Nantou Mining and the Youth Committee on June 12, 2015, to use only local unskilled labour and to favour local labour if qualification is required. Stakeholder management is managed on site by the implementation of a tripartite committee, comprised of representatives from Nantou Mining, the local community, and the government.

Capital and Operating Costs

Results for 2017 and 2018, and guidance for 2019 production, operating costs and sustaining capital are summarized below on a 100% basis:

		2017[1] Actual	**2018 Actual**	**2019 Guidance**
Payable Production				
Zinc	(million pounds)	62.8	184.0	151-168
Operating Cost	($/tonne)	114	105	106-117
C1 Cash Cost	($/lb zinc)	0.91	0.80	0.84-0.92
All-in Sustaining Cost	($/lb zinc)	1.02	0.91	0.91-0.99
Sustaining Capital	($millions)	6.8	20.9	11

1. Perkoa Mine was acquired August 31, 2017. The 2017 figures include only the period from September 1 to December 31.

ROSH PINAH MINE

The scientific and technical information included in the following section has been derived from or is based upon the technical report entitled "*Technical Report on the Rosh Pinah Mine, Namibia*" by Roscoe Postle Associates Inc. and dated May 1, 2018 (effective December 31, 2017) (the "**Rosh Pinah Technical Report**"), prepared by Torben Jensen, Ian T. Blakley, Tracey Jacquemin, and Avakash A. Patel. Each of Messrs Jensen, Blakley and Patel, is an independent "qualified person" under NI 43-101. Ms. Jacquemin is a "qualified person" under NI 43-101 but is not independent of the Company as she is an employee of the Company. Non-material updates since the date of the Rosh Pinah Technical Report are based on the Company's previously filed financial statements and MD&As.

Summary

Rosh Pinah is Trevali's lowest cost and longest life operation. It is located in southwestern Namibia, approximately 800 kilometres south of the capital city of Windhoek and 20 kilometres north of the Orange River, at the edge of the Namib Desert. The Rosh Pinah Mine consists of an underground mine, a mill and associated infrastructure. The mine has been in continuous production since 1969 and currently produces zinc and lead concentrates containing minor amounts of copper, silver and gold. As at December 31, 2018,

Rosh Pinah contained 1.95 billion pounds of zinc in measured and indicated mineral resources with an additional 872 million pounds of contained zinc in inferred mineral resources (see "Mineral Resource and Mineral Reserve Estimates" below). In 2018 the mine produced 94.2 million payable pounds of zinc, 8.5 million payable pounds of lead and 104,000 payable ounces of silver. The mine has 12 years of reserves with significant exploration upside. For 2019, production guidance is 80-89 million pounds of payable zinc, 10-11 million pounds of payable lead and 145,000-161,000 ounces of payable silver, and site operating cost guidance for 2019 is $56-63 per tonne.

Project Description, Location and Access

The Rosh Pinah Mine is an underground zinc-lead mine with an 1,800 to 2,000 tonne per day milling operation, located in southwestern Namibia directly adjacent to the town of Rosh Pinah, where employees of the Rosh Pinah Mine and the nearby Skorpion Zinc mines reside, plus a number of private businesses are located. The town of Rosh Pinah is 800 kilometres south of Windhoek and 20 kilometres north of the Orange River, at the edge of the Namib Desert. The mine site is accessed by road and the nearest commercial airport is located in the town of Oranjemund, approximately 105 kilometres southeast of Rosh Pinah via a paved road.

The Rosh Pinah Mine is owned by Rosh Pinah Zinc Corporation (Pty) Ltd. ("**RPZC**"). Trevali owns a 90% interest in RPZC and is operationally responsible for the management of RPZC, with the remainder held by PE Minerals (Namibia) (Proprietary) Limited ("**PE Minerals**"), Jaguar Investments Four (Proprietary) Limited ("**Jaguar**") and an Employee Empowerment Participation Scheme ("**EEPS**").

Mining Licence 39 ("**ML 39**") covers an area of 782 hectares, with an accessory works ("**AW**") area consisting of 4,433 hectares. ML 39 was granted by the Namibian Ministry of Mines and Energy ("**MME**") on November 13, 1995 for a term of 25 years with an expiry date of November 12, 2020. ML 39 and the AW area can be renewed for a further 20 years upon application to the MME. ML 39 requires payment of an annual fee, development of a works program, environmental compliance, commitment to seek local suppliers for fuel and lubricants, approval of product take-off agreements, and payment of taxes by permanent employees in Namibia. ML 39 and the AW are hereinafter referred to as "Rosh Pinah".

Rosh Pinah is mainly located on State land (with State-owned surface rights) and thus no surface rights agreements are required; however, the property overlaps onto two farms, Namuskluft 88 and Spitskop III, where ancillary surface rights are in place but are currently being renegotiated. RPZC has sufficient surface rights to cover the sites required for all project buildings and fixed installations for the life of mine. All permits required to operate the Rosh Pinah Mine are currently in place and the Company is not aware of any undisclosed environmental liabilities on the property.

Mine production is subject to royalties at 3% of net market value payable to the Namibian State and 3% of net market value payable to PE Minerals, the current holder of ML 39.

Other than as described above, the Company is not aware of any rights, agreements, or encumbrances to which Rosh Pinah is subject that would adversely affect the value of the property or Trevali's ownership.

RPZC also holds Exclusive Prospecting Licence 2616 ("**EPL 2616**"), which allows for exploration of base, rare and precious metals. EPL 2616 covers an area of 19,826 hectares and overlaps onto Spitskop farm. EPL 2616 will expire on November 30, 2019 and is in the process of being renewed.

History

The Rosh Pinah Mine has been in operation since 1969, excluding a short period during the 1990s when it was placed into care and maintenance. In 1964, mineral rights at Rosh Pinah were held by Moly Copper Mining and Prospecting Co. (SWA) Pty Ltd. ("**Moly Copper**"). Iscor Ltd. South Africa ("**Iscor South Africa**") decided to explore the Rosh Pinah deposit and drilling commenced in 1965. Thereafter, sufficient reserves

were proven to develop a mine and an operating company, Imcor Zinc, Pty Ltd ("**Imcor**") was formed between Iscor and Moly Copper. Preparatory work and mine development commenced during 1967, with ore production commencing in May 1969.

A sharp drop in the zinc price towards the end of 1992 led the mine into a loss situation and eventually to liquidation in December 1994. After liquidation, and prior to November 20, 2003, Imcor was owned by Kumba Resources Limited ("**Kumba Resources**"), PE Minerals, and Iscor Namibia. In November 2006, Kumba Resources changed its name to Exxaro Resources Limited ("**Exxaro**"). From 2008 until 2012, the Rosh Pinah Mine was jointly owned by Exxaro, PE Minerals, Jaguar and the EEPS.

In June 2012, Glencore acquired an 80.09% interest in RPZC. The remaining 19.91% was owned by PE Minerals (3.15%), EEPS (1.19%), and Jaguar (15.57%), the Namibian Broad-Based Empowerment Groupings. Effective August 31, 2017, Trevali acquired Glencore's 80.09% interest in RPZC. Trevali subsequently increased its interest by an additional 10% through a partial share buyback by RPZC, taking its ownership interest to 90%. Trevali is operationally responsible for the management of RPZC.

Since commencing mining operations in 1969 to the end of 2017, a total of 27 million tonnes have been mined from the various orebodies at Rosh Pinah. The average annual production over the last 20 years is approximately 640,000 tonnes of zinc per annum.

Geological Setting, Mineralization and Deposit Types

The Rosh Pinah Mine is hosted by the Rosh Pinah Formation (Hilda Subgroup of the Port Nolloth Group), forming part of the Neoproterozoic Gariep Terrane deposited onto a Palaeo-Mesoproterozoic basement of granite gneisses and supracrustals.

The base metal sulphides at the Rosh Pinah mine are contained within the approximately 30-metre thick mineralized locally termed "ore equivalent horizon" ("**OEH**"). In the Rosh Pinah area, the Rosh Pinah Formation has been shown to be at least 1,250 metres thick.

The primary mineralization type of economic interest at the Rosh Pinah Mine is a silicified, grey to dark grey, fine-grained and laminated unit locally called microquartzite mineralization. It consists of alternating millimetre to centimetre wide bands of sulphide exhalites (sphalerite, pyrite and galena + minor chalcopyrite), part of which was carbonatized with associated remobilization and enrichment of sulphides and is believed to represent a reworked sedimentary-exhalative (SEDEX) style exhalite. The secondary argillite carbonate mineralization carries the higher, economic, base metal values. The argillite mineralization would be similarly derived, but is diluted with background benthonic argillite.

Exploration

Rosh Pinah is a tier one Zn-Pb-Ag Mine, which has been in continuous production since 1969; however, the deposit has never been fully delineated and remains open along strike and at depth. The Rosh Pinah deposit is composed of five main centers of mineralisation, located at regular intervals, largely along the same folded horizons. Of these centers, Western Orefield is the largest discovered to date.

Since the discovery of the Rosh Pinah Mine, continued in-mine exploration has played a significant role in extending the life of the mine. The discovery of the WF3 orebody in 2008 has increased Mineral Reserves and extended the life of Rosh Pinah. Wide-spaced, exploration drillholes have been completed during 2018 testing five new targets, with hydrothermal alteration and sulphide stringers (including sphalerite and galena) intersected in 5 out 6 drillholes completed, demonstrating the under-explored nature of the Gariep Belt.

Drilling

Drilling statistics for 2018 and for the project as at December 31, 2018 are presented below:

Drilling Type	2018 Drill Holes (#)	Total Drill Holes (#)	2018 Drilling (metres)	Total Drilling (metres)
Underground	58	3,055	9,440	383,974
Production	387	6,430	18,163	243,922
Exploration	6	903	3,275	156,993
Geotechnical		19		545
Total:	**451**	**10,407**	**30,878**	**785,434**

The Company is unaware of any drilling, sampling or recovery factors that could materially impact the accuracy and reliability of the results.

Since September 2017, exploration work programs in Namibia are carried out under the guidance of Daniel Marinov, Trevali's Vice President of Exploration. Mr. Marinov is a "qualified person" under NI 43-101.

Western Orefield (WF3) Exploration

The 2018 program was designed to test the down plunge continuation of the Western Orefield and define new inferred resources. The results demonstrate the continuity and consistency of the mineralization from this deposit, where several broad mineralized intervals were intercepted. Western Orefield is the Northern most center of mineralization at Rosh Pinah.

The majority of the 2018 exploration campaign focused mainly on the WF3 orebody with more than 5,800 metres drilled on seven sections to test the conceptual WF3 extension target based on previous wide spaced drilling for potential identification of new inferred mineral resource.

2019 Exploration Outlook

In 2019, a regional exploration program with a budget of $0.75 million is planned which includes 3,000 metres of drilling over the EPL 2616. The EPL contains several prospective exploration targets, including the Massive Pyrite target (north of Gergarub), the Trekport Mountain West and the Trekport Mountain East anomalies. Surface fluxgate EM surveys is planned for the area north of the Gergarub deposit and at Rosh Pinah East targeting mineralization near the Eastern Orefield.

Sampling, Analysis and Data Verification

Regional exploration surface drillholes are drilled using HQ-sized core (63.5-millimetre diameter core) for overburden and weathered zones and NQ-sized core (47.6-millimetre diameter core) in bedrocks. Surface exploration and any inferred classification underground exploration drilling is performed by contractors. The indicated and measured classification underground exploration drilling is carried out by the in-house drilling crew. Underground exploration drill holes are drilled at NQ-sized core with core recovery above 95%.

Logging, sampling and analysis procedures comply with current QA/QC procedures and NI 43-101 requirements. Logging and sampling methodologies and procedures are documented, routinely updated, and maintained by the exploration department.

Drill core is logged on site by a geologist for lithological, structural, and geotechnical (core recovery, rock quality designation (RQD), and rock mass rating) information. A geo-data geologist supervises the database, which has set validation specifications for populated data.

Drill core is cut and sampled onsite at Rosh Pinah. Half-core samples are prepared using a specialized core saw utilizing fresh water. One half of the core is stored with the rest of the core and the other half is sent to the laboratory for analysis. Tertiary/production drill core is wholly sampled.

Samples are packaged at the core shed and registered into the Laboratory Information Management System (LIMS) by assistants in the Mineral Resource Management Department, then dispatched daily to the Rosh Pinah Mine Laboratory ("**RPML**") located on the mine site. On arrival, samples are checked, sorted, bar coded, and activated in the LIMS.

Although the internal RPML is not internationally certified, QA/QC procedures have been performed systematically at Rosh Pinah Mine since 2009 and 5% of samples are sent to an independent accredited facility. Standard procedures developed and followed include the submission of blanks, duplicate samples, and certified reference material, typically at every 18th sample interval, to measure precision, accuracy, and bias in the sampling and analytical process. Duplicates are taken every 14 samples with the duplicate retrieved by the assaying laboratory personnel after the sample has been crushed, basically representing a separate split. Duplicates are taken to quantify precision and any bias introduced after the parent sample was duplicated (i.e., during milling, digestion and analysis). Sample duplication is also conducted to ensure and demonstrate analytical repeatability.

Check assays of pulverized pulps are performed by a second lab and generally represent 5 to 10% of the entire sample database. Comparisons and reconciliation between original and check assays are done routinely during drilling, and systematically before any resource estimation exercise.

Sample custody is ensured on-site by continuous inventorying and monitoring of drill core. Once samples are prepared, using the methodologies described above, they are inventoried, individually bagged, tagged, and sealed in larger bags for transport to the assay lab. Audits of the assaying labs are performed occasionally.

The Mineral Resource cut-off grade for the Rosh Pinah Mine is a 4% zinc-equivalent based upon the approximate cost of milling and transport of ore to surface. Copper is currently not considered economic or recoverable and is therefore not included in the zinc-equivalent calculation.

Mineral Resource and Mineral Reserve Estimates

The table below shows the Mineral Resource Estimates for the Rosh Pinah Mine as at December 31, 2018:

			Grade			Metal	
	Quantity	**Zn**	**Pb**	**Ag**	**Zn**	**Pb**	**Ag**
Category	**Mt**	**%**	**%**	**g/t**	**M lbs**	**M lbs**	**K oz**
Measured	5.49	8.33	1.93	27.14	1,009	234	4,792
Indicated	5.83	7.30	1.59	25.18	938	204	4,716
Measured & Indicated	11.32	7.82	1.76	26.13	1,950	439	9,509
Inferred	5.56	7.11	1.13	24.93	872	139	4,457

(1) All Mineral Resources have been estimated in accordance with the CIM Definition Standards. Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Numbers may not add up due to rounding. The Mineral Resource is shown at 100% ownership, Trevali holds a 90% joint venture interest in the Rosh Pinah Mine.

(2) The Rosh Pinah Technical Report is the current technical report for the Rosh Pinah property.

(3) The Rosh Pinah Underground Mine Mineral Resource estimate is reported based on zinc equivalent cut off grade of 5% ZnEQ with metal prices of: US$1.13/lb zinc, US$0.95/lb lead and US$14.50/oz silver. The Rosh Pinah Underground Mine Mineral Resource estimate has been prepared by the mine geology department and non-independent Resource geology consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Yan Bourassa (P.Geo.), a Qualified Person as defined in NI 43-101. Mr. Bourassa is Vice President, Mineral Resource Management of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Rosh Pinah Mine as at December 31, 2018:

		Grade			Metal		
Category	**Quantity Mt**	**Zn %**	**Pb %**	**Ag g/t**	**Zn M lbs**	**Pb M lbs**	**Ag K oz**
Proven	3.90	7.12	1.59	20.49	612	137	2,568
Probable	4.59	6.40	1.46	23.11	648	148	3,409
Proven & Probable	8.49	6.73	1.52	21.90	1,260	285	5,978

(1) All Mineral Reserves have been estimated in accordance with the CIM Definition Standards. Numbers may not add due to rounding. The Mineral Reserve is shown at 100% ownership, Trevali holds a 90% joint venture interest in the Rosh Pinah Mine.

(2) The Rosh Pinah Technical Reportis the current technical report for the Rosh Pinah property.

(3) The Rosh Pinah Underground Mine Mineral Reserve estimate is reported based on planned stopes with a net smelter return cut-off grade of US$60/tonne, with metal prices of: US$1.13/lb zinc. The Rosh Pinah Underground Mine Mineral Reserve estimate has been prepared by non-independent Mine engineering consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Professional Engineer Barbara Rose (P.Eng.), a Qualified Person as defined in NI 43-101. Ms. Rose is Principal Mine Engineer of the Company and accordingly, is not independent.

Mining Operations

The Rosh Pinah Mine has been in continuous operation since 1969 and underground mining methods are well established. The mine's orebodies are accessed via multiple declines. All mining is mechanized using drill rigs, scooptrams, and underground haulage trucks. Waste is hauled via declines and placed in previously mined stopes. Ore is dumped into an ore pass feeding a grizzly and primary crusher and is subsequently conveyed to the surface process plant.

Mining is done by sub-level open stoping. Extraction of stopes starts on the upper levels and proceeds down dip. No backfill is used in the mine and sill or rib pillars are left where required for geomechanical purposes.

Annual mine production is typically 600,000 to 700,000 tonnes of ore from three different mining areas supplying a blend of ore types to the processing plant. The blending is carried out to manage the levels of copper, manganese and iron, which detrimentally impact recovery of zinc and lead, as well as to maintain a constant zinc and lead grade feed.

Processing and Recovery Operations

The process plant includes crushing, screening, and grinding followed by lead/zinc flotation and filtering to produce separate lead and zinc concentrates.

The run of mine ore is crushed in a primary crushing station, located underground from where it is conveyed into the beneficiation plant through a series of conveyor belts for further crushing, screening, and grinding. From the mill feed stockpiles, the ball mill is fed at a solids feed rate of 85 to 90 tonnes per hour. The milling circuit has two stages of cyclone classification in closed circuit with the mill to produce the lead flotation feed. A third stage of cyclones dewaters the flotation feed slurry to an optimal density.

The product from the milling circuit is sent to a conditioner where frother is added before it passes on to four rougher tank cells. The concentrate from the roughers are sent to the lead regrind circuit which comprises a high rate thickener, three stirred media detritors and a product tank. The product from the regrind circuit is sent to a first cleaner bank cell. The concentrate from the cleaner bank cell is sent to the lead column cell and the tails is recycled back to the conditioner. The rougher tails go to two scavenger tank cells. Tails from the lead column cell is recycled back to the first cleaner and the final concentrate sent to the lead concentrate thickener and belt filter for dewatering. The final lead concentrate from the belt filter is discharged onto a drying floor, where it is dried and stockpiled until loaded onto trucks for dispatch to the port of Luderitz.

The underflow of the intermediate thickeners is fed to two zinc conditioners in series. From the conditioners it is fed to a rougher tank cell which has its concentrate sent to the zinc regrind circuit. The regrind circuit consist of a high rate thickener, a stirred media detritor and a product tank. The product from the regrind circuit is fed to a cleaner cell. The rougher tails is sent to a series of four scavenger tank cells. The concentrate from the cleaner cell feeds the final zinc column which in turn produces the final zinc concentrate which is sent to the zinc thickener and belt filter for dewatering. The final zinc concentrate from the belt filter is discharged onto a drying floor, where it is dried and stockpiled until loaded onto trucks for dispatch to the port of Luderitz.

The tails from the cleaner cell is combined with that of the rougher tails that feed the scavenger cells. The final column tails and the scavenger concentrate are both recycled back to the conditioners. The scavenger tails is sent to the tailings surge sump from which it is pumped to the tailings dam.

In 2016, RPZC started mining the WF3 orebody. Variations in the WF3 orebody (higher iron and harder ore) necessitated the installation of regrind circuits in both the lead and zinc circuits as well as additional cleaning capacity in the lead circuit to optimize beneficiation and continue producing concentrates at a saleable grade. The project included an upgrade to the programmable logic circuit (PLC) and supervisory control and data acquisition (SCADA) system. The upgrade included changes to the dewatering circuits to accommodate finer material and an upgrade of the tailings pumping system. Additional plans for 2019 mill upgrades include new concentrate filter presses, cyclones and additional flotation capacity.

Infrastructure, Permitting and Compliance Activities

Mine electrical power is directly supplied from NamPower, the national power utility company of Namibia, through its grid system. Water is supplied by NamWater (Namibia Water Corporation) from the Orange River.

The Rosh Pinah Mine has an Occupational Health, Safety and Environment Commitment (HSEC) Policy (2017) outlining its commitment to the prevention of pollution and the undertaking of business in an environmentally sound manner. These commitments are then implemented and managed through a certified ISO 14001:2015 Environmental Management System, which is valid until August 1, 2020. A certified ISO 14001: 2015 Management System is not a legal requirement; however, it is considered a best practice principle and provides a benchmark for Environmental Management. RPZC's Environmental Management Plans provide the framework for Rosh Pinah's environmental management and includes regular monitoring and biannual evaluation of environmental performance through compliance audits undertaken by an external consultant.

Mining in Namibia is mainly regulated by the Minerals (Prospecting and Mining) Act 33 of 1992 (Minerals Act) as amended by the Minerals (Prospecting and Mining) Amendment Act 8 of 2008. In terms of the Minerals Act, an Environmental Impact Assessment (EIA) study must be furnished to the Ministry of Environment before a mining project can proceed. It should be noted that while this Act dealt with environmental matters arising from prospecting in mining, the Act predated the Environmental Management Act 7 of 2007 (Environmental Act), which came into force in 2012. The current authorizations for the operation are aligned with the Environmental Act. Finally, the Minerals Act provides that the holder of a mineral licence must take all steps to the satisfaction of the Minister to remedy any damage caused by any mining activities. In the case of larger mining operations, the Minister would almost invariably demand guarantees that could be used by the Ministry to remedy damage caused by mining activities; this is in the form of closure financial liability. Currently, there is no mandatory mechanism for the funding of the Final Mine Closure Plan.

Rosh Pinah town is a mining community built and managed by the mine for the employees. The town is inclusive of the Skorpion Zinc and the Rosh Pinah mines, and a joint-venture private company called RoshSkor has been established by RPZC and Skorpion Zinc to manage and operate the town as a private municipality. All services and infrastructure to operate and manage the village are provided through

RoshSkor. RoshSkor is also responsible for the implementation of Corporate Social Responsibility projects, which are currently funded between Skorpion Zinc and RPZC. Programs include training in basic needlework, hand weaving of carpets, development initiatives in the informal settlement of Tutengeni, which involves the upgrade of a school, training and implementation for the removal of waste and waste segregation, cleaning, and other activities.

Capital and Operating Costs

Results for 2017 and 2018 and guidance for 2019 production, operating costs and sustaining capital are summarized below on a 100% basis:

		2017[1] Actual	2018 Actual	2019 Guidance
Payable Production				
Zinc	(million pounds)	29.3	94.2	80-89
Lead	(million pounds)	4.4	8.5	10-11
Silver	(thousand ounces)	120	115	145-161
Operating Cost	($/tonne)	56	59	56-63
C1 Cash Cost	($/lb Zn)	0.47	0.70	0.70-0.77
All-in Sustaining Cost	($/lb Zn)	0.85	0.90	0.99-1.09
Sustaining Capital	($millions)	14.1	19.5	26

1. The Rosh Pinah Mine was acquired August 31, 2017; 2017 includes only the period from September 1 to December 31.

CARIBOU MINE

The scientific and technical information included in the following section has been derived from or is based upon the technical report entitled "*Technical Report on the Caribou Mine, Bathurst, New Brunswick, Canada*" by Roscoe Postle Associates Inc. dated May 31, 2018 (effective December 31, 2017) (the "**Caribou Technical Report**"), prepared under the supervision of Torben Jensen, Ian T. Blakley, Tracey Jacquemin and Shaun C. Woods. Each of Messrs. Jensen, Blakley and Woods is an independent "qualified person" under NI 43-101. Ms. Jacquemin is a "qualified person" under NI 43-101 but is not independent of the Company as she is an employee of the Company. Non-material updates since the date of the Caribou Technical Report are based on the Company's previously filed financial statements and MD&As.

Summary

The Company's wholly owned zinc-lead-silver Caribou Mine is located 50 kilometres west of Bathurst, New Brunswick, Canada. The operations consist of an underground mine with significant underground development, a fully permitted 3,000 tonne per day mill, a sulphide flotation recovery plant, metallurgical and geochemical laboratories, a tailings management facility, and other associated infrastructure. The Caribou Mine has been in continuous production since the Company restarted underground mining operations in the first quarter of 2015; commercial production was declared effective July 1, 2016. In February 2017, the Company entered into a Cooperation Agreement with the Mi'kmaq First Nation, as the Caribou Mine is situated within their traditional territory.

As at December 31, 2018, Caribou contained 1.41 billion pounds of contained zinc (see "Mineral Resource and Mineral Reserve Estimates" below). In 2018 the mine produced 72.0 million payable pounds of zinc, 24.4 million payable pounds of lead and 632,000 payable ounces of silver. For 2019, production guidance

for 2019 is 71-79 million payable pounds of zinc, 24-27 million payable pounds of lead and 641,000-713,000 payable ounces of silver, and site operating cost guidance is $72-79 per tonne.

Property Description, Location and Access

The Caribou Mine is located in Restigouche County in the province of New Brunswick, Canada, approximately 55 kilometres west of the coastal community of Bathurst. The property is accessed by paved highway and then by a four-kilometre gravel road to the main mine infrastructure.

The Caribou Property is 100% owned by Trevali and consists of mining lease ML-246, mineral claim 1773, industrial surface lease No. SIML2271 and freehold lands known as PID 50072032. ML-246 covers an area of 3,105.7 hectares and contains the Caribou Mine. The mining lease has a 20-year term and expires on October 27, 2028. Mineral claim 1773, also known as the Woodside Brook, covers a total area of approximately 826 hectares. Annual assessment work is required to renew mineral claim 1773. Industrial surface lease No. SIML2271 covers approximately 90 hectares, which includes the tailings area, has a 20-year term and is set to expire on May 31, 2026. The mining lease that covers the Caribou Mine is hereinafter referred to as “Caribou”.

Caribou is subject to three royalties or royalty-type taxes with differing methods of calculation:

- A 2% provincial royalty of the annual net revenue generated by the mining operation, which is equal to the gross revenue derived from mine output and commodity hedging less allowable transportation, costs for outputs sold, refining, smelting, and milling costs, and processing allowances;
- A 16% provincial net profits tax on annual net profits exceeding C$100,000. Net profit is calculated as the mine’s gross revenues less allowable costs, specified allowances for depreciation, financing expenses, processing, eligible exploration expenditures, as well as the 2% provincial royalty paid. The net profits tax may be further reduced by tax credits related to eligible process research expenditures and exploration expenditures using advanced exploration technologies; and
- A 10% net profits interest royalty payable to a third party, which is calculated as the mine’s gross revenue less allowable operating and administrative expenses, taxes (other than income tax), financing expenses, and eligible depreciation and amortization expenses.

The Company has formal surface access agreements in place and the Caribou Mine site is a fully permitted facility that allows for mining and milling under the existing Certificate of Approval. The addition of a copper circuit to produce a copper concentrate has been reviewed and a Certificate of Determination to proceed was issued to the Company. The Company has life-of-mine concentrate off-take agreements with Glencore for all concentrates produced at the Caribou Mine.

Other than as described above, the Company is not aware of any rights, agreements, or encumbrances to which Caribou is subject that would adversely affect the value of the property or Trevali’s ownership.

History

The Caribou Mine has been previously developed and mined by different owners, employing a variety of mining methods. The property’s ownership is summarized in the table below:

Company	Years of Ownership
Anaconda Canada Exploration Ltd.	1954 to 1986
East West Caribou Mining Limited	1986 to1989
Breakwater Resources Ltd.	1990 to 2005
Blue Note Metals Inc.	2006 to 2009
Maple Minerals Corporation	2009 to 2012
Trevali Mining Corporation	2012 to present

Early exploration work at Caribou in 1954 by Anaconda Canada Exploration Ltd. ("**Anaconda**") included an airborne electromagnetic (EM) survey over the property. Anaconda carried out preliminary surface mapping and exploration work in 1955 and began drilling the deposit in 1956. In 1959, Anaconda excavated a 380-metre long 2.4-metre by 2.7-metre adit to obtain a bulk sample of the mineralization. In 1965, Anaconda extended the adit to cover the entire deposit and discovered the supergene copper gossan by excavating a ventilation raise through the oxidized zone.

The mine began production from an open pit on the oxidized zone in 1970 and in 1971 mining continued in the sulphide body accessed from a ramp. Production ended in December of 1971. Anaconda initiated a second phase of production in 1973 and production ceased in November of 1974 and the project was placed on care and maintenance.

In 1980, Anaconda re-initiated exploration on the property and carried out a deep drilling program to test the continuity of the Caribou zone at depth. Anaconda also carried out limited test mining and processing that concluded with 25,400 tonnes of plant feed being milled at the Brunswick mine plant. In 1983, Anaconda built a gold-silver heap leach facility and processed 61,500 tonnes, producing 106,000 ounces of silver and 8,100 ounces of gold.

The project was transferred to the East West Caribou Mining Company Limited ("**East West**") in 1986. Between 1986 and 1988, East West initiated pre-production construction that included underground development and the construction of a concentrator on the property. East West re-initiated production at Caribou in 1990 and shortly after, the mine was shut down due to various operating problems.

In 1990, Breakwater Resources Ltd. ("**Breakwater**") acquired East West and briefly re-opened the mine producing 728,400 tonnes. The mine was closed in 1990 due to poor metallurgical recoveries. Metallurgical test work performed by Lakefield Research in 1994 demonstrated that lead and zinc concentrates could be produced with significantly higher recoveries than had been achieved in the past.

In 1996, Breakwater began construction of a new mill at Caribou and carried out surface exploration work on the property including the re-estimation of the mineral resources. Breakwater carried out soil and stream sediment sampling and magnetic and induced polarization geophysical surveys. Breakwater also drilled eight diamond drill boreholes totalling 2,659 metres. The drilling program was successful in identifying massive sulphide lenses at depth and production was re-initiated in July of 1997. In 1998, Breakwater drilled an additional five boreholes for 1,664 metres. Production was stopped again in August 1998 after having produced 586,598 tonnes grading 6.32% zinc and 2.93% lead and the mine was placed on care and maintenance.

From 1999 to 2000, Breakwater undertook several engineering studies to determine the feasibility of re-opening the Caribou Mine. Mineralogical and metallurgical studies were carried out at Lakefield Research, preliminary engineering review of the modifications required to the concentrator, as well as detailed engineering reviews of critical environmental projects, were also carried out.

In 2006, the property was acquired by Blue Note Metals Inc., who re-opened the mine in 2007 but ceased production in 2008 after mining about 517,000 tonnes. In 2009, Maple Minerals Corporation acquired Caribou from bankruptcy. On November 2, 2012, Trevali gained control of Caribou through the acquisition of Maple Minerals Corporation.

Geology and Mineralization

The Bathurst Mining Camp occupies a roughly circular area of approximately 70 kilometres diameter in the Miramichi Highlands of northern New Brunswick. The area boasts some 46 mineral deposits with defined tonnage and another hundred mineral occurrences, all hosted by Cambro-Ordovician rocks that were deposited in an ensialic back-arc basin.

The volcanogenic massive sulphide deposits in the Bathurst Mining Camp formed in a sediment- covered back-arc continental rift during periods when the basin was stratified with a lower anoxic water-column. The basin was subsequently intensely deformed and metamorphosed during multiple collisional events related to east-dipping subduction of the basin. The rocks in the Bathurst Mining Camp are divided into five groups: the Miramichi, Tetagouche, California Lake, Sheephouse Brook, and Fournier groups, which are largely in tectonic contact with one another. The lower part of each group is dominated by felsic volcanic rocks and the upper part by mafic volcanic rocks, which are overlain by carbonaceous shale and pelagic chert. The basalts are both tholeiitic and alkalic and show a progression from enriched, fractionated continental tholeiites to alkali basalts to more primitive, mantle-derived midocean ridge, tholeiitic pillow basalts. Most massive sulfide deposits of the Bathurst Mining Camp are associated with felsic volcanic rocks in each group.

The Caribou deposit is a volcanogenic massive sulfide (VMS) deposit, is located in the northern part of the Bathurst Mining Camp and occurs in the core of a synformal structure that plunges steeply (80°-85°) to the north. The Caribou deposit is a VMS typical of the Bathurst Mining Camp, but is sufficiently distinct from the Brunswick type to warrant a subtype designation (Caribou type), within the Bathurst Mining Camp. Unlike the Brunswick-12 deposit, which is hosted by the Tetagouche Group, the Caribou deposit occurs in the California Lake Group near the base of a felsic volcanic rock sequence that comprises part of the Spruce Lake Formation. The Spruce Lake Formation volcanic rocks are petrologically and geochemically distinct from those of the Tetagouche Group. Furthermore, the Caribou deposit is not associated with the Algoma-type carbonate-oxide-silicate iron formation that overlies and is lateral to the Brunswick-12 and Heath Steele deposits.

Mineralization within the Caribou deposit is composed of seven *en échelon* lenses striking parallel to the Caribou fold numbered 10 to 80 that are zoned mineralogically and chemically from a copper-rich vent-proximal facies (vent complex) near the bottom and western part of each lens, to a lead-zinc-rich vent-distal facies (bedded sulphides) near the top and eastern part of each lens. The zones typically consist of 90% sulphides, mainly pyrite, sphalerite, galena and chalcopyrite. The main gangue minerals are magnetite, siderite, stilpnomelane, quartz and chlorite. Lenses 10, 20, 30, 70, and 80 occur on the north limb of the Caribou fold while lenses 40 and 60 are mostly on the eastern limb of the fold.

Exploration

2018 exploration highlights include:

- Underground expansion drilling at Caribou has successfully demonstrated continuation of North limb mineralization at depth;
- Completed Restigouche resource definition drill program in support of advanced economic studies; and
- Murray Brook (MB) Exploration Alliance with Puma Exploration Inc. Evaluated and identified certain areas of the MB deposit, though the Company ultimately determined not to proceed with its option on the property.

Drilling

The Caribou deposit has been tested with a total of 1,441 diamond drill holes totaling 117,131 metres. A total of 1,359 drill holes were drilled from underground while 82 drill holes were collared from surface. Most of the surface drilling utilized NQ-sized core. Earlier underground diamond drilling was typically AX-sized, with recent drilling BQ-sized core drilling completed.

Drilling statistics for 2016, 2017 and 2018 and for the project to December 31, 2018 are presented below:

Zone Drilled	Year	Drill Holes (#)	Project Drill (#)	Drilling (metres)	Cumulative (metres)
Caribou	2016	234	1,040	11,326	80,320
Caribou	2017	195	1,235	11,749	92,069
Caribou	2018	206	1,441	25,068	117,131

Exploration work programs in Canada are carried out under the guidance of Daniel Marinov, P.Geo., Trevali's Vice President of Exploration. Mr. Marinov is a "qualified person" under NI 43-101.

Caribou in-Mine 2018 Exploration

A surface drilling program was conducted from July 2018 at Caribou with the aim of determining sulphide extensions at depth based on previous intercepts from drillholes CX-97-2 and BR-1037 which had intersected mineralization below the current mine workings. Four holes were drilled with two being stopped due to hole deviation. BR-1044 intercepted 1.34m of sulphide mineralization grading 14.21% zinc, 4.79% lead, 0.12% copper, 73 g/t silver, and 0.33 g/t gold.

In addition to the surface drilling, in July 2018, an underground drilling campaign was initiated with the target of defining the Lens 4 hinge zone area of Caribou and identifying new inferred resources. Drilling took place from an underground drill drive with holes typically around 350m in length with a total of 10,000m ear-marked for the program.

The extent of the Lens 4 hinge zone was delineated in the first few months of drilling and subsequent drilling was focused on resource upgrade and step-out holes where possible. Notable sulphide intercepts where achieved from drillholes intersecting the southern extent of the Northern Limb lenses which prompted the remainder of the 2018 drilling to be focused on this previously undefined portion of the deposit. The drilling program was completed on December 31, 2018 with 24 NQ-sized core drillholes for a total of 7,093m.

Restigouche 2018 Exploration

A drilling program was undertaken from April to June 2018 on Restigouche in order to delineate the mineral resource on the property. The focus of the drilling was to define the resource to Indicated category and replace historical holes which were considered unreliable data sources as well as gather geotechnical data for mining engineering studies.

During this period, there were 31 NQ-sized drillholes drilled at Restigouche with a total of 6,278m drilled. Five of these were step-out holes to determine the extent of sulphide mineralization on the property while the remainder were targeting mineral resource definition.

A ground gravity survey was conducted in August and September 2018 across the majority of the Restigouche lease and exploration claim. The purpose was to further define a gravity anomaly detected from previous airborne gravimetric data. Subsequent to this, a time domain electromagnetic (TDEM) survey was conducted across the entire property to further define anomalous areas in conjunction with the existing geophysical data. Continued work programs on the property will be subject to the data analyzed from the gravity and TDEM surveys once released.

New Brunswick 2019 Exploration Outlook

The 2019 exploration program in the Bathurst Mining Camp is under review and is focusing primarily on compilation and analysis of extensive regional databases to generate targets from data processing, field mapping, and soil sampling where necessary. Lithogeochemical investigations from sample data are also planned to determine alteration halos, chemostratigraphy, and elemental vectoring.

Sampling, Analysis and Data Verification

No information is available on the sample preparation and security for the historical data collected by previous owners of the property. Drilling and data collection at Caribou since Trevali's acquisition of project adheres to "Trevali's Drilling—Logging and Sampling Procedures for Drill Core".

Drill core is transported in core boxes directly from the drill rigs to the onsite core logging facility for processing. All geotechnical and geological logging personnel utilize a site-specific hierarchical coding system designed to ensure continuity of the logging parameters for the duration of the exploration programs, helping to maintain order, quality, and completeness of data collection. All drill core is marked by the site geologist and is logged, digitally photographed, and bulk density is measured prior to cutting and sampling.

While the relevant sample batch is being prepared, samples are securely stored on site in a lockable, purpose-built sample dispatch area. Samples are then delivered to the on-site lab preparation area that is operated by the Company. As part of the QA/QC program, control samples are added, which includes field duplicates (quartered core) at an approximate rate of 1 in 20, certified reference materials at an approximate rate of 1 in 20, and certified blank material at a rate of approximately 1 in 40.

Samples are shipped to Bureau Veritas Minerals Laboratories preparation facility in Timmins, Ontario, then forwarded to Vancouver, British Columbia, for assay. SGS and BVML's quality systems comply with the requirements for the International Standards ISO 17025 with CAN-P-1579 designation. Analytical accuracy and precision are monitored by the analysis of reagent blanks, reference material and replicate samples. Quality control is further assured by the use of international and in-house standards.

Mineral Processing and Metallurgical Testing

Metallurgical performance and design criteria for the rehabilitated Caribou processing plant outlined in the Caribou Technical Report was based upon the operating history of the plant, metallurgical testwork results available from previous operations, and extensive laboratory testwork programs. This work included the addition of a new copper flotation circuit design to recover copper from the lead circuit tailings. The Company continues to focus on zinc and lead recoveries and, as of the date hereof, the copper circuit is not being utilized.

The mill can operate at 140 wet tonnes per hour or 3,310 dry tonnes per day and consistently at 135 wet tonnes per hour. Actual recoveries and process plant throughput are slightly below design level ranges specified in the Caribou Technical Report. The Company has completed a number of operational initiatives that have significantly improved process plant performance in order to consistently achieve design levels and it is anticipated that further optimization efforts will result in additional efficiencies going forward.

Mineral Resource and Mineral Reserve Estimates

The table below shows the Mineral Resource Estimates for the Caribou Mine as at December 31, 2018:

		Grade					Metal				
Category	**Quantity Mt**	**Zn %**	**Pb %**	**Cu %**	**Ag g/t**	**Au g/t**	**Zn M lbs**	**Pb M lbs**	**Cu M lbs**	**Ag K oz**	**Au K oz**
Measured	6.00	6.69	2.53	-	75.36	-	885	335	-	14,537	-
Indicated	3.58	6.67	2.58	-	76.00	-	526	204	-	8,748	-
Measured & Indicated	9.58	6.68	2.55	-	75.60	-	1,411	539	-	23,285	-

(1) All Mineral Resources have been estimated in accordance with the CIM Definition Standards. Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Numbers may not add up due to rounding.

(2) The Caribou Technical Report is the current technical report for the Caribou property.

(3) The Caribou Underground Mine Mineral Resource estimate is reported based on zinc equivalent cut off grade of 5% ZnEQ with metal prices of: US$1.13/lb zinc, US$0.95/lb lead and US$14.50/oz silver. The Caribou Underground Mine Mineral Resource estimate has been prepared by the mine geology department and non-independent technical consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Yan Bourassa (P.Geo.), a Qualified Person as defined in NI 43-101. Mr Bourassa is Vice President, Mineral Resource Management of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Caribou Mine as at December 31, 2018:

		Grade			Metal		
Category	**Quantity Mt**	**Zn %**	**Pb %**	**Ag g/t**	**Zn M lbs**	**Pb M lbs**	**Ag K oz**
Proven	1.57	6.54	2.55	78.31	226.0	87.9	3,945
Probable	1.73	6.21	2.32	68.56	236.5	88.4	3,808
Proven & Probable	3.29	6.37	2.43	73.20	462.5	176.3	7,753

(1) All Mineral Reserves have been estimated in accordance with the CIM Definition Standards. Numbers may not add due to rounding.
(2) The Caribou Technical Report is the current technical report for the Caribou property.
(3) The Caribou Underground Mine Mineral Reserve estimate is reported based on optimized stopes designed on an incremental net smelter return cut-off grade of US$75/tonne with metal prices of: US$1.13/lb zinc, US$0.95/lb lead and US$14.50/oz silver. The Caribou Underground Mine Mineral Reserve estimate has been prepared by non-independent mine engineering consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Professional Engineer Barbara Rose (P.Eng.), a Qualified Person as defined in NI 43-101. Ms. Rose is Principal Mine Engineer of the Company and accordingly, is not independent.

Mining Operations

Trevali commenced underground mining in 2015 and commercial production was declared effective July 1, 2016.

The Caribou deposit begins at surface and extends below surface and remains open for expansion as evidenced by exploration drilling encountering mineralization to depths of approximately 770 metres below surface (approximately 350 metres outside of the defined mineral resource). Access to the underground mine is by a connected dual ramp system from portals in the upper 100 metres of the mine and a single ramp system between 100 and 425 metres. A dual ramp system has been developed in the lower portion of the mine below 425 metres in order to provide improved ventilation distribution and equipment flow.

Modified Avoca has been the main mining method, supplemented by uphole retreat for partial sill pillar recovery. Modified Avoca stopes employ unconsolidated waste rock and surface stockpiled waste rock as backfill. Underground haul trucks transport the mined material through the underground ramp system and out of the mine through the old conveyor portal, where surface stockpile pads, crusher and the process plant are located.

In October 2018, adverse geotechnical conditions in two mining zones resulted in the temporary cessation of retreat mining. The Company is continuing to conduct internal and external studies in order to evaluate alternate mining methods and increase mine flexibility.

Processing and Recovery Operations

The process plant at Caribou is a conventional milling and sulphide flotation plant with a 3,000 tonne per day nameplate capacity. The process plant includes crushing, screening, grinding, regrinding, and zinc, and lead flotation and filtering circuits to produce zinc, and lead concentrates. Concentrate production is stockpiled onsite prior to shipping and sale to Glencore. The zinc concentrate is transported by rail to Valleyfield, Quebec for further processing while the lead concentrate is further processed at Glencore's nearby Belledune smelting complex.

The Company has completed a number of initiatives that have improved crushing, optimized the primary grind, improved flotation circuits performance, and overall plant availability. As a result of these initiatives, process plant throughput, metal recoveries, and concentrate quality have improved significantly. However, despite declaring commercial production in mid-2016, zinc recoveries in 2018 were below design level ranges, partly reflecting a combination of challenging metallurgical conditions and various seasonal variations, for which optimization programs are now in effect. Testwork and technical support is ongoing to enable better future management of seasonal zinc recovery variation.

Infrastructure, Permitting and Compliance Activities

Existing infrastructure at the Caribou Mine includes access ramp portals, a shaft for services, surface ventilation equipment, a 3,000 tonne per day nameplate capacity mill, flotation circuits, a water treatment plant and sludge ponds, a tailings management facility, and various office and workshop buildings. The mine has a connection to New Brunswick Power Transmission Corporation's electrical power grid and an onsite diesel generator provides emergency power.

The Caribou Mine is a fully permitted facility that allows for mining and milling under its existing Certificate of Approval. The mine is in material compliance with all applicable regulatory requirements. The Company is currently in the process of permitting the construction and operation of the North Tailings Tributary Pond (NTTP) project. The Project consists of constructing a new tailings management facility to provide additional tailings storage capacity and to mitigate acid rock drainage from historical pre-Trevali sources located on-site.

On January 31, 2013, Trevali entered into a Limited Environmental Liability Agreement with the province of New Brunswick, whereby the province would accept the environmental liability associated with historic operations at Caribou. As at May 31, 2018, the current reclamation assets on file with the New Brunswick Department of Natural Resources totalled C$5 million. Additionally, as per Trevali's Approval to Operate I-8310 (C*ond.15b*), an additional C$1.2 million environmental protection bond has been posted with the New Brunswick Department of Environment and Local Government. As at December 31, 2018, the Company has recorded a provision for environmental rehabilitation, mine closure and reclamation activities for Caribou of $22.9 million, which it expects to settle during the course of mining and during closure.

In February 2017, the Company entered into a Cooperation Agreement with the Mi'kmaq First Nation, as the Caribou Mine is situated within their traditional territory. This agreement references the Impact Benefit Agreement executed in May 2011 covering the Halfmile Mine.

Capital and Operating Costs

Actual results for 2017 and 2018 and guidance for 2019 production, operating costs, and sustaining capital are summarized below:

		2017 Actual	2018 Actual	2019 Guidance
Payable Production				
Zinc	(million pounds)	79.9	72.0	71-79
Lead	(million pounds)	30.9	25.3	24-27
Silver	(thousand ounces)	890.3	697	641-713
Site Cash Cost	($/tonne)	$59	$68	72-79
C1 Cash Cost	($/lb Zn)	0.62	0.85	0.95-1.02
All-In Sustaining Cost	($/lb Zn)	0.72	1.14	1.15-1.28
Sustaining Capital	($millions)	27.0	20.9	16

SANTANDER MINE

The scientific and technical information included in the following section has been derived from or is based upon the technical report entitled *"Mineral Reserve Estimation Technical Report on the Santander Mine, Province de Huaral, Peru*" prepared by SRK Consulting (Peru) S.A. ("**SRK Peru**") dated March 31, 2017 (effective October 31, 2016) (the "**Santander Technical Report**"). The report was prepared under the supervision of Yao Hua (Benny) Zhang, Gary Poxleitner, and David Maarse of SRK Peru; Gilles Arseneau of ACS, and Leonard Holland of Holland and Holland Consultants Ltd., each of whom is an independent "qualified person" under NI 43-101. Non-material updates since the date of the Santander Technical Report are based on the Company's previously filed financial statements and MD&As.

Summary

The zinc-lead-silver Santander Mine is located in west-central Peru and consists of a historically mined open pit and underground workings, as well as the current underground mine, currently producing at an operating rate of approximately 2,400 tonnes per day, a conventional sulphide flotation mill, and associated infrastructure. Trevali began construction on the Santander Mine complex in 2011. Underground mining operations commenced in 2013, commercial production was declared effective January 31, 2014.

As at December 31, 2018, Santander contained 362 million pounds of zinc. Production in 2018 included 56.8 million payable pounds of zinc, 7.9 million payable pounds of lead and 435,000 payable ounces of silver. For 2019, production guidance is for 59-65 million payable pounds of zinc, 10-11 million payable pounds of lead and 536,000-595,000 ounces of payable silver, and site operating cost guidance is $45-49 per tonne.

Property Description, Location and Access

The Santander Mine is located in west-central Peru, about 215 kilometres east-northeast of the capital city of Lima. The location of the property is within the district of Santa Cruz de Andamarca, Province of Huaral, Department of Lima. The property is accessible by road from Lima either via the town of Huaral and then the village of Acos or via the town of Canta, at distances of 200 kilometres and 215 kilometres, respectively. On both routes, approximately 85% is travelled on paved road with the balance being good quality, maintained gravel roads.

Trevali holds a 100% interest in the Santander property, which consists of 72 mineral concessions covering a total area of 4,454.7 hectares, comprising an irregular, northwest-trending block of 66 mineral concessions covering 950.7 hectares and six other concessions covering 3,504 hectares. The mineral concessions were assigned to Trevali effective December 11, 2007 for a period of 50 years with an automatic 50-year extension. Trevali's interest includes the right to engage in exploration, development, processing, and commercialization activities and the Company controls sufficient surface rights for the life of mine. The concessions that cover the Santander Mine and the surrounding mineral concessions is hereinafter referred to as "Santander".

Santander is subject to the payment of annual maintenance fees for mineral concessions to maintain them in good standing. Santander is also subject to minimum annual commercial production requirements. Failure to satisfy these requirements may result in penalties or, in certain cases, cancellation of the concession. All of the Santander concessions are in good standing.

Santander is subject to three royalties or royalty-type taxes with differing methods of calculation:

- The 'Special Mining Tax' (Impuesto Especial a la Minería) is applied on a sliding scale from 0.2% to 0.4% on the net operating income of the mining operations. The net operating income is calculated as the annual net revenues generated by the mining operation less allowable

transportation, refining, smelting, and milling costs, processing allowances and general administrative expenses;

- The 'Mining Royalty' (Regalia a la Mineria) is applied on a sliding scale from 0.1% to 0.6% on the net operating income of the mining operations. The net operating income is calculated as the annual net revenues generated by the mining operation less allowable transportation, refining, smelting, and milling costs, processing allowances and general administrative expenses; and

- A 3.5% net smelter royalty payable to Compania Minerales Santander Inc. S.A.C ("**CMS**") and is calculated based on the net operating income (the mine's gross revenue less allowable operating and administrative expenses). Trevali retains a 100% interest in CMS. (See History section below).

Other than as described above under "Three-Year History – Significant Developments – 2017", the Company is not aware of any rights, agreements, or encumbrances to which Santander is subject that would adversely affect the value of the property or Trevali's ownership.

The property is located along the western edge of the Peruvian Altiplano with the main valley being at elevations of between 4,200 and 4,500 metres above sea level. Local ridges are steep with peaks at elevations exceeding 5,200 metres above sea level. The highly dissected topography is typical of mountain glaciation with cirques and cols being common. A few remnant glaciers are present but retreat has been quite extensive over the last 20 years, exposing new bedrock.

History

There has been a long history of exploration and mining at Santander with some of the existing concessions dating back to the early 1900s. The earliest recorded work at Santander was carried out in 1925 when the mineral rights to the district were acquired by Rosenshine and Associates. In 1928, the United Verde Copper Company optioned the property and carried out a program of exploration and core drilling in the area, the results of which are unknown. In the 1940s, the National Lead Company explored the area and conducted further drilling. On April 9, 1957, a Peruvian subsidiary of St. Joe Minerals was formed to exploit the identified resources, primarily lead and silver.

Following corporate restructuring in 1985, St. Joe divested all of its Latin American mining operations, including Santander. A private Peruvian mining company, CMS subsequently acquired Santander and continued production from the Santander Pipe until August 1992 when work was suspended due to adverse economic conditions. Santander was dormant until mid-2007 when an evaluation was undertaken by Trevali.

Trevali acquired the Santander Mine through a 50-year assignment agreement dated December 11, 2011 with CMS, an insolvent Peruvian company that became a special purpose entity controlled by Trevali in 2009. Trevali has an effective 100% interest in Santander by virtue of CMS's Creditors Committee approval of the mineral concession purchase option granted to the Company, and 100% voting rights held on the Company's creditor's claims, together with other Company obligations relating thereto as at December 31, 2017.

During the 34-year period prior to closure in 1992, the total production from the Santander Pipe was 7,993,105 tonnes of 10.88% Zn, 0.98% Pb, 0.31% Cu and 2 oz/t Ag. At the time of closure in August 1992, historical mineral reserves were estimated to be approximately 650,000 tonnes with an average grade of 9.74% Zn and 0.66 oz/t Ag (Espinosa and Flores, 1993). It is estimated that approximately 100,000 tonnes were mined from the Magistral Central and Magistral South deposits prior to closure in 1992.

Trevali began construction of the Santander Mine in 2011. Underground mining operations commenced in 2013 and commercial production was declared effective January 31, 2014.

Geological Setting, Mineralization and Deposit Types

Santander is located within the Miocene metallogenic belt of central and northern Peru. It extends for at least 900 kilometres along the Western Cordillera and adjacent Altiplano and is characterized by several hydrothermal mineral deposits of different types that formed between about 6 million and 20 million years ago. The belt is centred east of the Mesozoic and early Palaeocene Coastal batholiths and lies on mature continental crust that has undergone multiple episodes of compressive deformation from at least middle Palaeozoic to latest Neogene time. Mineralization is interpreted to have occurred pre–lower Miocene Quechua I compressive event and spanned later Quechua II tectonism. Mineral deposits are predominantly hosted by shelf carbonates and other sedimentary rocks of Late Triassic, Jurassic, and Cretaceous age and by volcanic and intrusive rocks mainly of Neogene age. Base metal and precious metal mineralization was intimately associated in time and space with the eruption of calc-alkali volcanic rocks of intermediate composition and the emplacement of mineralogically and geochemically similar dykes and stocks.

Santander hosts intrusion-related, carbonate-hosted, distal 'passive' replacement deposits, or carbonate replacement deposits (CRDs). Controls on mineralization vary, however, with the majority of mineralization displaying very strong structural and lithological controls. Santander includes four discrete deposit areas: the Magistral deposits, the Santander Pipe, the Puajanca Pipe, and the tailings area.

Exploration and Drilling

With the exception of the drilling programs described below, there has been no recent exploration undertaken at Santander.

Extensive diamond drilling was carried out at Santander while it was in production from the mid-1950s until 1992, but no drilling took place after 1992 until Trevali acquired the project. Since acquiring the project in 2007 and as of December 31, 2018, Trevali has completed 71,704 metres of drilling in 287 diamond boreholes collared on surface and 44,884 metres of drilling in 244 diamond boreholes collared underground related to exploration programs. Underground definition drilling accounts for an additional 29,860 metres of drilling in 503 diamond drill holes.

Drilling statistics for 2018 and for the project to December 31, 2018 are presented below:

		2018		2007 - 2018	
	Zone Drilled	**Number of Holes**	**Total Metres**	**Number of Holes**	**Total Metres**
Exploration Surface Drilling	Magistral Surface	2	1,769	202	52,457
	Santander Pipe	9	5,986	22	12,360
	Puajanca	-	-	11	2,011
	Blanquita	-	-	4	1,247
	Capilla	-	-	2	215
	Blato	2	1,766	2	1,766
	Planta	-	-	7	384
	Relavera	1	356	3	654
	Tailings			34	611

	Zone Drilled	2018		2007 - 2018	
		Number of Holes	Total Metres	Number of Holes	Total Metres
Exploration UG Drilling	Magistral Underground Exploration	32	11,570	244	44,884
Exploration Total		**46**	**21,447**	**531**	**116,587**
Mine Underground Definition Total		**168**	**10,004**	**503**	**29,860**

Exploration work programs in Peru are carried out under the guidance of Daniel Marinov, P.Geo., Trevali's Vice President of Exploration, for the Company. Mr. Marinov is a "qualified person" under NI 43-101.

Magistral Deposits

The Magistral deposits consist of three main bodies: Magistral North, Magistral Central, and Magistral South; and six minor bodies: Rosa (depleted 2017), Bono, Fatima North, Fatima South, Magistral Central-North, and Oyon. Magistral mineralization is hosted in limestone of the Chulec formation, and the upper limits (or hanging wall) broadly correspond to a siliciclastic facies section of the Farat formation, often in fault contact. The lower limit (or footwall) of the mineralization is defined as the base of the last significant sulphide horizon and is occasionally gradational. Mineralized narrow but very high-grade veins occur perpendicular to the main Magistral bodies and occasionally present massive sulphide replacement in between the veins, as in the cases of Rosa, Fatima South, and Fatima North. At depth, Oyon splits into two parallel (stacked) mantos: Oyon 1 and Oyon 2.

The primary objective of the 2018 Magistral drill program was to better define and upgrade the inferred resource to measured and indicated categories. The drill program at the Magistral Mine aimed to discover extensions to the existing resources and upgrade resources to extend the Life of Mine. In 2018, 32 underground drill holes, totaling approximately 11,570 metres, were completed.

Santander Pipe

The Santander Pipe is located approximately 350 metres east of the processing plant. Sulphide mineralization is hosted within the Santander anticline and is associated with skarn and/or associated gangue (silicification, dolomitization, and calcic alteration) in various proportions largely dependent on the original character of the host rock and postulated distance from heat/mineral source or pathways. In detail, the skarn mineralization forms a circular, massive, plug-like body in the Jumasha and Pariatambo limestone formation to depths of approximately 250 metres below surface prior to forming more discrete skarn hosted replacements in the underlying interbedded Chulec limestone formation to 480-metre vertical depth, which is the vertical limit of historic mining operations. The average diameter of the skarn/sulphide body is approximately 120 metres. The mineralization remains open for expansion as underground exploration drilling indicates that the Santander Pipe extends a minimum of an additional 250 metres below the lowermost development levels for an approximate total vertical extent of 730 metres.

Nine drill holes for a total of 5,986 metres were completed at the Santander Pipe in 2018. Drill holes were primarily focused on better defining high grade mantos below the historic workings. Results of this drilling to date are very positive and allowed for an improved geological model and mineralization implicit modeling.

An updated resource estimate will be completed for the Santander Pipe and pending a positive economic outlook additional definition drilling and exploration is planned for 2019. The Company believes that significant exploration potential remains below and adjacent to the Pipe which has never been previously explored systematically. Drilling at the Santander Pipe target in 2017 and 2018 intersected multiple stacked high-grade zinc (+/- copper) replacement bodies or mantos. Drillhole SAN-0228B continued into strongly altered (hornfels, silicification and potassic alteration) siliciclastic rocks of the Farat and Carhuaz Fm which host multiple generations of stockwork quartz-molybdenite veins. The ages and cross cutting vein relationships suggest a prolonged and robust mineralizing system with the potential for a deeper skarn and/or porphyry system.

Property Exploration

In 2018 several surface EM surveys were carried out over known mineralization and along prospective trends. Results from this work defines EM anomalies over known mineralization and has identified a new target west of the Santander Pipe. A large surface mapping and geochemical sampling program was completed in 2018 focusing over known mineralization and outcropping limestone east of the Santander Fault. Results from the geochemical program also validate known mineralization and exploration targets. Both the Surface EM, mapping and geochemical sampling programs have proven to be effective exploration tools which will continue to be used in 2019 as part of the target validation and generative work.

Santander 2018 Exploration Outlook

In 2019, a $1.9 million surface exploration program is planned which will include 4,500 metres of resource definition at the Santander Pipe (pending resource update) and 5,000 metres of exploration drilling which will test a variety of targets including, Blato (2,200 metres), Capilla (1,200 metres), Nati (600 metres) and Santander Pipe Expansion (1,000 metres).

At the Santander Pipe, conventional and directional drilling with borehole electromagnetics will continue to target extensions to the lower portion of the inferred mineral resource, which remains open for expansion at depth, with the goal of defining new mineral resources to support future mine planning. Directional drilling coupled with borehole electromagnetics (BHEM) is considered for the deeper section of the pipe.

Surface EM, mapping and geochemical surveys will be carried out over known targets and over prospective trends in order to validate targets or to generate new targets. It is also anticipated that a number of high priority drill ready exploration targets will be drill tested in 2019, including Blato, Capilla, Nati and Santander Pipe Expansion, all of which are located in the highly prospective Magistral and Santander trends and coincide with magnetic anomalies and favourable structural settings.

Sampling, Analysis and Data Verification

Drilling and data collection at Santander adhere to “Trevali’s Drilling-Logging and Sampling Procedures for Drill Core and Tailings” standard operating procedures manual. Drilling methods at Santander are diamond drilling using either HQ (63.5 mm core diameter) or NQ diameter (47.6 mm core diameter diameter rods, and when/if drilling conditions dictate rods are reduced to NQ or BQ diameter (36.5 mm core diameter).

Drill core is transported in core boxes directly from the drill rigs to the onsite core logging facility for processing. All geotechnical and geological logging personnel utilize a site-specific hierarchical coding system designed to ensure continuity of the logging parameters for the duration of the exploration programs, helping to maintain order, quality, and completeness of data collection. All drill core is marked by the site geologist and is logged, digitally photographed, and bulk density is measured prior to cutting and sampling.

Samples are delivered to an onsite laboratory for assaying. Zinc, lead, and silver assays are obtained by Aqua-Regia acid digestion dissolution followed by atomic absorption (AA) measurement. The AA machine

is calibrated each shift and cleaned and calibrated when changing from geology samples to mill samples. Values of lead and zinc over 15% are assayed by volumetric method.

Operation of the onsite laboratory is outsourced and managed by SGS-Peru personnel. SGS-Peru's quality system complies with the requirements for the International Standards ISO 9001:2000 and ISO 17025: 1999. Analytical accuracy and precision are monitored by the analysis of reagent blanks, reference material, and replicate samples. Quality control is further assured by the use of international and in-house standards. Trevali personnel also insert blind certified reference material at regular intervals into the sample sequence to independently assess analytical accuracy. Finally, representative blind duplicate samples at a rate of approximately 5% are routinely forwarded to an ISO-compliant third-party laboratory for external quality control. All Magistral resource definition drill core assays have been carried out at the on-site Santander SGS laboratory since 2014. Production mine samples are also assayed at the independent on-site laboratory with external verification samples submitted to ALS laboratories in Lima, Peru. Drill core samples from exploration drilling (Santander Pipe and other targets) are sent to ALS Geochemistry Lima for processing.

The Santander database contains 1,428 drill holes and 6,035 channel samples as of December 31, 2018. Of the 1,428 drill holes, 1,039 (73%) were drilled by Trevali. The sampling and quality control procedures of the pre-Trevali historical drill holes is not known. An independent qualified person has evaluated the impact of the historical holes and noted that 317 of the 389 historical holes are situated in the Santander Pipe area. Only 65 historical holes were drilled in the Magistral deposit and only 17 of these intersected the mineralized zone and three out of the seven historical holes drilled in the Puajanca area intersected the Puajanca Pipe.

Trevali's quality control program was designed, implemented, and monitored by Daniel Marinov, Trevali's Vice President of Exploration, and follows industry best practices to assure data quality of the drilling program and underground channel sampling program. Daniel Marinov is a QP as defined by NI 43-101 and is responsible for all aspects of the work, including the QA/QC programs.

Mineral Processing and Metallurgical Testing

The Santander mill and processing plant design was based upon laboratory test work carried out initially at Glencore's Yauliyacu concentrator laboratory and finally at the Santander metallurgical laboratory. A substantial amount of flotation testwork was carried out to assess all aspects of the differing mineralized bodies that exist in the Santander Mine, along with mixtures of the different mineralized bodies to assess the effect of the mining program throughout the mine life. Results of metallurgical test work provided the data used for the design of a conventional sulphide flotation process flowsheet along with an equipment list to process approximately 2,400 tonnes of mineralized material per day through the mill.

At the time of the Santander processing plant design and development, the Rosaura mill and flotation plant owned by Empresa Minera Los Quenuales S.A. ("**Los Quenuales**"), a subsidiary of Glencore, was closed. Trevali formed a joint venture with Glencore to use the Rosaura mill and flotation plant as the basis for the Santander design, which was disassembled, transported, and reconstructed at Santander, with additional equipment necessary to accommodate 2,400 tonnes per day of Santander plant feed, as well as reclaimed tailings. The forecasted average metallurgical recoveries were 85% for Zn, 85% for Pb, and between 68% and 70 % for Ag.

Mineral Resource and Mineral Reserve Estimates

The table below shows the Mineral Resource Estimates for the Santander Mine as at December 31, 2018:

		Grade			Metal		
Category	**Quantity Mt**	**Zn %**	**Pb %**	**Ag g/t**	**Zn M lbs**	**Pb M lbs**	**Ag K oz**
Santander Mine							
Measured	1.42	5.63	0.92	33.96	176	29	1,552
Indicated	1.66	5.09	0.59	31.78	186	22	1,692
Measured & Indicated	3.08	5.34	0.74	32.79	362	50	3,244
Inferred	1.43	4.60	0.21	22.19	145	7	1,022
Santander Pipe Project							
Indicated	2.77	6.81	0.09	13.39	416	5	1,193
Inferred	0.82	4.60	0.21	22.19	83	4	583

(1) All Mineral Resources have been estimated in accordance with the CIM Definition Standards. Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Numbers may not add up due to rounding.
(2) The Santander Technical Report is the current technical report for the Santander property.
(3) The Santander Magistral Underground Mine Mineral Resource estimate is reported based on net smelter return cut-off grade of US$40/tonne with metal prices of: US$1.13/lb zinc, US$0.95/lb lead and US$14.50/oz silver. The Santander Magistral Underground Mine Mineral Resource estimate has been prepared by the mine geology department and non-independent Resource geology consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Yan Bourassa (P.Geo.), a Qualified Person as defined in NI 43-101. Mr Bourassa is Vice President, Mineral Resource Management of the Company and accordingly, is not independent.
(4) The Santander Pipe Underground Deposit Mineral Resource estimate is reported based on net smelter return cut-off grade of US$40/tonne with metal prices of: US$1.13/lb zinc, US$0.95/lb lead and US$14.50/oz silver. The Santander Pipe Underground Deposit Mineral Resource estimate has been prepared by the exploration geology department and non-independent Resource geology consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Yan Bourassa (P.Geo.), a Qualified Person as defined in NI 43-101. Mr. Bourassa is Vice President, Mineral Resource Management of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Santander Mine as at December 31, 2018:

		Grade			Metal		
Category	**Quantity Mt**	**Zn %**	**Pb %**	**Ag g/t**	**Zn M lbs**	**Pb M lbs**	**Ag K oz**
Proven	1.11	4.71	0.77	34.54	115.8	19.0	1,238
Probable	1.22	4.62	0.51	29.42	124.5	13.7	1,155
Proven & Probable	2.34	4.67	0.64	31.86	240.3	32.7	2,393

(1) All Mineral Reserves have been estimated in accordance with the CIM Definition Standards. Numbers may not add due to rounding.
(2) The Santander Technical Report is the current technical report for the Santander property.
(3) The Santander Magistral Underground Mine Mineral Reserve estimate is reported based on optimized stopes designed on an incremental net smelter return cut-off grade of US$45/tonne with metal prices of: US$1.13/lb zinc, US$0.95/lb lead and US$14.50/oz silver. The Santander Magistral Underground Mine Mineral Reserve estimate has been prepared by non-independent mine engineering consultants to the company with an effective date of December 31, 2018, under the supervision of and approved by Professional Engineer Barbara Rose (P.Eng.), a Qualified Person as defined in NI 43-101. Ms. Rose is Principal Mine Engineer of the Company and accordingly, is not independent.

Mining Operations

Underground mining commenced in 2013 and commercial production was declared effective January 31, 2014. All mining and mineral processing activities are performed by contractors.

The underground mine is accessed via three operational portals at Magistral North, Magistral Central, and Magistral South. Each portal has an associated ramp system, and the Magistral Central and Magistral South ramps are connected at the 4,510-metre and 4370-metre levels, with one ramp servicing both Magistral Central and Magistral South for the remainder of the depths of the currently defined mineralized lenses. By-passes connect the Magistral North ramp system to the Magistral Central and Magistral South system on

the main levels on elevations of 4,510 metres, 4,580 metres, 4,370 metres, 4,300 metres and newly planned 4,230-metre level.

Avoca is the main mining method utilized at the Santander underground operations. It is supplemented by up-hole retreat for partial sill pillar recovery and by modified Avoca in some extremity stopes along strike of the mineralization. Stope sequencing is retreated along strike from lens extremities. Ore is hauled to surface and waste rock broken underground is hauled to empty stopes as backfill, to underground temporary storage (remuck bays), or to surface temporary waste storage. Ore mucked from stopes is either loaded directly into trucks or stored in remuck bays along the ramps prior to truck haulage. empty stopes are filled with waste rock from development, supplemented with waste rock back-hauled from existing surface waste rock stockpiles.

Mineral Processing and Recovery Operations

The Santander processing plant is a conventional sulphide milling and flotation plant, comprised of three stages of crushing with two stages of grinding and differential flotation to produce zinc and lead concentrates. Concentrates are dewatered on-site and temporarily stored in concentrate sheds before being trucked to the Callo Glencore port facility near Lima as part of off-take agreements with Glencore. Process plant tailings are delivered to an on-site tailings management facility.

The Santander mill and flotation plant was designed and built by Trevali, Los Quenuales, and Holland & Holland Consultants Ltd. Los Quenuales' closed 1,250 tonne-per-day Rosaura mill was purchased, relocated, refurbished, and expanded to process Santander material at a nameplate capacity of 2,000 tonnes per day. The mill receives ore mainly from the Magistral underground zones, which is supplemented by excavated historical tailings from a nearby tailings pond. The Santander processing plant is operated by Tecnomin Peru S.A.C., a Peruvian contractor, with Trevali overseeing contracted labour, staff, and supervision of ongoing plant and processes optimization. The plant is operated 24 hours a day, 7 days per week, with scheduled monthly downtime for planned maintenance.

Infrastructure, Permitting and Compliance Activities

Existing infrastructure at Santander includes a 2,000 tonne per day nameplate capacity mill and flotation plant, an on-site tailings management facility, a surface water treatment plant, a metallurgical laboratory operated by SGS Peru, ancillary surface buildings, and an underground mine. Electrical grid power is supplied under a long-term power purchase agreement and from river generated power supplied by Volcan through long-term agreements.

Mine dewatering flow rates increased from 550 litres per second to 650 litres per second as the mine progresses to depth. This change in flow rate is addressed in permit applications that are already under consideration by authorities. A feasibility study for the expansion of the existing tailings management facility commenced in 2018 with SRK consulting to accommodate the current LoM tailings requirement. The permitted expansion configuration will involve a 3-metre raise of the existing tailings dam to provide the necessary storage, maintaining a similar footprint.

With the exception of the permitting described above or as would not materially affect operations, Santander requires no additional permits for continued operation and the mine is in material compliance with all applicable regulatory requirements. As at December 31, 2018, the Company has recorded a provision for environmental rehabilitation, mine closure, and reclamation activities of $13.1 million, which it expects to settle during the course of mining and during closure.

Surface land use agreements are in place with the communities of San Jose de Baños, Santa Cruz de Andamarca, Santa Catalina, and San Jose de Chauca. Initiatives include donations of musical equipment to local community bands, medical and school supplies, literacy outreach programs, and tourism and

sustainability studies performed in cooperation with the local communities. Regular community meetings and consultations are held with local stakeholders.

Capital and Operating Costs

Actual results for 2017 and 2018 and guidance for 2019 production, operating costs and sustaining capital are summarized below:

		2017 Actual	2018 Actual	2019 Guidance
Payable Production				
Zinc	(million pounds)	53.1	56.8	59-65
Lead	(million pounds)	10.5	7.9	10-11
Silver	(thousand ounces)	603	481	536-595
Operating Cost	($/tonne)	40	43	45-49
C1 Cash Cost	($/lb Zn)	0.67	0.72	0.71-0.79
All-in Sustaining Cost	($/lb Zn)	0.95	0.99	1.02-1.13
Sustaining Capital	($millions)	21.3	14.2	21

RISK FACTORS

The Company's approach to identifying and managing risk is a key component of how senior management operates and the Board oversees management of the Company's business. The enterprise risk management program of the Company is coordinated by the Vice President, General Counsel and Corporate Secretary and managed by the senior management team, including the Chief Executive Officer, Chief Financial Officer and Chief Operating Officer, with direct oversight by the Board. The Company maintains an enterprise risk register which is updated on a regular basis. The Company has conducted a top down review of key strategic, financial and operational risks and reviews this at least quarterly. The enterprise risk register includes a list of actions to ensure that those risks that have been identified as most material to the Company and its business are mitigated to agreed levels of tolerance, and progress is reported to the Board on a regular basis.

The financing, exploration, development and mining of any of the Material Properties is subject to a number of risk factors. The following is a discussion of risk factors relevant to the Company's operations and future financial performance. Any one of such risk factors could cause actual events to differ materially from those described in forward-looking statements relating to the Company. Additional risks not currently known by the Company, or that the Company currently deems immaterial, may also impair the Company's operations. Investors should carefully consider the risks and uncertainties described below.

Commodity, Market and Currency Risk

The volatility of the price of zinc, lead, silver and other metals could have a negative impact on the Company's future operations.

The Company's principal products are zinc, lead, and silver with minor gold and copper production. Even if commercial quantities of mineral deposits are discovered by the Company, there is no guarantee that a profitable market will continue for the sale of the metals produced. The price of the Common Shares, the Company's financial results and exploration, and the Company's development and mining activities in the future may be materially adversely affected by declines in the price of zinc, lead, silver, gold and copper. Zinc, lead, silver, gold and copper prices fluctuate widely and are affected by numerous factors beyond the Company's control, such as the sale or purchase of metals by various central banks and financial institutions, interest rates, exchange rates, inflation or deflation, fluctuation in the value of the United States dollar and foreign currencies, global and regional supply and demand, and the political and economic

conditions of major metals-producing and metals-consuming countries throughout the world. The prices of zinc, lead, silver, gold and copper have fluctuated widely in recent years, and future price declines could cause continued development of and commercial production from the properties to be uneconomic or result in the write-off of assets whose value is impaired as a result of low metal prices.

Decreases in commodity prices could negatively impact the Company's Mineral Reserve calculations and feasibility of the Company's projects.

If Mineral Reserve calculations and life-of-mine plans are required to be revised using significantly lower zinc, lead, silver, gold and copper prices, as a result of a decrease in commodity prices, this could result in material write-downs of the Company's investment in mining properties and increased reclamation and closure charges.

In addition to adversely affecting the Company's Mineral Reserve and Mineral Resource estimates and financial condition, declining metal prices can impact operations by requiring a reassessment of the feasibility of a particular project. As a result of any reassessment, the Company may determine that it is not feasible to continue commercial production at some or all of its current projects. Even if a project is ultimately determined to be economically viable, the need to conduct such a reassessment may cause substantial delays and/or may interrupt operations until the reassessment can be completed, which may have a material adverse effect on the results of operations and financial condition.

The Company's hedging program may be unsuccessful in reducing the price risk associated with fluctuations in base metals or foreign currencies.

From time to time the Company may engage in commodity hedging transactions intended to reduce the risk associated with fluctuations in commodity prices, but there is no assurance that any such commodity-hedging transactions designed to reduce the risk associated with fluctuations in metal prices will be successful. Hedging may not protect adequately against declines in the price of the hedged metal. Furthermore, although hedging may protect the Company from a decline in the price of the metal being hedged, it may also prevent it from benefiting from price increases.

In addition, from time to time, the Company may engage in foreign exchange hedging transactions intended to reduce the risk associated with fluctuations in foreign exchange rates, but there is no assurance that any such hedging transactions designed to reduce the risk associated with fluctuations in exchange rates will be successful and as such, operating costs and capital expenditures may be adversely impacted.

The Company's activities expose it to a variety of financial risks including interest rate risk, credit risk, and liquidity risk. The Company's risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Company's financial performance. The Company may use derivative financial instruments to hedge certain risk exposures. The Company does not purchase derivative financial instruments for speculative investment purposes.

Smelter charges for the Company's concentrates are based upon international benchmarks that may adversely affect operating costs.

The Company has life-of-mine concentrate off-take agreements with Glencore, a leading miner and commodity trader, for all concentrates produced at its Santander, Caribou, Rosh Pinah, and Perkoa mines at International Benchmark terms. Glencore also holds a right of first refusal for any future concentrate sales from Halfmile-Stratmat, Gergarub and Heath Steele properties. International Benchmark terms are based on average on London Metal Exchange (LME) pricing for any given shipping period and smelter treatment and refining charges based upon annual negotiations between third party smelting and mining groups, which are beyond the Company's control. Changes in metal prices and smelters' charges can have a material adverse impact on the Company's operating costs, making the Company's mines less profitable.

The Company is subject to currency fluctuations that may adversely affect its financial position.

The Company is subject to currency risks. The Company's functional currency is the US dollar, and its mining operations and interests are located in Canada, Peru, Burkina Faso, and Namibia, with additional development stage assets in Canada and Namibia. Zinc, lead, silver, gold and copper are sold in US dollars and the Company's costs are incurred principally in US dollars, Canadian dollars, Peruvian sols, Namibian dollars, South African rands, West African CFA francs, and Euros. The appreciation of non-US dollar currencies against the US dollar can increase the cost of zinc, lead, silver, gold and copper production and capital expenditures in US dollar terms. The Company also holds cash and cash equivalents that are denominated in foreign currencies that are subject to currency risk. Accounts receivable and other current and non-current assets denominated in foreign currencies relate to goods and services taxes, income taxes, value-added taxes and insurance receivables. The Company is further exposed to currency risk through non-monetary assets and liabilities of entities whose taxable profit or tax loss are denominated in foreign currencies.

Financial and Tax Risks

Global economic conditions may adversely affect the Company's growth and profitability.

Global markets continue to experience a high level of price and volume volatility. Many industries, including the precious metals mining industry, have been and continue to be impacted by these market conditions. Some of the key impacts of these conditions include contraction in credit markets resulting in a widening of credit risk, devaluations, high volatility in global equity, commodity, foreign exchange and precious metal markets, and a lack of market confidence and liquidity. A continued or worsened slowdown in the financial markets or other economic conditions, including, but not limited to, sovereign debt and government solvency conditions, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of the financial markets, interest rates and tax rates, may adversely affect the Company's growth and profitability. Specifically: the global credit/liquidity crisis could impact the cost and availability of financing and the Company's overall liquidity; volatility of gold and silver prices would impact the Company's revenues, profits, losses and cash flow; continued recessionary pressures could adversely impact demand for the Company's production and, conversely, inflationary pressures would impact the Company's production costs; volatile energy, commodity and consumables prices and currency exchange rates would impact the Company's production costs; and the devaluation and volatility of global stock markets would impact the valuation of the Company's equity and other securities. These factors could have a material adverse effect on the Company's financial condition and results of operations.

There are inflation-related risks in emerging markets.

The Company's activities and results of operations may also be adversely affected by the effects of rapid inflation in the general price level of goods and services in emerging markets. Peru, Namibian and Burkina Faso have experienced fluctuating rates of inflation for many years. There can be no assurance that any governmental action will be taken to control inflationary or deflationary situations or that any such action will be effective. Future governmental action may trigger inflationary or deflationary cycles or otherwise contribute to economic uncertainty. Additionally, changes in inflation or deflation rates and governmental actions taken in response to such changes may affect currency values. Any such events or changes could have a material adverse effect on the Company's results of operations and financial condition.

The Company's term credit facility contains a number of covenants that impose significant operating and financial restrictions on the Company and may limit its ability to engage in acts that may be in the Company's long-term best interest.

As of December 31, 2018, the Company had aggregate consolidated indebtedness of $136.5 million under its credit facility. The terms of the credit facility require the Company to satisfy various affirmative and

negative covenants and to meet certain financial ratios and tests. The covenants include, without limitation, restrictions on its ability to: incur additional indebtedness; pay dividends or make other distributions or repurchase or redeem its capital stock; prepay, redeem or repurchase certain debt; make loans and investments; sell, transfer or otherwise dispose of assets; incur or permit to exist certain liens; enter into transactions with affiliates; enter into agreements restricting its subsidiaries' ability to pay dividends; and, consolidate, amalgamate, merge or sell all or substantially all of the Company's assets. The Company can provide no assurances that in the future, it will not be limited in its ability to respond to changes in its business or competitive activities or be restricted in its ability to engage in mergers, acquisitions or dispositions of assets. The Company's failure to comply with covenants in its credit facility could result in an event of default that, if not cured or waived, could result in a cross-default under other debt instruments and the acceleration of all its debt. Furthermore, a failure to comply with these covenants could materially and adversely affect the Company's business, financial condition and results of operations and its ability to meet its payment obligations under its debt, and the price of the Common Shares.

The Company's ability to raise funds through the issuance of debt instruments could be adversely impacted by the credit rating of the Company's existing debt.

The Company's debt currently has a non-investment grade rating, and any rating assigned could be lowered or withdrawn entirely by a rating agency, if, in that rating agency's judgment, future circumstances relating to the basis of the rating, such as adverse changes, so warrant. Any future lowering of the Company's ratings likely would make it more difficult or more expensive for it to obtain additional debt financing, which may have a material adverse effect on the Company.

The Company will require additional capital to develop the Halfmile-Stratmat Project.

If a positive production decision is made for the Halfmile-Stratmat Project, the Company will be required to raise additional capital to develop the Halfmile-Stratmat Mine. Failure to obtain sufficient capital could delay or indefinitely postpone further exploration, development, and production on any, or all, of the properties. There is a risk that sufficient financing will not be available on a timely basis or on acceptable terms to the Company. Management believes that financing options will continue to be available to enable the Company to proceed with its exploration and evaluation of the Halfmile-Stratmat Project.

The Company is exposed to long-term liquidity risk through the excess of financial obligations due over available assets at any point in time.

As at December 31, 2018, the Company had an unrestricted cash balance of $65.5 million and adjusted working capital of $149 million. Based on the anticipated cash flows from Santander, Caribou, Perkoa, and Rosh Pinah, the Company is expected to have sufficient resources to meet its committed expenditures for the next twelve months. However, additional funds may be required should commodity prices weaken beyond current levels or the U.S. dollar depreciates significantly. See "Commodity, Market and Currency Risk" as risk factors elsewhere in this AIF.

There are a number of risks which may have a direct impact on the Company's potential revenue stream, including: (i) potential for delays in development activities; (ii) risks related to the inherent uncertainty of production and cost estimates, and the potential for unexpected costs and expenses; and (iii) risks related to commodity price, smelting and refining charges and foreign exchange rate fluctuations. In the future, the Company's ability to continue its development activities depends primarily on the Company's ability to commence and continue operations to generate revenues or to obtain financing through joint ventures, debt financing, equity financing, production sharing arrangements, sale of assets or some combination of these or other means. There can be no assurance that any such arrangements will be concluded and the associated funding obtained. There can be no assurance that the Company will generate sufficient revenues to meet its obligations as they become due or will obtain necessary financing on acceptable terms, if at all. The failure of the Company to meet its on-going obligations on a timely basis will likely result in the loss or substantial dilution of the Company's interests (as existing or as proposed to be acquired) in its

properties. Should the Company incur significant losses in future periods, it may be unable to continue as a going concern, and realization of assets and settlement of liabilities in other than the normal course of business may be at amounts significantly different from those reflected in its current financial statements.

The Company may not be able to obtain the external financing necessary to continue its exploration and development activities on its properties.

The ability of the Company to continue the exploration and development of its property interests may be dependent upon its ability to maintain or increase revenues from its existing production and planned expansions, and potentially raise significant additional financing thereafter. The sources of external financing that the Company may use for these purposes may include project debt, joint ventures, production sharing arrangements, sale of assets, corporate debt, or equity offerings, or some combination of these or other means. There is no assurance that the financing alternative chosen by the Company will be available to the Company, on favourable terms or at all. Depending on the alternative chosen, the Company may have less control over the management of its projects. There is no assurance that the Company will successfully increase revenues from existing and expanded production. Should the Company not be able to obtain such financing and increase its revenues, it may become unable to acquire and retain its exploration properties and carry out exploration and development on such properties, and its title interests in such properties may be adversely affected or lost entirely.

In order to finance future operations, the Company may raise funds through the issuance of shares or the issuance of debt instruments or other securities convertible into shares.

The Company cannot predict the potential need or size of future issuances of Common Shares or the issuance of debt instruments or other securities convertible into shares or the effect, if any, that this would have on the market price of the Common Shares. The financing alternative chosen by the Company may not be available to it on acceptable terms, or at all. If additional financing is not available, the Company may have to postpone the development of, or sell, one or more of its properties. Any transaction involving the issuance of shares, or securities convertible into shares, could result in dilution, possibly substantial, to present and prospective security holders.

The Company is subject to taxation in multiple jurisdictions and changes to the taxation laws of such jurisdictions could have a material adverse effect on its profitability.

The Company has operations and conducts business in multiple jurisdictions and it is subject to the taxation laws of those jurisdictions. The Company may be subject to review, audit, and assessment in the ordinary course, the outcome of which could result in penalties imposed or higher taxes being payable, any of which could have a material adverse effect on the Company. These taxation laws are complicated and subject to change. The introduction of new tax laws, regulations or rules, or changes to, or differing interpretation of, or application of, existing tax laws, regulations or rules in any of the countries in which the Company's operations or business is located, could result in an increase in the Company's taxes, or other governmental charges, duties or impositions, or an unreasonable delay in the refund of certain taxes owing to the Company. No assurance can be given that new rules and regulations will not be enacted or that existing rules and regulations will not be applied in a manner which could limit or curtail production or development. Taxes may also adversely affect the Company's ability to repatriate earnings and otherwise deploy its assets.

Exchange controls may restrict the Company's ability to repatriate earnings.

From time to time, emerging market countries in which the Company operates or has interests have adopted measures to restrict the availability of the local currency or the repatriation of capital across borders. These measures are typically imposed by governments and/or central banks during times of local economic instability to prevent the removal of capital or the sudden devaluation of local currencies or to maintain in-country foreign currency reserves.

These measures can have a number of negative effects on the Company's operations. For example, exchange controls reduce the quantum of immediately available capital that the Company could otherwise deploy for investment opportunities or the payment of expenses. As a result, the Company may be required to use other sources of funds for these objectives which may result in increased financing costs. In addition, measures that restrict the availability of the local currency or impose a requirement to operate in the local currency may create practical difficulties for the Company.

Namibia is part of the South African Rand Common Monetary Area ("**CMA**"). Exchange controls in the CMA require that dividends, loans, repayment of loans and payment of all invoices to parties outside the CMA by companies registered in the CMA receive prior approval. The controls, as they relate to Namibia, are applied by the Bank of Namibia. There can be no assurance that the Company will obtain the requisite approvals in the future to repay loans or pay invoices to parties outside the CMA, including the Company's subsidiaries not resident in the CMA. Thus, exchange controls may restrict the Company from repatriating funds and using those funds for other purposes.

Production, Mining and Operating Risks

Changes in the Company's production outlook will have an effect on the Company's cash flow from operations.

A decrease in the amount of, or a change in the timing of the production outlook for, or in the prices realized for, metals of the Company, particularly in relation to the production of zinc, lead and silver, will directly affect the amount and timing of the Company's cash flow from operations. The actual effect of such a decrease on the Company's cash flow from operations would depend on the timing of any changes in production and on actual prices and costs. Any change in the timing of these projected cash flows that would occur due to production shortfalls, delays in receiving permits, delays in construction, delays in commissioning the mines or labour disruptions would, in turn, result in delays in receipt of such cash flows and in using such cash to fund capital expenditures, including capital for the Company's development projects, in the future. Any such financing requirements could adversely affect the Company's ability to access capital markets in the future to meet any external financing requirements or increase its debt financing costs.

There can be no assurance that the Company will generate sufficient revenues to meet its obligations as they become due or will obtain necessary financing on acceptable terms, if at all. The failure of the Company to meet its on-going obligations on a timely basis will likely result in the loss or substantial dilution of the Company's interests (as existing or as proposed to be acquired) in its properties.

The Company is focused in a single industry, and at least over the near term, expects to continue to be dependent on four mines for all of its commercial production.

The Company is concentrated in the zinc mining industry, and accordingly, its profitability is most sensitive to changes in the overall condition of this industry. Furthermore, the Santander Mine, the Caribou Mine, the Perkoa Mine and the Rosh Pinah Mine accounted for all of the Company's commercial production in 2018 and are expected to account for all of the Company's commercial production in the near term. Any adverse condition affecting mining, processing conditions, expansion plans, or ongoing permitting activities at these operations could have a material adverse effect on the Company's financial performance and results of operations.

Recently opened mines may never reach full production, which would have an adverse effect on the Company's cash flows and results of operations.

The Santander Mine achieved "commercial production" in 2014 and Caribou Mine achieved "commercial production" on July 1, 2016. Recently opened mines are subject to risks associated with new mine development, including delays in existing operations, change in Mineral Reserve or Mineral Resource

estimations, and increased understanding of the geological model of the deposit. The Company did not base its production decisions at Santander or Caribou (which are both in commercial production) on a feasibility study of Mineral Reserves demonstrating economic and technical viability and, as a result, the Company may be faced with increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including risks associated with developing a commercially mineable deposit. At the Santander Mine, the Company has subsequently established Mineral Reserves (March 2017). Historically, such projects have a much higher risk of economic and technical failure. Also, there is no guarantee that anticipated production costs will be achieved. Failure to achieve production targets would have a material adverse impact on the Company's ability to generate revenue and cash flow to fund its operations.

Financial projections rely on estimates of future production that may not be reliable and could have a negative impact on the Company's future cash flows, business, results of operations and financial condition.

The Company prepares estimates of future production for its operating mines, and any such information is forward-looking. The Company cannot give any assurance that it will achieve its production estimates. These production estimates are dependent on, among other things, the accuracy of Mineral Reserve and Mineral Resource estimates, the accuracy of assumptions regarding ore grades and recovery rates, ground conditions, physical characteristics of ores, such as hardness and the presence or absence of particular metallurgical characteristics, and the accuracy of estimated rates and costs of mining and processing. The failure of the Company to achieve its production estimates could have a material and adverse effect on future cash flows, profitability, results of operations, and financial condition.

The level of production, capital and operating cost estimates relating to development projects for determining and obtaining financing and other purposes, are based on certain assumptions and are inherently subject to significant uncertainty. Actual results for the Company's projects will differ from current estimates and assumptions, and these differences may be material. In addition, experience from actual mining or processing operations may identify new or unexpected conditions that could reduce production below, or increase capital or operating costs above, current estimates. If actual results are less favourable than currently estimated, the Company's business, results of operations, financial condition and liquidity could be materially adversely affected.

The Company's actual production may vary from its estimates for a variety of reasons, including: actual ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; short-term operating factors such as the need for sequential development of ore bodies and the processing of new or different ore grades from those planned; mine failures, slope failures or equipment failures; industrial accidents; natural phenomena such as inclement weather conditions, floods, droughts, rock slides and earthquakes; encountering unusual or unexpected geological conditions; changes in power costs and potential power shortages; shortages of principal supplies needed for operation, including explosives, fuels, chemical reagents, water, equipment parts and lubricants; labour shortages or strikes; civil disobedience and protests; and restrictions or regulations imposed by government agencies or other changes in the regulatory environments. Such occurrences could result in damage to mineral properties, interruptions in production, injury or death to persons, damage to property of the Company or others, monetary losses and legal liabilities. These factors may cause a mineral deposit that has been mined profitably in the past to become unprofitable, forcing the Company to cease production. It is not unusual in new mining operations to experience unexpected problems during the start-up phase. Depending on the price of zinc, lead, silver or other minerals, the Company may determine that it is impractical to commence or, if commenced, to continue commercial production at a particular site.

Shortages, or increases in prices, of energy and other consumables can adversely affect the Company's results of operations.

The Company is dependent on various commodities (such as diesel fuel, electricity, steel, and concrete), labour and equipment (including parts) to conduct its mining operations and development projects. A shortage of such input commodities, labour or equipment or a significant increase of their cost could have a material adverse effect on the Company's ability to carry out its operations and therefore limit, or increase the cost of production.

The Company is also dependent on access to and supply of water and electricity to carry out its mining operations, and such access and supply may not be readily available. Market prices of input commodities can be subject to volatile price movements which can be material, occur over short periods of time and are affected by factors that are beyond the Company's control, including global and regional supply and demand, political and economic conditions, and applicable regulatory regimes. An increase in the cost, or decrease in the availability, of input commodities, labour or equipment may affect the timely conduct and cost of the Company's operations and development projects. If the costs of certain input commodities consumed or otherwise used in connection with the Company's operations and development projects were to increase significantly, and remain at such levels for a substantial period, the Company may determine that it is not economically feasible to continue commercial production at some or all of its operations or the development of some or all of its current projects, which could have an adverse impact on the Company's financial performance and results of operations.

Risks and costs relating to development, ongoing construction and changes to existing mining operations and development projects.

The Company's ability to meet development and production schedules and cost estimates for its development and expansion projects cannot be assured. Without limiting the generality of the foregoing, the Company is in the process of completing a ramp-up at the Caribou Mine. In addition, the Company is undertaking permitting efforts with respect to expanded tailings dam facilities at the Perkoa Mine and the Santander Mine. Technical considerations, delays in obtaining governmental approvals, inability to obtain financing or other factors, including specifically to the foregoing, could cause delays in current mining operations or in developing properties. Such delays could materially affect the financial performance of the Company.

Failure to achieve estimates or material increases in costs could have an adverse impact on future cash flows, business, results of operations and financial condition.

The Company prepares estimates of cash costs and capital costs of production for each of its operations. As a result of the substantial expenditures involved in the development of mineral projects and the fluctuation of costs over time, development projects and operating mines may be prone to material cost overruns. The Company's actual costs may vary from estimates for a variety of reasons, including: short-term operating factors; revisions to mine plans; risks and hazards associated with mining; natural phenomena, such as inclement weather conditions, water availability, floods, and earthquakes; and unexpected labour issues, labour shortages, strikes or community blockades. Operational costs may also be affected by a variety of factors, including: changing waste-to-ore ratios, ore grade metallurgy, labour costs, cost of commodities, general inflationary pressures and currency exchange rates. Many of these factors are beyond the Company's control. No assurance can be given that such estimates will be achieved.

Furthermore, delays in the construction and commissioning of mining projects or other technical difficulties may result in even further capital expenditures being required. Any delay in the development of a project, or cost overruns or operational difficulties once the project is fully developed, may have a material adverse effect on the Company's business, results of operations and financial condition.

Development projects are uncertain and it is possible that actual capital and operating costs and economic returns will differ significantly from those estimated for a project prior to production.

The Company's Halfmile-Stratmat project is a development stage project in Canada. Mine development projects require significant expenditures during the development phase before production is possible. Development projects are subject to the completion of successful feasibility studies and environmental assessments, issuance of necessary governmental permits and availability of adequate financing. The economic feasibility of development projects is based on many factors such as: estimation of Mineral Reserves; anticipated metallurgical recoveries; environmental considerations and permitting, future metal prices; and anticipated capital and operating costs of these projects. Unforeseen circumstances, including those related to the amount and nature of the mineralization at the development site, technological impediments to extraction and processing, legal requirements, governmental intervention, infrastructure limitations, environmental issues, disputes with local communities or other events, could result in one or more of the Company's planned developments becoming impractical or uneconomic. Any such occurrence could have an adverse impact on the Company's financial condition and results of operations. The Halfmile-Stratmat development project has no recent direct operating history upon which to base estimates of future production and cash operating costs, but operating costs from the Company's nearby Caribou Mine may be indicative of certain operating costs. Particularly for development projects, estimates of proven and probable Mineral Reserves and cash operating costs are, to a large extent, based upon the interpretation of geologic data obtained from drill holes and other sampling techniques, and feasibility studies that derive estimates of cash operating costs based upon anticipated tonnage and grades of ore to be mined and processed, the configuration of the ore body, expected recovery rates of metals from the ore, estimated operating costs, anticipated climatic conditions and other factors. As a result, it is possible that actual capital and operating costs and economic returns will differ significantly from those currently estimated for a project prior to production.

Any of the following events, among others, could affect the profitability or economic feasibility of a project: unanticipated changes in grade and tonnes of ore to be mined and processed, unanticipated adverse geological conditions, unanticipated metallurgical recovery problems, incorrect data on which engineering assumptions are made, availability of labour, costs of processing and refining facilities, availability of economic sources of power, adequacy of water supply, availability of surface on which to locate processing and refining facilities, adequate access to the site, unanticipated transportation costs, government regulations (including regulations with respect to the environment, prices, royalties, duties, taxes, permitting, restrictions on production, and quotas on exportation of minerals), fluctuations in metal prices, and accidents, labour actions, and force majeure events.

It is not unusual in new mining operations to experience unexpected problems during the start-up phase, and delays can often occur at the start of production. It is likely that actual results for the Company's projects will differ from current estimates and assumptions, and these differences may be material. In addition, experience from actual mining or processing operations may identify new or unexpected conditions that could reduce production below, or increase capital or operating costs above, current estimates. If actual results are less favourable than currently estimated, the Company's business, results of operations, financial condition, and liquidity could be materially adversely affected.

The Company may be unable to maintain or increase annual production.

Although the Company's activities are primarily directed towards mining operations, its activities also include the exploration for, and development of, mineral deposits. The Company must continually replace and expand Mineral Reserves depleted by production to maintain production levels over the long term. The Company's ability to maintain or expand production will depend on its ability to expand known ore bodies, locate new deposits, make acquisitions or bring new mines into production.

Material changes in Mineral Reserves and Mineral Resources, grades, production or recovery rates may affect the economic viability of projects. There is a risk that depletion of Mineral Reserves will not be offset

by discoveries, acquisitions, or the conversion of mineral resources into mineral reserves. The mineral base of Trevali's operations may decline if reserves are mined without adequate replacement and the Company may not be able to sustain production beyond the current mine lives, based on current production rates.

Notwithstanding the Company's expertise and track record in this area, exploration is highly speculative in nature. Trevali's exploration projects involve many risks and are frequently unsuccessful. Once a site with mineralization is discovered, it may take several years from the initial phases of drilling until production is possible, during which time the economic feasibility of production may change. The Company can provide no assurance that it will be able to maintain or increase its annual production, bring new mines into production or expand the Mineral Reserves and Mineral Resources at existing mines.

Failure to identify additional Mineral Reserves may result in reduction of mineral production at one or more of the Company's mines and may result in a mine ceasing to be economic and, ultimately, may lead to closure of the mine. Mine closure involves long-term management of permanent engineered structures, achievement of environmental closure standards, orderly termination of employees and contractors and ultimately relinquishment of the site. The successful completion of these and other associated tasks is dependent on sufficient financial resources and the ability to successfully implement negotiated agreements with relevant governmental authorities, community, unions, employees and other stakeholders.

Mineral Reserve and Mineral Resource estimates are based on interpretation and assumptions and may yield less mineral production under actual conditions than is currently estimated.

The Company's Mineral Reserve and Mineral Resource estimates are estimates only and no assurance can be given that any particular level of recovery of metals will in fact be realized. There can also be no assurance that an identified mineral deposit will ever qualify as a commercially mineable (or viable) orebody that can be economically exploited. Additionally, no assurance can be given that the anticipated tonnages and grades will be achieved or that the indicated level of recovery will be realized. These estimates may require adjustments or downward revisions based upon further exploration or development work or actual production experience.

Estimates of Mineral Reserves and Mineral Resources can also be affected by such factors as environmental permitting regulations and requirements, weather, environmental factors, unforeseen technical difficulties, unusual or unexpected geological formations and work interruptions. In addition, the grade of ore ultimately mined may differ dramatically from that indicated by results of drilling, sampling and other similar examinations. Short term factors relating to Mineral Reserves and Mineral Resources, such as the need for orderly development of ore bodies or the processing of new or different grades, may also have an adverse effect on mining operations and on the results of operations.

Mineral Reserves and Mineral Resources are reported as general indicators of mine life. Mineral Reserves and Mineral Resources should not be interpreted as assurances of mine life or of the profitability of current or future operations. There is a degree of uncertainty attributable to the calculation and estimation of Mineral Reserves and Mineral Resources and corresponding grades being mined or dedicated to future production. Until ore is actually mined and processed, Mineral Reserves and grades must be considered as estimates only.

In addition, the quantity of Mineral Reserves and Mineral Resources may vary depending on metal prices. Extended declines in market prices for zinc, lead, silver, and copper may render portions of the Company's mineralization uneconomic and result in reduced reported mineralization. Any material change in Mineral Reserves and Mineral Resources tonnes or grades may affect the economic viability of the Company's projects.

The Mineral Resources may not be economically developable, in which case Trevali may never recover its expenditures for exploration and/or development.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. The Company prepares its Mineral Reserves and Mineral Resources estimates in accordance with Canadian disclosure requirements and NI 43-101. Mineral Resource estimates for properties that have not commenced production are based, in many instances, on limited and widely spaced drill hole information, which is not necessarily indicative of the conditions between and around drill holes. Accordingly, such Mineral Resource estimates may require revision as more drilling information becomes available or as actual production experience is gained. No assurance can be given that any part or all of Mineral Resources constitute or will be converted into Mineral Reserves.

The Company has relied upon historical data that may be inaccurate or incomplete.

The Company has relied, and the technical reports prepared in respect of the Company's various Material Properties are based, in part, upon historical data compiled by previous parties involved with the Material Properties. To the extent that any of such historical data is inaccurate or incomplete, the Company's development and exploration plans may be adversely affected and could materially adversely affect the Company's business, results of operations, financial condition, and liquidity.

The Company may be unable to keep pace with innovations affecting the mining industry.

With volatility in the price of price of zinc, lead, silver and other metals and the Company's focus on cost reductions and higher efficiencies, the Company has limited funds available for investment in innovation and new technology. The Company deals with particularly challenging environments both in the underground and open pit operations. Given the significant costs associated with leveraging new technologies such as solar panels for energy and electrical mobile equipment, the Company may not be able to keep pace with innovations affecting the mining industry and leverage technology that may further drive investment and growth.

Legal, Permitting, Regulatory, Title and Political Risks

Failure to obtain or retain permits would adversely affect the Company's results of operations and financial condition.

The operations of the Company require receipt and maintenance of licenses and permits from various governmental authorities. Furthermore, prior to any development on any of the properties, it must receive permits from appropriate governmental authorities. There can be no assurance that the necessary permits will be obtained; that previously issued permits will not be suspended; or that delays will not occur in connection with obtaining necessary permits, renewals or additional permits. Delays or a failure to obtain such licenses and permits, or a failure to comply with the terms of any such licenses and permits that the Company does obtain, could have a material adverse effect on the Company.

Permits may be invalidated if such permits were not lawfully issued.

The Company requires permits and approvals from various regulatory authorities for many aspects of mine development, operation, closure and reclamation. In addition to meeting the requirements necessary to obtain such permits and approvals, they may be invalidated if the applicable regulatory authority is legally challenged that it did not lawfully issue such permits and approvals. The ability of the Company to obtain and maintain permits and approvals and to successfully develop and operate mines may be adversely affected by real or perceived impacts associated with its activities that affect the environment and human health and safety at its development projects and operations and in the surrounding communities. The real or perceived impacts of the activities of other mining companies may also adversely affect the Company's

ability to obtain and maintain permits and approvals. The Company is uncertain as to whether all necessary permits will be maintained on acceptable terms or in a timely manner.

Defects in the title could have a material and adverse effect on the Company's results of operations and financial condition.

Although the Company has taken steps to verify the title to the mineral properties in which it has, or has a right to acquire, an interest in accordance with industry standards for the current stage of exploration of such properties, these procedures do not guarantee title (whether of the Company or of any underlying vendor(s) from whom the Company may be acquiring its interest). Accordingly, the properties may be subject to prior unregistered liens, agreements, transfers or claims, including indigenous land claims, and title may be affected by, among other things, undetected defects. The Company can provide no assurances that there are no title defects affecting its properties. In addition, the Company may be unable to operate its properties as permitted or to enforce its rights with respect to the properties.

The process of acquiring exploration concessions involves an application process (which can be quite lengthy) and, until title to an exploration concession is actually granted, there can be no assurance that an exploration concession which has been applied for will be granted (especially as it is not always possible to determine if there are prior applications over the same ground) or on a timeline that the Company believes to reasonable.

The majority of the Company's mineral assets are located outside Canada and are held indirectly through foreign affiliates.

It may be difficult if not impossible to enforce judgments obtained in Canadian courts predicated upon the civil liability provisions of the securities laws of certain provinces against substantially all of the Company's assets that are located outside Canada.

The Company's operating and development properties are located in jurisdictions that are subject to changes in economic and political conditions and regulations in those countries.

At the present time, three of the Company's four mining operations are located outside of Canada: the Santander Mine in Peru, the Rosh Pinah Mine in Namibia and the Perkoa Mine in Burkina Faso. Such operations are exposed to various levels of political, security, legal, economic, and other risks and uncertainties. Economic and political conditions in these countries could adversely affect the business activities of the Company. These conditions are beyond the Company's control, and there can be no assurances that any mitigating actions by the Company will be effective.

These risks and uncertainties vary from country to country and include, but are not limited to: terrorism; hostage-taking; crime, including organized criminal enterprise; thefts and illegal incursions on property, which illegal incursions could result in serious security and operational issues, including the endangerment of life and property; extreme fluctuations in currency exchange rates; high rates of inflation; labour unrest; the risks of civil unrest; expropriation and nationalization; renegotiation or nullification of existing concessions, licenses, permits and contracts; illegal mining could result in serious environmental, social, political, security and operational issues, including the endangerment of life and property; adequacy, response and training of local law enforcement; changes to policies and regulations impacting the mining sector; restrictions on foreign exchange and repatriation; and changing political conditions, currency controls, and governmental regulations that favour or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction.

Future political and economic conditions in these countries may result in these governments adopting different policies with respect to foreign investment, and development and ownership of mineral resources and changing laws and regulations relating to the mining industry or shifts in political conditions may increase the costs related to the Company's activities including the cost of maintaining its properties. Any

changes in such policies may result in changes in laws affecting ownership of assets, foreign investment, mining exploration and development, taxation including value added and withholding taxes, royalties, currency exchange rates, gold sales, environmental protection, labour relations, price controls, repatriation of income, and return of capital, which may affect both the ability of the Company to undertake exploration and development activities in respect of future properties in the manner currently contemplated, as well as its ability to continue to explore, develop and operate its properties. Future governments in these countries may adopt substantially different policies, which might extend to, as an example, expropriation of assets. The effect of these factors cannot be accurately predicted. Economic instability could result from current global economic conditions and could contribute to currency volatility and potential increases to income tax rates, both of which could significantly impact the Company's profitability.

The Company's activities are subject to extensive laws and regulations governing worker health and safety, employment standards, waste disposal, protection of historic and archaeological sites, mine development, protection of endangered and protected species and other matters. Regulators have broad authority to shut down and/or levy fines against facilities that do not comply with regulations or standards.

The occurrence of the various factors and uncertainties related to economic and political risks of operating in the Company's jurisdictions cannot be accurately predicted and could have a material adverse effect on its operations, profitability, or financial condition.

There are additional political and economic risks at foreign operations.

Trevali's exploration and development activities and production operations in foreign countries, including its recently acquired African Assets in Namibia and Burkina Faso, are subject to various levels of political, economic and other risks and uncertainties that could negatively impact Trevali's operations and financial condition. These risks and uncertainties vary significantly from country to country and include, but are not limited to, the existence or possibility of terrorism; hostage taking; military repression; extreme fluctuations in currency exchange rates; high rates of inflation; labour unrest; the risks of war or civil unrest; coups and counter coups; expropriation and nationalization; uncertainty as to the outcome of any litigation in foreign jurisdictions; uncertainty as to enforcement of local laws; arbitrary changes in law or policy; environmental controls and permitting; restrictions on the use of land and natural resources; renegotiation or nullification of existing government orders, concessions, licenses, permits and/or contracts; delays in obtaining permits or licences; illegal mining; sabotage, theft, robbery, vandalism, lack of civil services such as utilities (electricity and water), hospitals, ambulances, police departments and fire departments; disease and other potential endemic health issues; changes in taxation policies; difficulty obtaining key equipment or key components; restrictions on foreign exchange and repatriation; corruption; bribery; inadequate infrastructure; unstable legal systems; changing political conditions; changes in mining and social policies; opposition to mining by non-governmental organizations or environmental groups; limits on foreign ownership; child labour; child slavery; forced labour; social unrest on account of poverty or unequal income distribution; "black economic empowerment" legislation; currency controls and governmental regulations that favor or require the awarding of contracts to local contractors or require foreign contractors to employ citizens of, or purchase supplies from, a particular jurisdiction or require equity participation by local citizens; income repatriation and capital recover; import and export restrictions; and other risks arising out of foreign sovereignty issues. The Company may also be exposed to situations or persons that may pose security threats to personnel and facilities. The occurrence of any of these events may have a material adverse effect on the Company's business, financial condition or results of operations.

Trevali's mineral exploration and mining activities may be affected in varying degrees by political instability and governmental legislation and regulations relating to foreign investment and the mining industry. In particular, Burkina Faso has experienced varying degrees of civil unrest. See "There are security risks associated with the Company's operations in Burkina Faso that may have a material adverse effect on its operations" below. Threats or instability in a country caused by political events including elections, change in government, changes in personnel or legislative bodies, foreign relations or military control present serious political and social risk and instability causing interruptions to the flow of business negotiations and

influencing relationships with government officials. Changes in policy or law may have a material adverse effect on the Company's business, financial condition or results of operations.

Operations may be affected in varying degrees by: (i) government regulations with respect to, but not limited to, restrictions on production, price controls, exchange controls, export controls, currency remittance, income or other taxes, expropriation of property, foreign investment, maintenance of claims, environmental legislation, land use, land claims of local people, local content and ownership (such as "black economic empowerment" laws), water use and mine safety; and (ii) the lack of certainty with respect to foreign legal systems, which may not be immune from the influence of political pressure, corruption or other factors that are inconsistent with the rule of law.

Failure to comply with applicable laws, regulations, and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. The occurrence of these various factors and uncertainties cannot be accurately predicted and could have a material adverse effect on the Company's business, financial condition and results of operations.

While the governments of Burkina Faso and Namibia generally considered by the Company to be mining friendly, no assurances can be provided that this will continue in the future. It is possible that a current or future government may adopt substantially different policies or take arbitrary action which might halt exploration development or production, nationalize assets or cancel contracts and/or mining and exploration rights and/or make changes in taxation treatment any of which could have a material and adverse effect on the Company's business financial condition or results of operations.

Exposure of the Company's projects and operations to political risk comprises part of the evaluations, perceptions and sentiments of investors. An adverse change in investors' or potential investors' tolerance of political risk could have a material adverse effect on the Company. In addition, perception of political risk or foreign operations or changes and instability may make it more difficult for the Company to obtain required financing. Although Trevali believes it has good relations with each of these West African governments, there can be no assurance that the actions of present or future governments in Burkina Faso or Namibia will not materially adversely affect the Company's business, financial condition or results of operations.

Property interests and exploration activities in Namibia are subject to political, economic and other uncertainties, and situations may arise that could have a material adverse effect on the Company's business.

The Namibian economy is highly dependent on the mining sector, which, in 2016, was estimated at approximately 13% of the gross domestic product. Namibia is also highly dependent on foreign imports, including fuel. These factors make the Namibian economy particularly vulnerable to adverse commodity price fluctuations, which could have a material adverse effect on the Company's business.

In addition, Namibia is a member of the Southern African Customs Union ("**SACU**"), which provides for a common external tariff and guarantees free movement of goods between its member states. A high proportion of Namibia's trade is conducted with SACU members and, in its 2016 budget, the Namibian Ministry of Finance stated that a significant risk for revenue growth is the projected reduction of SACU revenue. The Namibian Government is highly dependent on SACU revenue, but Namibia's share of the SACU revenue is expected to decline in the foreseeable future, as a result of which the Namibian government may be compelled to introduce additional taxes or increase current tax rates. The introduction of additional taxes or any increase in current tax rates could have a material adverse effect on the Company.

In 2015, Namibia released a first version, and in 2016, Namibia released a second version of the so-called Namibia Equitable Economic Empowerment Framework bill (the "**NEEEF Bill**"), which proposed, in effect,

the forced transfer of 25% of the shares or economic interest in any business enterprise conducting business in Namibia to certain designated persons, being persons of colour, women and disabled persons. Whilst the NEEEF Bill contained various controversial provisions which may render it unconstitutional, the NEEEF Bill caused considerable uncertainty in the Namibian business community and the investor community, on account of which it is still under discussion and revision. As of March 2018, the President of Namibia has announced that it is the Government's intention to further consult and finalise the NEEEF Bill in the parliamentary sessions of 2018, but it is not clear if and when the NEEEF Bill will become law, and in any event, there would need to be regulations to be operative. As it is only a bill, it is entirely speculative at this time to determine the extent to which the NEEEF Bill would affect the Company.

In 2016, the Namibian parliament passed a new investment law termed the Namibia Investment Promotion Act, 2016, which has not yet come into force. If enacted, the Namibia Investment Promotion Act, 2016 would materially change the legal basis on which foreign investments are to be made, maintained and withdrawn from Namibia. In essence, the law provides not only for reservation of certain businesses to Namibians, but also requires the approval of the Minister of Industrialisation, Trade and SME Development prior to making an investment, when expanding an investment and when disinvesting, on a discretionary basis. The law would also abolish the recourse of foreign investors to international tribunals by requiring any disputes be exclusively dealt with under Namibian law and by the Namibian courts. If enacted, the Namibia Investment Promotion Act, 2016, may have a negative effect on investor security and new investments into Namibia. In the absence of regulations or guidelines with respect to the approval process, it is entirely at the discretion of the Minister to determine what type of foreign investments, disinvestments or changes to current investments will be allowed, and it is entirely speculative at this time to determine the extent to which the Namibia Investment Promotion Act, 2016 would affect the Company.

In Namibia, due to high levels of unemployment, and restrictive immigration policies applied by the Namibian Ministry of Home Affairs, it may be difficult for the Company to obtain employment permits for skilled personnel that may be required in exploration or mining operations. In addition, Namibia suffers from high levels of poverty. Although the Namibian government spends a significant proportion (the highest single budget amount) on education, education initiatives and programs may take time to take effect. Currently, a significant proportion of the Namibian work-force can be classified as unskilled or semi-skilled labourers, as a result of which it may be difficult for employers to find skilled personnel for specialized tasks. Shortages of suitably qualified personnel in Namibia could have a material adverse effect on the Company's business, financial condition and results of operations.

Namibia's status as a developing country may also make it more difficult for the Company to obtain required financing for its projects. Although resource-based businesses have a long history in Namibia and to date have not been adversely impacted by unreasonable or arbitrary government action, there can be no assurance that the Company's business, operations and affairs will not be materially adversely effected by unreasonable or arbitrary applications of Namibian laws and regulations or changes in the political and economic status of Namibia.

Property interests and exploration activities in Burkina Faso are subject to political, economic and other uncertainties, and situations may arise that could have a material adverse effect on the Company's business.

As the government of Burkina Faso continues to struggle with deficits and a depressed economy, the strength of commodity prices has resulted in the mining sector being targeted as a source of revenue. The government of Burkina Faso are continually assessing and/or revising the terms under which mining companies may extract resources in their country and unilateral renegotiations by the government of Burkina Faso against one company, may affect all companies in the country. In addition, the enforcement by the Company of its legal rights to develop its properties or to utilize its permits and licenses may not be recognized by the court systems in Burkina Faso, although in certain circumstances the Company and State may agree to submit their dispute to an international court of arbitration. Burkina Faso's status as a

developing country may also make it more difficult for the Company to obtain required financing for its projects.

The new mining code adopted by Burkina Faso in July 2015 introduced changes to the mining legislation, including changes affecting taxation, licensing, the requirement to pay a preferred dividend to the state, requirements for employments of local personnel or contractors and other benefits to be provided to local residents. The trend in resource nationalism could have a material adverse impact on the Company.

Furthermore, the Company requires consultants and employees to work in Burkina Faso to carry out its planned exploration and development programs. It may be difficult, from time, to time to find or hire qualified people in the mineral exploration industry who are situated in Burkina Faso, or to obtain all of the necessary services or expertise in Burkina Faso, or to conduct operations on its projects at reasonable rates. If qualified people and services or expertise cannot be obtained in Burkina Faso, the Company may need to seek and obtain those services from service providers located outside of Burkina Faso which could result in delays and higher costs to the Company.

There are security risks associated with the Company's operations in Burkina Faso that may have a material adverse effect on its operations.

The Perkoa Mine is located in Burkina Faso. Criminal and terrorist activities in the region, or the perception that activities are likely, may disrupt the Company's operations, hamper the Company's ability to hire and keep qualified personnel and impair the Company's access to sources of capital. As well, both the French and Canadian government authorities, respectively, have issued warnings of heightened risk of jihadist incursions from Mali in certain areas within an 80-kilometre wide zone along the western border of Burkina Faso. The Perkoa Mine is outside of this zone as it is located approximately 125 kilometres from the Malian border. Risk factors associated with conducting business in the region include risks related to personnel safety and asset security. Risks may include, but are not limited to: kidnappings of employees and contractors, exposure of employees and contractors to local crime related activity and disturbances, exposure of employees and contractors to drug trade activity, and damage or theft of Company or personal assets including any future concentrate shipments. The effect of these factors cannot be accurately predicted and may result in serious adverse consequences including personal injuries or death, property damage or theft, limiting or disrupting operations, restricting the movement of funds, impairing contractual rights, and causing the Company to suspend or shutdown operations, all of which may expose the Company to potential liabilities and could have a material adverse effect on the Company's operations, profitability, or financial condition. Such events could have a material adverse impact on the Company and make it more difficult for the Company to obtain required financing. Although the Company has developed procedures regarding these risks, due to the unpredictable nature of criminal activities, there is no assurance that the Company's efforts are able to effectively mitigate risks and safeguard personnel and Company property effectively.

Drilling and other development work requires all necessary permits and licenses to be granted.

A number of approvals, licenses and permits are required for various aspects of exploration, development, and expansion projects. The Company is uncertain if all necessary permits will be maintained or obtained on acceptable terms or in a timely manner. Future changes in applicable laws and regulations or changes in their enforcement or regulatory interpretation could negatively impact current or planned exploration and development activities or any other projects with which the Company becomes involved. Any failure to comply with applicable laws and regulations or failure to obtain or maintain permits, even if inadvertent, could result in the interruption of production, exploration or development, or material fines, penalties or other liabilities. It remains uncertain if the Company's existing permits may be affected in the future or if the Company will have difficulties in obtaining all necessary permits that it requires for its proposed or existing mining activities.

In order to maintain mining licenses, exploration licenses, mining concessions and other similar mining claims in good standing, concession holders must advance their projects efficiently, including by obtaining the necessary permits prior to stipulated deadlines. The Company has implemented plans to obtain all necessary permits prior to the relevant deadlines. While the Company is confident in its ability to meet all required deadlines or milestones so as to maintain its concessions in good standing, there is risk that the relevant permitting and licensing authorities will not respond in a timely manner. If these deadlines are not met, the Company believes that extensions to deadlines for obtaining the required approvals and permits could be negotiated so that the concessions would remain in good standing. However, there is no guarantee that the Company will be able to obtain the approvals and permits as planned or, if unable to meet such deadlines, that negotiations for an extension will be successful in order to maintain its concessions in good standing. If the mining were to expire, this could have a material adverse impact on the Company and its ability to control and develop its projects.

Litigation could be brought against the Company and the resolution of legal proceedings or disputes may have a material adverse effect on the Company's future cash flows, results of operations or financial condition.

The Company could be subject to legal claims and/or complaints and disputes with other parties that result in litigation, including unexpected environmental remediation costs, arising out of the normal course of business. The results of litigation cannot be predicted with certainty. The costs of defending and settling litigation can be significant, even for claims that have no merit. There is a risk that if such claims are determined adversely to the Company, they could have a material adverse effect on the Company's financial performance, cash flow, and results of operations.

Failure of the Company to comply with laws and regulations could negatively impact current or planned mining activities and exploration and developmental activities.

The Company's mining, exploration and development activities are subject to extensive laws and regulations concerning the environment, worker health and safety, employment standards, waste disposal, mine development, mine operation, mine closure and reclamation, and other matters. Activities required to achieve full compliance can be costly and involve extended timelines. Future changes in applicable laws and regulations or changes in their enforcement or regulatory interpretation could negatively affect current or planned mining, exploration and developmental activities on the projects in which the Company is, or may become, involved. Any failure to comply with applicable laws and regulations or to obtain or maintain permits, even if inadvertent, could result in the interruption of mining, exploration and developmental operations or in material fines, penalties, cleanup costs, damages, and the loss of key permits or approvals. While the Company has taken great care to ensure full compliance with its legal obligations, there can be no assurance that the Company has been, or will be, in full compliance with all of these laws and regulations, or with all permits and approvals that it is required to have.

Trevali may also be held responsible for the costs of addressing contamination at the site of current or former activities or at third party sites. Trevali could also be held liable to third parties for exposure to hazardous substances. The costs associated with such responsibilities and liabilities may be significant. While Trevali has implemented extensive health and safety initiatives at its sites to protect the health and safety of its employees, contractors and members of the communities affected by its operations, there is no guarantee that such measures will eliminate the occurrence of accidents or other incidents which may result in personal injuries or damage to property, and in certain instances such occurrences could give rise to regulatory fines and/or civil liability.

The Company cannot guarantee that title to its properties will not be challenged.

The validity of the Company's mining claims and access rights can be uncertain and may be contested. Although the Company is satisfied it has taken reasonable measures to acquire the rights needed to undertake its operations and activities as currently conducted, some risk exists that some titles and access

rights may be defective. No assurance can be given that such claims are not subject to prior unregistered agreements or interests or to undetected or other claims or interests that could be materially adverse to the Company. While the Company has used its best efforts to ensure title to all its properties, these titles may be disputed, which could result in costly litigation or disruption of operations.

Additional future property acquisitions, relocation benefits, legal and related costs may be material. The Company cannot currently determine the expected timing, outcome of negotiations or costs associated with the relocation of the remaining property owners and possessors and potential land acquisitions. The Company may need to enter into negotiations with landowners and other groups in the host communities where the Company's projects are located in order to conduct future exploration and development work. There is no assurance that future discussions and negotiations will result in agreements with landowners or other local community groups so as to enable the Company to conduct exploration and development work on these projects.

Conflicting interests with local stakeholders may cause delays or work stoppages.

The Company's relationships with the communities in which the Company operates are critical to ensuring the future success of existing operations and the construction and development of future projects. Trevali puts a priority on being a responsible corporate citizen and takes considerable care to develop productive relationships with a range of stakeholders in every community where it operates. However, these and other community stakeholders may impact the Company's ability to explore, develop or operate its mining properties. In certain circumstances, consultation with such stakeholders may be required and the outcome may affect the Company's ability to explore, develop or operate its mining properties. The Company provides significant economic and social benefits to its host communities and countries, which facilitates broad stakeholder support for the Company's operations and projects. There is no guarantee that local residents will support the Company's operations or projects. If a dispute were to arise, it might result in reduced access to the properties or a delay in operations.

There is an increasing level of public interest worldwide relating to the perceived effect of mining activities on the environment and on communities impacted by such activities. Certain non-governmental organizations ("**NGOs**"), some of which oppose globalization and resource development, are often vocal critics and attempt to interfere with the mining industry and its practices. Adverse publicity generated by such NGOs or others related to extractive industries generally, or their operations specifically, could have an adverse effect on the Company's reputation or financial condition and may impact the Company's relationship with the communities in which it operates. While the Company believes that it operates in a socially responsible manner, there is no guarantee that the Company's efforts in this respect will mitigate this potential risk.

The Company does not have direct ownership or possession rights to use the surface of the lands for certain mineral tenures.

Although the Company acquires the rights to some or all of the minerals in the ground subject to the tenures that it acquires, or has a right to acquire, in most cases it does not thereby acquire any rights to, or ownership of, the surface to the areas covered by its mineral tenures. In such cases, applicable mining laws usually provide for rights of access to the surface for the purpose of carrying on mining activities, however, the enforcement of such rights can be costly and time consuming. In areas where there are no existing surface rights holders, this does not usually cause a problem, as there are no impediments to surface access. However, in areas where there are local populations or land owners (as with many of the Company's properties), it is necessary, as a practical matter, to negotiate surface access. There can be no guarantee that, despite having the right at law to access the surface and carry on mining activities, the Company will be able to negotiate a satisfactory agreement with any such existing landowners/occupiers for such access, and therefore it may be unable to carry out mining activities. In addition, in circumstances where such access is denied, or no agreement can be reached, the Company may need to rely on the assistance of local officials or the courts in such jurisdiction.

The Company has formal surface access agreements in place for its Santander, Caribou, Rosh Pinah and Perkoa properties. A formal access agreement is not currently required for its earlier stage/pre-development Halfmile-Stratmat Property. From time to time, a land possessor may dispute the Company's surface access rights, and as a result the Company may be barred from its legal occupation rights. Surface access issues have the potential to result in the delay of planned exploration programs, and these delays may be significant.

Some of the Company's operations may be disrupted by artisanal miners.

The Company's property interests at the Perkoa Mine are held in areas of Burkina Faso that are currently being exploited by small-scale artisanal miners for gold. As Nantou Mining further explores and advances its projects, it may require the removal of any artisanal miners operating on its properties. There is a risk that such artisanal miners may oppose Nantou Mining's operations, which may result in a disruption to any planned development and/or mining and processing operations. In addition, artisanal miners have historically used chemicals that are harmful to the environment to separate the precious metals from the ore. There can be no assurance that Nantou Mining and/or the Company will not be subject to environmental liabilities resulting from such operations in the future, which could have a material adverse impact on the Company. In addition, artisanal work practices are often unsafe and accidents and/or incidents may occur on the property, and there is an added reputational risk that third parties may wish to link the activities of the artisanal miners to that of Nantou Mining and/or the Company in the event of accidents or incidents, which could have a material adverse impact on the Company.

Failure to comply with public company obligations could cause a significant decline in Trevali's share price.

As a publicly traded company, the Company is subject to numerous laws, including, without limitation, corporate, securities and environmental laws, compliance with which is both very time consuming and costly. The failure to comply with any of these laws, individually or in the aggregate, could have a material adverse effect on the Company, which could cause a significant decline in the price of the Company's shares. The number of laws that the Company and its local operations must comply within a number of continents and jurisdictions increases the risks of non-compliance.

Furthermore, laws applicable to the Company constantly change and the Company's continued compliance with changing requirements is both time consuming and costly. Adding to the significant costs of compliance with laws is the Company's desire to meet a high standard of corporate governance. The Company's continued efforts to comply with numerous changing laws and adhere to a high standard of corporate governance have resulted in, and are likely to continue to result in, increased general and administrative expenses and a diversion of management time and attention from revenue-generating activities to compliance activities.

Relationships with Key Stakeholders

The Company's current and future operations are subject to a risk that one or more groups of indigenous people may oppose continued operation, further development, or new development of the Company's projects and mines.

The Company operates in some areas presently or previously inhabited or used by indigenous peoples. Trevali puts a priority on being a responsible corporate citizen and takes considerable care to develop productive relationships with a range of stakeholders in every community where it operates. In the case of indigenous peoples, the Company's presence can trigger various international and national laws, codes, resolutions, conventions, guidelines, and imposing obligations on government and companies to respect the rights of indigenous people. These may include a mandate that government consult with communities surrounding the Company's projects and mines regarding actions affecting local stakeholders, prior to granting us mining rights, permit, amendments or authorizations. Consultation and other rights of Aboriginal

people may require accommodations, including undertakings regarding employment, royalty payments and other matters. While the Company is respectful of these obligations, this may affect the Company's ability to acquire, within a reasonable time frame, effective mineral titles in these jurisdictions, including in some parts of Canada, in which aboriginal title is claimed, and may affect the timetable and costs of development of mineral properties in these jurisdictions. The obligations of government and private parties under the various international and national laws pertaining to indigenous people continue to evolve and be defined. There can be no assurance that the Company's relations with any indigenous group will remain amicable. If a dispute were to arise, it might result in reduced access to properties or a delay in operations. The current and future operations are subject to a risk that one or more groups of indigenous people may oppose continued operation, further development, or new development of the Company's projects or operations. Such opposition may be directed through legal or administrative proceedings or expressed in manifestations such as protests, roadblocks or other forms of public expression against the Company's activities. Opposition by indigenous people to the Company's operations may require modification of or preclude operation or development of the properties or may require the Company to enter into agreements with indigenous people with respect to the properties.

The Company's current and future operations are subject to First Nation rights and title.

Trevali is respectful of Indigenous peoples in Canada and has a working relationship with the Mi'kmaq First Nation partners in New Brunswick. However, the nature and extent of First Nation rights and title remains the subject of active debate, claims and litigation in Canada, including with respect to intergovernmental relations between First Nation authorities and federal, provincial and territorial authorities. There can be no guarantee that claims will not cause permitting delays, unexpected interruptions or additional costs for the Company's projects. These risks may have increased after the Supreme Court of Canada decision of June 26, 2014, in *Tsilhqot'in Nation v. British Columbia* in which the Supreme Court of Canada confirmed that if a third party commences operations on land over which First Nation claim Aboriginal title, without the consent of the First Nation group, the third party may be required to cease operations and cancel the project upon establishment of Aboriginal title.

The Company's relationship with local communities may affect the Company's existing operations and development projects.

The Company's relationships with the communities in which it operates are critical to ensure the future success of its existing operations and the construction and development of its projects. There is an increasing level of public concern relating to the perceived effect of mining activities on the environment and on communities impacted by such activities. Adverse publicity relating to the mining industry generated by non-governmental organizations and others could have an adverse effect on the Company's reputation or financial condition and may impact its relationship with the communities in which it operates. While the Company is committed to operating in a socially responsible manner, there is no guarantee that the Company's efforts in this regard will mitigate this potential risk.

The inability of the Company to maintain positive relationships with local communities may result in additional obstacles to permitting, increased legal challenges, or other disruptive operational issues at any of the Company's operating mines, and could have a significant adverse impact on the Company's ability to generate cash flow, with a corresponding adverse impact to the Company's share price and financial condition.

The Company's directors and officers may have interests that conflict with the Company's interests.

The directors of Trevali are nominated or appointed on the strength of their experience and the specific skills and expertise they can bring to the establishment and execution of the Company's strategy and the enhancement of shareholder value. Certain directors and officers of the Company are, and may continue to be, involved in the mining and mineral exploration industry through their direct and indirect participation in corporations, partnerships or joint ventures that are potential competitors of the Company. Situations

may arise in connection with potential acquisitions or opportunities where the other interests of these directors and officers may conflict with the interests of the Company. Directors and officers of the Company with conflicts of interest will be subject to, and follow the procedures set out in, applicable corporate and securities legislation, regulation, rules and policies.

Exploration, development and production at the Company's mining operations are dependent upon the efforts of its key personnel.

The nature of the Company's business requires specialized skills and knowledge. The Company operates large mining operations in Canada, Peru, Burkina Faso, and Namibia that requires technical expertise in the areas of geology, engineering, mine planning, metallurgical processing, mine operations, and environmental compliance. The Company's success is heavily dependent on its key personnel and on the ability to motivate, retain and attract highly skilled employees. The Company and other companies in the mining industry compete for personnel and the Company is not always able to fill positions in a timely manner. If the Company is unable to attract and retain qualified personnel or fails to establish adequate succession planning strategies, the Company's operations could be adversely affected. The Company does not carry key-man life insurance with respect to its executives.

The business of the Company is dependent on good labour and employment relations.

Competition for skilled workers in the resource sector results in employee turnover at the Company's operations and a need to constantly recruit and train new employees. This competition for qualified employees occasionally results in workforce shortages, which can often be supplemented with more costly contract labour. As technology evolves and automation increases, the skill mix required also changes and the Company may not be able to attract the required capabilities for new ways of working, or re-skill those skills sets that will be changed in the future. Relations between the Company and its employees may be impacted by changes in labour relations which may be introduced by, among others, employee groups, unions, and the relevant governmental authorities in whose jurisdictions the Company carries on business. Changes in such legislation or otherwise in the Company's relationship with the Company's employees may result in higher ongoing labor costs, employee turnover, strikes, lockouts or other work stoppages, any of which could have a higher material adverse effect on the Company's business, results of operations and financial condition.

In addition, labour in Peru is customarily unionized and there are risks that labour unrest or wage agreements may adversely impact the Company's operations.

A portion of the workforces at the Caribou Mine and the Rosh Pinah Mine are unionized. In October 2017, the Company successfully negotiated a five year agreement with the United Steelworkers Union for the mill and surface hourly employees at the Caribou Mine. All underground hourly employees and site salaried employees have been engaged in the non-union workplace contracts. In January 2018, the Company successfully negotiated a three-year agreement with the unionized workforce at the Rosh Pinah Mine.

The Perkoa Mine in Burkina Faso has an organized workforce and the Company has not had any issues with its workforce since acquiring the mine.

Additional groups of non-union employees may seek union representation in the future.

Rapid growth will require additional operations personnel.

During 2018 Trevali bolstered its corporate and operational teams with the aim of implementing cost and operational optimization initiatives to help enhance the value of our diversified asset base. The Company anticipates that as it expands its existing production and brings additional properties into production, and as the Company acquires additional mineral rights, the Company may experience significant growth in its operations. This growth may create new positions and responsibilities for management personnel and

increase demands on its operating and financial systems, as well as require the hiring of a significant number of additional operations personnel. There can be no assurance that the Company will successfully meet these demands and effectively attract and retain any such additional qualified personnel. The failure to attract and retain such qualified personnel to manage growth effectively could have a material adverse effect on the Company's business, financial condition or results of operations.

As a result of social media and other internet-based applications, companies today are at a much greater risk of losing control over how they are perceived.

Damage to the Company's reputation can be the result of the actual or perceived occurrence of any number of events, and could include any negative publicity, whether true or not. Although the Company puts priority on responsible operations and corporate citizenship and places a great emphasis on protecting its image and reputation, it does not ultimately have direct control over how it is perceived by others. Reputation loss may lead to increased challenges in developing and maintaining community relations, decreased investor confidence, and act as an impediment to the Company's overall ability to advance its projects, thereby having a material adverse impact on financial performance, cash flows, and growth prospects.

Environmental Risks

Compliance with environmental laws, including changes to such laws, could adversely affect results of operations.

The Company's exploration and production activities are subject to regulation by governmental agencies under various environmental laws. These laws address noise, emissions, water discharges, waste management, management of hazardous substances, protection of natural resources, antiquities and endangered species and reclamation of lands disturbed by mining operations. Environmental legislation in many countries is evolving and the trend has been towards stricter standards and enforcement, increased fines, penalties and potential for facilities to be shut-down for non-compliance, more stringent environmental assessments of proposed projects and increasing responsibility for companies and their officers, directors, and employees. Compliance with environmental laws and regulations may require significant capital outlays on behalf of the Company and may cause material changes or delays in the Company's intended activities. There can be no assurance that future changes in environmental regulations will not adversely affect the Company's business, and it is possible that future changes in these laws or regulations could have a significant adverse impact on some portion of the Company's business, causing the Company to re-evaluate those activities at that time.

Failure to comply with such laws and regulations can have serious consequences, including damage to the Company's reputation, stopping the Company from proceeding with the development of a project, negatively impacting the operation or further development of a mine, increasing the cost of development or production and litigation and regulatory actions against the Company. The Company cannot give any assurance that, notwithstanding its precautions, breaches of environmental laws (whether inadvertent or not) or environmental pollution will not materially and adversely affect its financial condition and its results from operations. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Company's operations. Environmental hazards may exist on the properties on which the Company holds interests which are unknown to the Company at present and which have been caused by previous or existing owners or operators of the properties. The Company may also acquire properties with known or undiscovered environmental risks. Any indemnification from the entity from which the Company has acquired such properties may not be adequate to pay all the fines, penalties and costs (such as cleanup and restoration costs) incurred related to such properties. Some of the Company's properties also have been used for mining and related operations for many years before acquisition and were acquired as is or with assumed environmental liabilities from previous owners or operators.

The Company's failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions, including orders issued by regulatory or judicial authorities causing operations to

cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. The Company may be required to compensate those suffering loss or damage by reason of its operations and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

Production at certain of the Company's mines involves the use of various chemicals, which may be toxic material. Should toxic chemicals leak or otherwise be discharged from the containment system, the Company may become subject to liability for cleanup work that may not be insured. While appropriate steps will be taken to prevent discharges of pollutants into the ground water and the environment, the Company may become subject to liability for hazards that it may not be insured against and such liability could be material.

Actual costs of reclamation are uncertain, and higher than expected costs could negatively impact the results of operations and financial position.

Land reclamation requirements are generally imposed on mineral exploration companies (as well as companies with mining operations) in order to minimize long-term effects of land disturbance, and the Company is subject to such requirements at its mineral properties. Decommissioning liabilities include requirements to control dispersion of potentially deleterious effluents; and, reasonably re-establish pre-disturbance landforms and vegetation.

In order to carry out reclamation obligations arising from exploration and potential development activities, the Company must allocate financial resources that might otherwise be spent on further exploration and development programs. Reclamation costs are uncertain and planned expenditures may differ from the actual expenditures required. If the Company is required to carry out unanticipated reclamation work, its financial position could be adversely affected.

Problems with water sources could have a negative impact on the Company's exploration programs and operations.

A key operational risk is the availability of sufficient water supplies to support mining operations. Large volumes of water are used in the extraction and processing of minerals and metals. Conversely, other properties of the Company are located in areas that have many competing demands water and access to sufficient supplies will need to be negotiated by the Company. The Company may not be able to secure the water necessary to conduct its activities as planned. The Company will strive to ensure that its activities do not adversely impact community water sources. Future operations and activities may require that alternate water sources be provided to potentially affected communities at the Company's expense.

Water is an integral requirement for exploration, development and production facilities on mineral properties and the Company's ability to obtain a secure supply of water at a reasonable cost depends on many factors, including global and regional supply and demand, political and economic conditions, problems that can affect local supplies, delivery, and relevant regulatory regimes.

Even a temporary interruption of water could adversely affect an operation. An increase in prices could negatively affect the Company's business, financial condition and results of operations. Establishing such water infrastructure for the Company's development projects will, in any event, require significant resources, identification of adequate sources of raw materials and supplies and necessary cooperation from national and regional governments, none of which can be assured. There is no guarantee that the Company will secure water rights going forward or on terms reasonable to the Company.

The Company is subject to substantial regulation with respect to water management at the Company's mining operations.

The water collection, treatment, and disposal operations at the Company's mines are subject to substantial regulation and involve significant environmental risks. If collection or management systems fail, overflow or do not operate properly, untreated water or other contaminants could spill onto nearby properties or into nearby streams and rivers, causing damage to persons or property, injury to aquatic life and economic damages.

Environmental and regulatory authorities in the jurisdictions in which the Company operates conduct periodic or annual inspections of the Company's projects. As a result of these inspections, the Company is from time to time required to modify its water management program, complete additional monitoring work or take remedial actions with respect to the Company's operations as it pertains to water management.

Liabilities resulting from damage, regulatory orders or demands, or similar, could adversely and materially affect the Company's business, results of operations and financial condition. Moreover, in the event that the Company is deemed liable for any damage caused by overflow, the Company's losses or consequences of regulatory action might not be covered by insurance policies.

Climate Change Risks

Mining operations have a significant carbon footprint.

The Company's mining and processing operations are energy intensive, resulting in a significant carbon footprint. The Company acknowledges climate change as an international and community concern. A number of governments or governmental bodies have introduced or are contemplating regulatory changes in response to the potential impacts of climate change, including the introduction or expansion of carbon emission taxes. Where legislation already exists, regulation relating to emission levels and energy efficiency is becoming more stringent. Some of the costs associated with reducing emissions can be offset by increased energy efficiency and technological innovation. While the Company is committed to exploring ways to minimize the environmental impact of its operations, in the long term this may result in increased operating costs. The inability to achieve required energy efficiencies could have an adverse impact on the Company's ability to achieve cost guidance.

Seasonal conditions may have an adverse effect on the Company's operations.

The Company is capable of developing and operating all of its projects year-round; however, some seasonal factors and the physical risks of climate change may also have a materially adverse effect on the Company's operations. These may include extreme weather events, changes in rainfall and storm patterns and intensities, heavy snowfall, water shortages, and changing temperatures. In particular, cold temperatures and heavy snowfall in Canada may impact the Company's ability to achieve production forecasts, including anticipated recoveries, at the Company's Caribou Mine. While the Company has taken measures to mitigate the impact of weather on its operations, severe rainfall or drought conditions could have an adverse impact on the Company's ability to achieve production forecasts.

Insurance and Compliance Risks

The Company may not have sufficient insurance coverage.

The mining industry is subject to significant risks that could result in damage to, or destruction of, mineral properties or producing facilities, personal injury or death, environmental damage, delays in mining, monetary losses, and possible legal liability.

The Company's policies of insurance may not provide sufficient coverage for losses related to these or other risks. The Company's insurance does not cover all risks that may result in loss or damages and may not be adequate to reimburse the Company for all losses sustained. In particular, the Company does not have coverage for certain environmental losses or certain types of earthquake damage. The occurrence of losses or damage not covered by insurance could have a material and adverse effect on the Company's cash flows, results of operation, and financial condition.

The Company's business involves uninsurable risks.

In the course of exploration, development, and production of mineral properties, certain risks and, in particular, unexpected or unusual geological operating conditions, including cave-ins, fires, flooding and earthquakes may occur. It is not always possible to fully insure against such risks and the Company may decide not to take out insurance against such risks as a result of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any future profitability and result in increasing costs and a decline in the value of the securities of the Company.

Any failure to strictly comply with anti-corruption laws could have a material adverse effect on the Company's reputation and results of operations.

The *Canadian Corruption of Foreign Public Officials Act* and the *U.S. Foreign Corrupt Practices Act* and anti-bribery laws in other jurisdictions, prohibit companies, and their intermediaries from making improper payments for the purposes of obtaining or retaining business or other commercial advantage. The Company's policies mandate compliance with these anti-bribery laws, which often carry substantial penalties. The Company operates in jurisdictions that have experienced governmental and private sector corruption to some degree, and, in certain circumstances, strict compliance with anti-bribery laws may conflict with certain local customs and practices. There can be no assurances that the Company's internal control policies and procedures will always protect it from reckless or other inappropriate acts committed by the Company's affiliates, employees or agents. Violations of these laws, or allegations of such violations, could have a material adverse effect on the Company's business, financial position and results of operations.

The Company may fail to maintain adequate internal control over financial reporting.

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Disclosure controls and procedures are designed to ensure that information required to be disclosed by a company in reports filed with securities regulatory agencies is recorded, processed, summarized and reported on a timely basis and is accumulated and communicated to a company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. Trevali has invested resources to document and analyze its system of disclosure controls and its internal control over financial reporting. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance with respect to the reliability of financial reporting and financial statement preparation.

Trevali's critical operating systems may be compromised.

Cyber threats have evolved in severity, frequency and sophistication in recent years, and target entities are no longer primarily from the financial or retail sectors. Cybersecurity risk is increasingly difficult to identify and quantify and cannot be fully mitigated because of the rapid evolving nature of the threats, targets and consequences. Persons engaging in cybercrime may target corruption of systems or data, or theft of sensitive data. While the Company invest in robust security systems to detect and block inappropriate or illegal access to the Company's key systems, including supervisory control and data acquisition operating systems at the Company's operations, and regularly review policies, procedures and protocols to ensure data and system integrity, there can be no assurance that critical systems will not be inadvertently or

intentionally breached and compromised. This may result in business interruption losses, equipment damage, or loss of critical or sensitive information.

Mining Industry Risks

The Company is in competition with other mining companies that have greater resources and experience.

The mining industry is competitive in all of its business phases. The Company competes with numerous companies that have experience and financial resources significantly in excess of those of the Company, in the search for: (i) attractive mineral properties; (ii) qualified technical expertise, operational experience, service providers, and labour; (iii) equipment and suppliers; capital for the purpose of financing development of mineral properties. As a result of this competition, the Company may be unable to maintain or acquire attractive mining properties, recruit or retain qualified people, or acquire the capital necessary to fund its operations and develop its properties on terms it considers acceptable, or at all. Consequently, the Company's competitive disadvantages could have materially adverse affects on the Company's, operations, revenues, and financial condition.

The Company may be unable to identify opportunities to grow its business, and it may be unsuccessful in integrating new businesses and assets that it may acquire in the future.

As part of the Company's business strategy, it has sought and will continue to seek new operating, development and exploration opportunities in the mining industry. In pursuit of such opportunities, the Company may fail to select appropriate acquisition candidates or negotiate acceptable arrangements, including arrangements to finance acquisitions or integrate the acquired businesses into its business. The Company cannot provide assurance that it can complete any acquisition or business arrangement that it pursues, or is pursuing, on favorable terms, if at all, or that any acquisitions or business arrangements completed will ultimately benefit its business. Further, any acquisition the Company makes will require a significant amount of time and attention of its management, as well as resources that otherwise could be spent on the operation and development of its existing business.

Any future acquisitions would be accompanied by risks, such as a significant decline in the relevant metal price after the Company commits to complete an acquisition on certain terms; the quality of the mineral deposit acquired proving to be lower than expected; the difficulty of assimilating the operations and personnel of any acquired companies; the potential disruption of its ongoing business; the inability of management to realize anticipated synergies and maximize its financial and strategic position; the failure to maintain uniform standards, controls, procedures and policies; and the potential for unknown or unanticipated liabilities associated with acquired assets and businesses, including tax, environmental or other liabilities. There can be no assurance that any business or assets acquired in the future will prove to be profitable, that the Company will be able to integrate the acquired businesses or assets successfully or that the Company will identify all potential liabilities during the course of due diligence. Any of these factors could have a material adverse effect on its business, expansion, results of operations, and financial condition.

Mining has inherent risks and is subject to conditions or events beyond the Company's control, which could have a material adverse effect on its business and which conditions and events may not be insurable.

Mineral exploration and development involves risks, which even a combination of experience, knowledge and careful evaluation may not be able to overcome. Operations in which the Company has a direct or indirect interest will be subject to hazards and risks normally incidental to exploration, development and production of minerals, any of which could result in work stoppages, damage to or destruction of property, loss of life and environmental damage. Fires, power outages, labour disruptions, flooding, explosions, cave-ins, land-slides and the inability to obtain suitable or adequate machinery, equipment or labour are other

risks involved in the operation of mines and the conduct of exploration programs. Substantial expenditures are required to establish reserves through drilling, to develop metallurgical processes, to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineralized deposit, no assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis. The economics of developing mineral properties is affected by many factors including the cost of operations, variations of the grade of ore mined, fluctuations in the price of minerals produced, costs of processing equipment and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals and environmental protection. In addition, the grade of mineralization ultimately mined may differ from that indicated by drilling results and such differences could be material. Short-term factors, such as the need for orderly development of mineralized bodies or the processing of new or different grades, may have an adverse effect on mining operations and on the results of operations. There can be no assurance that minerals recovered in small scale laboratory tests will be duplicated in large scale tests under on-site conditions or in production scale operations. Material changes in geological resources, grades, stripping ratios or recovery rates may affect the economic viability of projects. The Company does not currently carry any liability insurance for such risks, electing instead to ensure its contractors have adequate insurance coverage. The nature of these risks is such that liabilities might exceed any insurance policy limits, the liabilities and hazards might not be insurable or the Company might not elect to insure itself against such liabilities due to high premium costs or other factors. Such liabilities may have a materially adverse effect upon the Company's financial condition.

Most of these risks are beyond the Company's control and could result in damage to, or destruction of, mineral properties, production facilities or other properties, personal injury or death, loss of key employees, environmental damage, delays in mining, increased production costs, monetary losses and possible legal liability.

The business of exploration for minerals and mining requires significant infrastructure.

Mining, processing, development, and exploration activities depend, to one degree or another on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. The maintenance and management of much of the infrastructure that the Company relies upon is beyond the control of the Company. The loss of such infrastructure, even temporarily, could potentially materially adversely affect the Company's operations, revenues, and financial condition.

Infrastructure in West Africa may be under developed, which could have an adverse effect on the Company.

Trevali's operations in Namibia and Burkina Faso depend on adequate infrastructure, which is underdeveloped in certain parts of West Africa, and the uninterrupted flow of materials, supplies, and services. Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants which affect capital and operating costs. The lack of availability on acceptable terms or the delay in the availability of any one or more of these items could prevent or delay exploitation and/or development of the Company's projects. If adequate infrastructure is not available in a timely manner, there can be no assurance that the continued development of the Company's projects will be commenced or completed on a timely basis, if at all, or that the resulting operations will achieve the anticipated production volume, or that construction costs and ongoing operating costs will not be higher than anticipated. In addition, unusual or infrequent weather phenomena, sabotage or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's business, financial condition and results of operations. Any interruptions to the procurement of equipment or the flow of materials, supplies and services to these properties could have an adverse impact on Trevali's business, financial condition and results of operations.

The Company's ability to secure power supplies and at a reasonable cost are significant operational risks.

A key operational risk is the availability of sufficient power supplies to support mining operations. Large quantities of power are used in the extraction and processing of minerals and metals. Conversely, other properties of the Company are located in areas that have many competing demands for power and access to sufficient supplies will need to be negotiated by the Company. Power is an integral requirement for exploration, development and production facilities on mineral properties.

The Company's ability to obtain a secure supply of power at a reasonable cost depends on many factors, including: global and regional supply and demand; political and economic conditions; problems that can affect local supplies; delivery; and, relevant regulatory regimes.

Even a temporary interruption of power could adversely affect an operation. An increase in prices could negatively affect the Company's business, financial condition, and results of operations. Establishing power infrastructure for the Company's development projects will, in any event, require significant resources, identification of adequate sources of raw materials and supplies, and necessary cooperation from national and regional governments, none of which can be assured. There is no guarantee that the Company will secure the power going forward or on terms reasonable to the Company. Nevertheless, the Company has a long-term power purchase agreement in place with a SN Power, a significant Peruvian power distributor, for the Santander Mine. The CaribouMine is connected to the New Brunswick grid where excess capacity is available. The Rosh Pinah Mine is supplied directly from the NamPower, the national power utility company of Namibia, through its grid system. As the supply of power from the Burkina Faso national grid is unreliable, all power for the Perkoa Mine is currently from diesel generators, though the heavy fuel oil project is expected to be commissioned in the first half of 2019.

The business of exploration for minerals and mining involves a high degree of risk, as few properties that are explored are ultimately developed into producing mines.

The Company is engaged in exploration, mine development and the mining and production of precious metals, primarily zinc, and is exposed to a number of risks and uncertainties that are common to other companies in the same business. Unusual or unexpected ground movements, fires, power outages, labour disruptions, flooding, cave-ins, landslides and the inability to obtain suitable adequate machinery, equipment or labour are risks involved in the operation of mines and the conduct of exploration programs. The Company has relied on and may continue to rely upon consultants and others for mine operating and exploration expertise. Few properties that are explored are ultimately developed into producing mines. Substantial expenditures are required to establish ore reserves through drilling, to develop metallurgical processes to extract the metal from the ore and in the case of new properties, to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineral deposit, the Company may not be able to raise sufficient funds for development. The economics of developing mineral properties is affected by many factors including the cost of operations, variations in the grade of ore mined, fluctuations in metal markets, costs of mining and processing equipment and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals and environmental protection. Where expenditures on a property have not led to the discovery of mineral reserves, spent costs will not usually be recoverable.

The trading price of the Common Shares may be volatile, subject to large fluctuations over short periods, and may increase or decrease in response to a number of events and factors.

Share prices for many companies in the mineral exploration and mining industries have experienced wide fluctuations that have been often unrelated to the operations of the companies themselves. These factors may include:

- the price of zinc and other metals;
- the Company's operating performance and the performance of competitors and other similar companies;
- exploration results from the Company's mineral properties;
- the public's reaction to the Company's news releases, other public announcements, and the Company's filings with the various securities regulatory authorities;
- changes in earnings estimates or recommendations by research analysts who track the Common Shares or the shares of other companies in the resource sector;
- changes in general economic conditions;
- the arrival or departure of key personnel; and
- acquisitions, strategic alliances or joint ventures involving the Company or its competitors.

In addition, the market price of the Company's shares is affected by many variables not directly related to the Company's success and are therefore not within the Company's control, including other developments that affect the market for all resource sector shares, the breadth of the public market for the Company's shares, and the attractiveness of alternative investments. In addition, securities markets have recently experienced an extreme level of price and volume volatility, and the market price of securities of many companies has experienced wide fluctuations which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. The effect of these and other factors on the market price of the Common Shares on the exchanges in which the Company trades has historically made the Company's share price volatile and suggests that the Company's share price will continue to be volatile in the future.

Geotechnical failures could result in the temporary or permanent closure of the Company's mines.

Mining, by its very nature, involves the excavation of soils and rocks. The stability of the ground during and after excavation involves a complicated interaction of static and dynamic stresses (including induced stresses such as blasting), gravity, rock strength, rock structures (such as faults, joints, and bedding), groundwater pressures and other geomechanical factors. Underground workings, pit slopes, and other excavations may be subject to local or widespread geotechnical failure should the forces acting on the rock mass exceed the strength of that rock mass.

The Company employs internal geotechnical experts, external consultants and third party reviewers and auditors who use industry-standard engineering data gathering, analyses, techniques and processes to manage the geotechnical risks associated with the design and operation of a mine and the related civil structures. However, due to unforeseen situations and to the complexity of these rock masses and large rock and soil civil structures, geotechnical failures may still occur which could result in the temporary or permanent closure of all or part of a mining operation, injuries to mine personnel or others, and/or damage to mine infrastructure, equipment or facilities, which materially impacts mineral production and/or results in additional costs to repair or recover from such geotechnical failures and the resulting damage.

Risks associated with operations in West Africa.

Operations in Burkina Faso and Namibia are governed by mineral agreements with local governments that establish the terms and conditions under which the Company's affairs are conducted. These agreements cover a number of items, including the duration and renewal terms of exploration permits and mining licenses/operating permits; supply and repayment of funds for capital investments; the right to export production; distribution of dividends; shareholder rights and obligations for the Company and the government in respect of their ownership; labour matters; the right to hold funds in foreign bank accounts and in foreign currencies; taxation rates; and the right to repatriate capital and profits.

Uncertainties in the interpretation and application of laws and regulations in the West African jurisdictions in which the Company operates may affect its ability to comply with such laws and regulations, which may increase the risks with respect to its operations. In the event of a dispute arising from the Company's

activities, the Company may be subject to the exclusive jurisdiction of courts or arbitral proceedings outside of North America or may not be successful in subjecting persons to the jurisdiction of courts in North America, either of which could unexpectedly and adversely affect the outcome of a dispute. The courts in Burkina Faso and Namibia may offer less certainty as to the judicial outcome or a more protracted judicial process than is the case in more established economies. Businesses can become involved in lengthy court cases over simple issues when rulings are not clearly defined, and the poor drafting of laws and excessive delays in the legal process for resolving issues or disputes compound such problems. Accordingly, Trevali could face risks such as: (i) effective legal redress in the courts of Burkina Faso or Namibia being more difficult to obtain, whether in respect of a breach of law or regulation, or in a contract or an ownership dispute, (ii) a higher degree of discretion on the part of governmental authorities and therefore less certainty, (iii) the lack of judicial or administrative guidance on interpreting applicable rules and regulations, (iv) inconsistencies or conflicts between and within various laws, regulations, decrees, orders and resolutions, or (v) relative inexperience of the judiciary and courts in such matters.

Enforcement of laws in Burkina Faso or Namibia may depend on and be subject to the interpretation placed upon such laws by the relevant local authority, and such authority may adopt an interpretation of an aspect of local law which differs from the advice that has been given to Trevali by local lawyers or even previously by the relevant local authority itself. Furthermore, there is limited relevant case law providing guidance on how courts would interpret such laws and the application of such laws to Trevali's contracts, joint ventures, licenses, license applications or other arrangements. Thus, there can be no assurance that contracts, joint ventures, licenses, license applications or other legal arrangements will not be adversely affected by the actions of government authorities and the effectiveness of and enforcement of such arrangements.

Risks associated with serious diseases.

The Company is exposed to pandemics like malaria and other diseases, such as dengue, chikungunya, Zika and other flu like viruses (e.g. avian, swine). Such pandemics and diseases represent a serious threat to maintaining a skilled workforce in the mining industry in Africa and in South America and is a major healthcare challenge for the Company. Further, Ebola, HIV and other diseases represent a serious threat to maintaining a skilled workforce in the mining industry throughout Africa and are a major healthcare challenge to Trevali's operations in Africa. The epidemic of the Ebola virus disease in 2014 in parts of West Africa resulted in a substantial number of deaths and the World Health Organization declared it a global health emergency. This outbreak did not affect the operations of the previous owner of the African Assets, Glencore, but had it spread further, the workforce may have been adversely affected. Should there be an epidemic in the countries in which Trevali operates, which is not satisfactorily contained, its workforce may be adversely impacted and the Company may face difficulties securing transportation of supplies and equipment essential to its mining operations. As a result, the Company's exploration, development and production plans could be delayed, or interrupted after commencement. Any changes to these operations could significantly increase costs of operations and have material adverse effect on the Company's business, results of operations, and future cash flow.

In addition, unsafe work conditions or equipment, transportation of personnel or insufficient worker training may expose personnel to potentially serious occupational and workplace accidents causing injuries and or potential fatalities while working at, or travelling to or from, an operating mine.

There can be no assurance that the Company will not lose members of its workforce or see its workforce productivity reduced or incur increased medical costs/insurance premiums as a result of these health risks, which could have a material and adverse effect on the Company's future cash flows, earnings, results of operations and financial condition.

DIVIDENDS

The Company has not paid any dividends on the Common Shares since its incorporation. The Company does not anticipate declaring or paying any dividends on the Common Shares in the near future, although

it reserves the right to pay dividends if and when it is determined to be advisable by the Board. As a result, shareholders will have to rely on capital appreciation, if any, to earn a return on investment in the Common Shares in the near future. There are no restrictions on the Company's ability to pay dividends.

DESCRIPTION OF CAPITAL STRUCTURE

The Company is authorized to issue an unlimited number of Common Shares. As at December 31, 2018, a total of 818,496,085 Common Shares were issued and outstanding. As of the date of this AIF, there are 817,596,085 Common Shares issued and outstanding (the Company having purchased and cancelled an aggregate of 900,000 Common Shares since January 1, 2019 pursuant to its normal course issuer bid).

Each Common Share entitles the holder thereof to one vote per Common Share at all meetings of shareholders. All of the Common Shares issued rank equally as to dividends, voting rights and distribution of assets on winding-up or liquidation. Shareholders have no pre-emptive rights, nor any right to convert their Common Shares into other securities. There are no existing indentures or agreements affecting the rights of shareholders other than the Notice of Articles and Articles of the Company.

MARKET FOR SECURITIES

The Common Shares are listed and posted for trading on the TSX under the symbol "TV". The following table sets forth the reported high and low prices and the trading volume of the Common Shares on the TSX for the 12-month period ended December 31, 2018:

Month	High (C$)	Low (C$)	Volume
January	1.75	1.49	53,641,607
February	1.65	1.38	46,677,970
March	1.50	1.22	50,835,425
April	1.31	1.15	33,846,147
May	1.195	1.01	41,209,508
June	1.22	0.83	56,740,735
July	0.93	0.73	52,409,638
August	0.82	0.59	34,571,506
September	0.80	0.67	38,119,897
October	0.785	0.465	55,057,282
November	0.56	0.405	54,494,019
December	0.50	0.34	34,198,842

DIRECTORS AND OFFICERS

The table presented below provides the name, place of residence, position(s) held with the Company and principal occupation during the last five years by each of the Company's directors and executive officers and, for directors, the date since which they have served as a director of the Company.

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years	Director Since
Dr. MARK CRUISE British Columbia, Canada	President, Chief Executive Officer and Director	President and Chief Executive Officer of the Company.	March 18, 2008

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years	Director Since
JESSICA MCDONALD [5][6] British Columbia, Canada	Chair of the Board[1]	Chair of Canada Post Corporation (since December 2017); Interim President and Chief Executive Officer of Canada Post Corporation (April 2018 to March 2019); President and Chief Executive Officer of British Columbia Hydro and Power Authority (July 2014 to July 2017); independent consultant (2013).	October 11, 2017
RUSSELL BALL [3][4][6] British Columbia, Canada	Director	Executive Vice President, Chief Financial Officer and Corporate Development of Goldcorp Inc. (March 2016 to November 2017); Executive Vice President, Corporate Development and Capital Projects of Goldcorp Inc. (December 2014 to March 2016); Executive Vice President of Capital Management of Goldcorp Inc. (May 2013 to December 2014).	October 11, 2017
ANTON DRESCHER [3][4] British Columbia, Canada	Director	President and Director of Harbour Pacific Capital Corp. (1998 to present); President and director of WestPoint Management Consultants Ltd. (1979 to present).	May 23, 2007
CHRIS ESKDALE Oberaegi, Switzerland	Director	Head of Zinc Industrial Assets, Glencore.	March 2, 2012
MIKE HOFFMAN [5][6] Ontario, Canada	Director[2]	Principal of M Hoffman Consulting Inc.; director of Eastmain Resources Inc. (since March 2016) and Havilah Mining Corporation (since May 2018).	April 6, 2011
DAN ISSEROW [3][4][5] British Columbia, Canada	Director	President and Chief Financial Officer of Silica Ventures Inc.	October 11, 2017
DAN MYERSON Ontario, Canada	Director	Head of Glencore's Canadian zinc business.	August 31, 2017
GERBRAND VAN HEERDEN British Columbia, Canada	Chief Financial Officer	Chief Financial Officer of the Company (June 2018 to present); Senior Vice President – Business Initiative/ Development (November 2017 to June 2018); Chief Financial Officer of Glencore's Rosh Pinah Zinc Corporation (2013 to November 2017).	n/a
BRYANT SCHWENGLER British Columbia, Canada	Chief Operating Officer	Chief Operating Officer of the Company (November 2017 to present); General Manager at the Company's Caribou Mine (March 2016 to November 2017); General Manager at Glencore's Lady Loretta Mine (April 2014 to December 2016); General Manager at Glencore's Mount Isa Open Pit Operations (June 2011 to April 2014).	n/a
PAUL KELLER Ontario, Canada	Senior Vice President, Maintenance, Reliability & Operational Excellence	Senior Vice President, Maintenance, Reliability & Operational Excellence (since January 2019); Senior Vice President, Major Projects & Technical Support of the Company (November 2017 to January 2019); Chief Operating Officer of the Company (May 2011 to November 2017).	n/a

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years	Director Since
ALEX TERENTIEW Ontario, Canada	Senior Vice President, Corporate Development & Investor Relations	Senior Vice President, Corporate Development & Investor Relations of the Company (since September 2018); Mining Research Analyst, BMO Capital Markets (November 2016 to August 2018); Research Analyst, Raymond James Ltd. (November 2011 to November 2016).	n/a
YAN BOURASSA Ontario, Canada	Vice President, Mineral Resource Management	Vice President, Mineral Resource Management of the Company (since July 2018); Vice President Geology at Roxgold Inc. (July 2016 to July 2018); Director Business Development at Golden Star Resources Ltd. (May 2011 to June 2016)	n/a
STEVEN MOLNAR British Columbia, Canada	Vice President, General Counsel & Corporate Secretary	Vice President, General Counsel & Corporate Secretary of the Company (since July 2018); Lawyer at McCarthy Tétrault LLP (February 2014 to July 2018).	n/a
JOANNE THOMOPOULOS British Columbia, Canada	Vice President, Human Resources Strategy	Vice President, Human Resources Strategy of the Company (since October 2018); Director, Human Resources at BC Hydro (January 2008 to October 2018)	
STEVE STAKIW British Columbia, Canada	Vice President – Investor Relations and Corporate Communications	Vice President – Investor Relations and Corporate Communications of the Company.	n/a
DANIEL MARINOV British Columbia, Canada	Vice President – Exploration	Vice President – Exploration of the Company (since April 2013); Chief Geologist of the Company (March 2011 to March 2013).	n/a

Notes:

(1) Ms. McDonald was appointed Chair of the Board effective March 12, 2019.
(2) Mr. Hoffman resigned as Chair of the Board effective March 12, 2019.
(3) Member of the Audit Committee.
(4) Member of the Compensation and Human Resources Committee.
(5) Member of the Corporate Governance and Nominating Committee.
(6) Member of the Health, Safety, Environment and Community Committee.

All of the Company's directors serve until the next annual meeting of shareholders or until such director's successor is duly elected or appointed.

Director and Officer Biographies

Dr. Mark Cruise, President, Chief Executive Officer and Director

Dr. Cruise founded the Company and has been President since February 25, 2008 and Chief Executive Officer since May 28, 2009. Dr. Cruise was Vice-President, Business Development of Cardero Resources Corp., a public company listed on the TSX and American Stock Exchange, from March 2007 to September 2011, and from November 2004 to March 2007 was the Vice-President, Exploration. From 1996 to 2004, Dr. Cruise was Senior Geologist with Anglo American plc. Dr. Cruise is also a director of Velocity Minerals Ltd. and a Trevali-nominated director of Prism Resources Inc., public companies listed on the TSXV. Dr. Cruise received a Bachelor of Geology and a Doctorate of Geology from the University of Dublin, Trinity College. Dr. Cruise is a professional member of the Institute of Geologists of Ireland and the European Federation of Geologists.

Jessica McDonald, Chair of the Board

Ms. McDonald currently serves as Chair of Canada Post, which includes in its Group of Companies a majority shareholding of Purolator Courier, and subsidiaries Innovapost and SCI Logistics. She has previously served as President and CEO of Canada Post on an interim basis. Prior experience includes President and CEO of BC Hydro, Chair of Powertech Labs Inc, and Board Director of Powerex Corp. She serves on the Member Council of Sustainable Development Technology Canada, and was previously a Visiting Fellow at Stanford's Center for Energy Policy and Finance. She is a director of the Board of Trade of Greater Vancouver, as well as a director of Hydro One Inc. and Coeur Mining, Inc. She has significant experience in Government including Deputy Minister to the Premier and Head of the Public Service of British Columbia. She is a certified ICD Board Director.

Russell Ball, Director

Mr. Ball was Executive Vice President, Chief Financial Officer and Corporate Development of Goldcorp Inc. from March 2016 until October 2017, having initially joining Goldcorp Inc. in 2013 and serving as Executive Vice President of Capital Projects, Strategy and Corporate Development, including oversight of their primary growth projects. Prior to his role with Goldcorp Inc., Mr. Ball served in varying capacities for Newmont Mining Corporation, including Strategic and Business Planning culminating with his appointment as Executive Vice President and Chief Financial Officer. He is also currently the Executive Chairman of Calibre Mining Corp. and a director of Lydian International Limited, Columbus Gold Corp. and Allegiant Gold Ltd. He qualified as both a Chartered Accountant from the Institute of Chartered Accountants of South Africa and a Certified Public Accountant in Colorado.

Anton Drescher, Director

Mr. Drescher is a Certified Public Accountant and a Certified Management Accountant with over 35 years of experience as an officer and director of companies in various industries, including mining, telecommunications, technology and waste management. He is the President of Harbour Pacific Capital Corp., a private company that provides consulting services for mergers and acquisitions, corporate reorganizations, debt and equity financings and regulatory filings. He is also the President of Westpoint Management Consultants Limited, a private company engaged in tax and accounting consulting for business reorganizations, the Chief Financial Officer and a director of Oculus VisionTech Inc., a public company involved in streaming video and video-on-demand, and a director and former president of RavenQuest BioMed Inc. He also serves as a director of Xiana Mining Inc., International Tower Hill Mines Ltd., Corvus Gold Inc. and River Wild Exploration Inc.

Chris Eskdale, Director

Mr. Eskdale joined Glencore International A.G. in January 1997 as Asset Manager and is currently head of industrial assets of the zinc division. Prior to this, he was an accountant at Deloitte & Touche in London and Moscow. Mr. Eskdale is on the board of directors of a number of international mining companies, including Compania Minera Volcan SAA, a Peruvian listed mining company engaged in the extraction and production of zinc, lead and copper concentrates (since 2012), the Noranda Income Fund (since 2013, though will not be standing for re-election at that company's annual general meeting to be held on April 26, 2019) and Recylex S.A., a Paris listed company processing zinc and lead materials (since 2014). Mr. Eskdale holds a Master of Arts (Honours) degree from the University of Oxford and qualified as a Chartered Accountant in July 1994 with the Institute of Chartered Accountants in England and Wales.

Mike Hoffman, Director

Mr. Hoffman is a professional mining engineer with over 35 years of experience in mine operations, projects, engineering and corporate development. He has served in senior executive positions at Belo Sun Mining Corp. (from 2012 to 2014), Crocodile Gold Corp. (from July 2009 to June 2011), Crowflight Minerals Inc.

(from September 2007 to July 2009), Goldcorp Inc. (from April 2003 to June 2006), Desert Sun Mining Corp. (from September 2006 to April 2007) and Yamana Gold Inc. (from April 2006 to June 2007). He is also currently a director of Eastmain Resources Inc. and Havilah Mining Corporation. Mr. Hoffman received a Bachelor of Applied Science (Mining Engineering) from Queen's University and is a Professional Engineer in Ontario.

Dan Isserow, Director

Mr. Isserow is a Chartered Accountant with financial and business operations leadership experience and a successful track record of growing organizations across various business sectors, including introducing the Nando's restaurant franchise to Canada and serving as its President and CEO from 1993 to 2012. He is currently the Co-Founder, President and Chief Financial Officer with Silica Ventures, a company focused on the expanding market for digital sign applications; with customers in Canada and the United States. He is a Chartered Accountant from the Institute of Chartered Accountants of South Africa.

Dan Myerson, Director

Mr. Myerson is currently the head of Glencore's Canadian zinc business, and has worked closely with Trevali at both the corporate and operations level. Prior to joining Glencore, Mr. Myerson worked in the global capital markets division of Morgan Stanley with a principal focus on the Asia-Pacific region. Mr. Myerson holds a Master of Finance (Honours) degree from the Queensland University of Technology in Brisbane, Australia.

Gerbrand Van Heerden, Chief Financial Officer

Mr. Van Heerden has 18 years of experience in various senior management roles in the mining industry, across numerous commodities, specializing in base metals. He commenced his career with Deloitte following which he joined Metorex Limited, a multi-listed mid-tier mining company as Group Financial Controller in 2004. At Metorex, he held a number of senior management positions, becoming a specialist in a wide field including technical consolidation and accounting, treasury, cross border taxation, trading and marketing of commodities, derivatives, group and debt re-structuring, due diligences, feasibilities, as well as a strong operational influencer to improve business profitability and sustainability. He was also involved in numerous green and brownfield projects, in Southern and Central Africa, through commissioning and into operational readiness during this period. He joined Glencore in 2013 as Chief Financial Officer of the newly acquired Rosh Pinah Zinc Corporation and was instrumental in the turn-around and modernization of the operation with a focus on establishing a continuous improvement culture. Mr. Van Heerden is a Chartered Accountant from the Institute of Chartered Accountants of South Africa and a graduate of the University of Johannesburg, South Africa.

Bryant Schwengler, Chief Operating Officer

Mr. Schwengler has 17 years of experience in a variety of roles including senior management positions in both underground and open-pit mining operations. Results driven with a strong safety focus, Bryant's broad skill set encompasses the full mine operational life cycle from commissioning, mine planning and optimization through to closure. Commencing his career with Mount Isa Mines Ltd., he provided engineering solutions to the Ernest Henry Open Cut Mine (Cu-Au). Following this he transitioned to Xstrata Zinc and ultimately Glencore at the world class Mt Isa Zinc operations. During this period, he led both technical and operational teams at the Blackstar, Handlebar Hill and Lady Loretta Zinc mines. As part of the strategic partnership with Glencore, Bryant was seconded to the Caribou Mine in early 2016 where he was instrumental in supporting the site during commissioning, the transition to commercial production and the ongoing optimization process. Mr. Schwengler holds a Bachelor of Engineering degree from the University of Ballarat, Victoria, Australia.

Paul Keller, Senior Vice President, Maintenance, Reliability & Operational Excellence

Mr. Keller brings extensive mine operations experience in Canada with 35 years of experience most recently as Manager of Technical Services for a major Canadian mining contractor where he led a team of engineers and designers on various mining contracts for major mining companies. Mr. Keller began his career with Rio Algom Limited and has also worked in various management roles with Barrick Gold's Hemlo mine in operations, engineering and maintenance. Mr. Keller initially jointed the Company in May 2012 as Vice President of Operations. In July 2012, he was appointed as Chief Operating Officer of the Company. In November 2017, he was appointed as Senior Vice President – Major Projects & Technical Support and became Senior Vice President, Maintenance, Reliability & Operational Excellence in January 2019. Mr. Keller holds a Bachelor of Engineering/Mining from Laurentian University and is a Professional Engineer.

Alex Terentiew, Senior Vice President, Corporate Development & Investor Relations

Prior to joining the Company in October 2018 as Senior Vice President, Corporate Development & Investor Relations, Mr. Terentiew spent over 12 years in the investment industry as a mining and commodity research analyst, most recently at BMO Capital Markets (November 2016 to October 2018), and previous to that at Raymond James, Credit Suisse and Scotia Capital. At BMO, he was a top-ranked analyst covering the base metals sector in addition to providing insightful research focused papers of long-term growth potential, value margins and commodity research. Prior to his career in research, he was a licensed Professional Geoscientist in the Province of Ontario. Mr. Terentiew holds an MBA from the Rotman School of management, a Master of Applied Science in Civil Engineering and a Bachelor of Science from the Department of Geology, both from the University of Toronto.

Yan Bourassa, Vice President, Mineral Resource Management and Business Improvement

Mr. Bourassa joined the Company in July 2018 as Vice President, Mineral Resource Management and assumed responsibility for Business Improvement in January 2019. He has extensive experience in resource estimation/disclosure and a strong background in operations and exploration, having previously worked as Vice President, Geology at Roxgold Inc. from July 2016 to July 2016, and as Director of Business Development at Golden Star Resources Ltd. from May 2011 to June 2016 (and as Exploration Manager – Africa for that company from January 2018 to May 2011). Mr. Bourassa holds a Master of Science in Geology from the Université du Québec à Montréal and is a member of the Association of Professional Geoscientists of Ontario.

Steven Molnar, Vice President, General Counsel & Corporate Secretary

Prior to joining the Company as its General Counsel in July 2018, Mr. Molnar practiced corporate and securities law at McCarthy Tétrault from February 2014 to July 2018 and at Heenan Blaikie LLP from October 2010 to January 2014. He has extensive experience advising on a variety of matters and transactions including with respect to corporate governance, regulatory compliance and public company reporting obligations, mergers, acquisitions and dispositions, equity and debt financings, and joint ventures and other commercial arrangements in the resource industry. Mr. Molnar holds a Juris Doctor from Osgoode Hall Law School and a Bachelor of Arts (First Class Honours) from Simon Fraser University. He is called to the bar in both British Columbia and Ontario.

Joanne Thomopoulos, Vice President, Human Resources Strategy

An influential senior human resources leader with over 15 years of direct leadership experience, Ms. Thomopoulos joined the Company in October 2018 as Vice President, Human Resources Strategy. Previously, she was Director of Human Resources at BC Hydro from January 2008 to October 2018 and Senior HR Manager at the British Columbia Lottery and Gaming Corporation from October 2003 to January 2008. In these various roles she has led workforce redesign projects, developed performance management and talent development frameworks, and provided strategic advice on mergers, acquisitions and

integrations. Ms. Thomopoulos holds a Chartered Professional in Human Resources Designation, Strategic Human Resources Management Graduate Certification, Advanced Certification in Management and a Diploma in Criminal Justice. She is also a Certified Coach and a Facilitator for Kouzes and Posner's Leadership Practices.

Steve Stakiw, Vice President, Investor Relations and Corporate Communications

Mr. Stakiw is a geologist with over 25 years of mineral exploration, research, and finance/equity market experience. He has held senior management roles with a leading mining research and investment publication and has consulted to resource-focused investment funds. Mr. Stakiw joined the Company in April 2008, initially as Manager – Corporate Communications and from November 27, 2012 as the Company's Vice President – Investor Relations and Corporate Communications. Mr. Stakiw holds a B.Sc. (Geology) degree from Lakehead University, Ontario and has completed the Canadian Securities Course.

Daniel Marinov, Vice President, Exploration

A professional geologist, Mr. Marinov has over 25 years of international experience in exploration and underground mining for precious, base metals and industrial minerals throughout Eastern Europe, Asia, Australia, as well as Central and South America in senior management roles for Rio Tinto and Anglo American. Mr. Marinov acted as Chief Geologist of the Company from April 1, 2011 to March 2013 and from April 1, 2013, has served as the Company's Vice President of Exploration. Mr. Marinov holds a Master of Science degree in mineral exploration from the University of Mining and Geology of Sofia, Bulgaria. He is a Registered Professional Geoscientist (RPGeo) with the Australian Institute of Geoscientists (AIG).

Common Share Ownership

As of the date of this AIF, the directors and executive officers of the Company, as a group, beneficially own, directly or indirectly, or exercise control or direction over an aggregate of 7,404,510 Common Shares, which together represent approximately 0.91% of the Company's issued and outstanding Common Shares before giving effect to the exercise of options or warrants to purchase Common Shares held by such directors and officers. The statement as to the number of Common Shares beneficially owned, directly or indirectly, or over which control or direction is exercised by the directors and executive officers of the Company as a group is based upon information furnished by the directors and executive officers.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

The following information, not being within the knowledge of the Company, has been furnished by the respective directors and executive officers.

No director or executive officer of the Company is, as at the date of this AIF, or has been within the last ten years, a director, chief executive officer or chief financial officer of any company (including the Company) that:

(a) was subject to a cease trade order, an order similar to a cease trade order, or an order that denied the relevant company access to any exemption under applicable securities legislation, and which in all cases was in effect for a period of more than 30 consecutive days (an "**Order**"), which Order was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer of such company; 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 of such company.

Other than as set forth below, no director or executive officer of the Company or any shareholder holding a sufficient number of Common Shares to affect materially the control of the Company:

(a) is, as at the date of this AIF, or has been within the last ten years, a director or executive officer of any company (including the Company) 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;

(b) has, within the last ten years, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or become subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold his assets;

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

(d) has been subject to any penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision regarding the Company.

On March 10, 2010, the TSX Venture Exchange, Inc. ("**TSXV**") rendered a decision with respect to a review concerning certain unauthorized loans by Xiana Mining Inc. (formerly "Dorato Resources Inc.") to the Company. As part of its decision, the TSXV required Mr. Drescher (who was a director of Xiana at the relevant time) to seek prior written approval from the TSXV should he propose to be involved with any other TSXV listed issuer as a director and/or officer. On May 14, 2010, the TSX, upon review of the TSXV's decision, required Mr. Drescher to seek approval from the TSX should he propose to be involved with any other TSX listed issuers as a director and/or officer. In addition, the TSX required Mr. Drescher to inform the TSX of any future actions commenced against him by any regulatory entity. Subsequently, Mr. Drescher applied to the TSX for reconsideration of the abovementioned restrictions and, on May 1, 2013, the TSX agreed to remove all such restrictions.

Russell Ball was a director of Molycorp, Inc. ("**Molycorp**") from March 2010 until August 2016. In June 2015, Molycorp filed a voluntary petition for relief under chapter 11 of title 11 of the United States Code in the United States Bankruptcy Court for the District of Delaware. On November 3, 2016, Molycorp announced that it filed a joint plan of reorganization with the US Bankruptcy Court for the District of Delaware that proposed an emergence from chapter 11 protection and on August 31, 2016, Molycorp announced that such plan of reorganization became effective and Molycorp emerged from chapter 11 protection.

Conflicts of Interest

Most of the Company's directors and/or officers are also directors, officers, employees or consultants of other companies that are engaged in the business of acquiring, developing and exploiting natural resource properties. Such associations may give rise to conflicts of interest from time to time. As a result, opportunities provided to a director of the Company may not be made available to the Company, but rather may be offered to a company with competing interests. The directors of the Company are required by law to act honestly and in good faith with a view to the best interests of the Company, to disclose any personal interest which they may have in any project or opportunity of the Company, and to abstain from voting on such matters.

Chris Eskdale and Dan Myerson, both directors of the Company, are members of the senior management team at Glencore. Glencore is a significant shareholder of the Company, owning approximately 26% of the issued and outstanding Common Shares. In addition, through off-take agreements, Glencore has agreed to purchase all concentrates from the Company's Santander, Caribou, Rosh Pinah, and Perkoa operations. Furthermore, Glencore and the Company and certain of their respective affiliates, have entered into agreements to provide technical services. As part of the Investor Rights Agreement, Glencore has been granted certain board nomination rights, the right to participate in future equity offerings by the Company to maintain its pro rata ownership in Trevali and consent rights on any future material asset sales. Pursuant to the Investor Rights Agreement, Glencore has agreed to the Standstill (until August 31, 2020) and to hold the Share Consideration until August 31, 2019. The Standstill prohibits Glencore from taking certain specified actions without Trevali's approval, including, among other things, launching a takeover bid or increasing its ownership in Trevali.

The directors and executive officers of the Company are aware of the existence of laws governing the accountability of directors and officers for corporate opportunity and requiring disclosure by the directors of conflicts of interests and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors and executive officers.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Legal Proceedings

Except as disclosed below, to the knowledge of the directors and officers of the Company, the Company and its properties are not subject to, and during the financial year ended December 31, 2018 were not subject to, any legal proceeding, nor does the Company know of any such legal proceedings to be contemplated.

An arbitration proceeding commenced on March 24, 2017 by Diorite Securities Limited, as Trustee of the Fern Trust (the "**Fern Trust**"), against Trevali Mining (New Brunswick) Ltd. regarding the calculation of the10% net profit interest ("**NPI**") royalty in the Caribou Mine. A decision with respect to the first phase of the arbitration was rendered in November 2018 but is subject to appeal by the Fern Trust. A date for the hearing of the appeal, as well as for the second phase of the arbitration, has not yet been set.

An action was commenced on December 13, 2017 in the Court of Queen's Bench of New Brunswick, also by Diorite Securities Limited, as Trustee of the Fern Trust, against both Trevali Mining (New Brunswick) Ltd. and the Company. The action asserts that the Company has an obligation to run the mine in accordance with Fern Trust's interests. The Company has brought a motion to strike the claim on the basis that the pleading does not disclose a reasonable cause of action. The hearing date for that motion was scheduled to take place in February 2018 but has been adjourned by mutual consent.

Regulatory Actions

Except as disclosed below, to the knowledge of the directors and officers of the Company, the Company has not: (a) had any penalties or sanctions imposed against it by a court relating to securities legislation or by a securities regulatory authority during the financial year ended December 31, 2018; (b) had any other penalties or sanctions imposed against it by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision; or (c) entered into any settlement agreements with a court relating to securities legislation or with a securities regulatory authority during the financial year ended December 31, 2018.

On January 26, 2016, Trevali received a "*Notice of Intent to Issue a Direction Pursuant to the Fisheries Act*", dated January 19, 2016 (the "**Notice of Intent**"). The Notice of Intent makes a claim, among other things, that Trevali is responsible at its Caribou mining operations in allowing the deposit of a deleterious substance in water frequented by fish that is not authorized and that all reasonable measures consistent

with public safety and with the conservation and protection of fish have not been taken under the *Fisheries Act*, etc. The Notice of Intent lists a number of measures Trevali must take in respect to the conservation and protection of fish and fish habitat. In response to such Notice of Intent, Trevali has made detailed oral and written submissions to the Environmental Enforcement Directorate. In connection with same, Trevali has had the assistance of its current primary technical consultant at Caribou who has an approximate 35-year working history at the Caribou Mine, working with various prior owners and organizations (including the Province of New Brunswick). The Company's position in respect to the various allegations is that the Notice of Intent incorrectly puts responsibility for a number of historic liabilities associated with the Caribou Mine site on the Company which are legally the responsibility of the Province of New Brunswick, as contemplated by the terms of the Company's January 30, 2013 limited environmental liability agreement entered into with the Province of New Brunswick in respect to the Caribou Mine. Subsequent meetings with provincial and federal agencies has resulted in correct application of the responsibilities under the limited environmental liability agreement and the provincial governing authority in coordination with Trevali have enacted a long-term correction action plan to respond to the Notice of Intent. The Company is still in discussions with government authorities in this regard.

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Except as disclosed below, none of the directors or executive officers of the Company, or persons or companies that beneficially own, or control or direct, directly or indirectly, more than 10% of the outstanding Common Shares, or any associate or affiliate of any of the foregoing, has any material interest, direct or indirect, in any transactions in which the Company has participated since January 1, 2016, which has materially affected or is reasonably expected to materially affect the Company.

Chris Eskdale and Dan Myerson, directors of the Company, are members of the senior management team at Glencore. Glencore is a significant shareholder of the Company, owning approximately 26% of the Company's issued and outstanding Common Shares. In addition, through off-take agreements, Glencore has agreed to purchase all the concentrates from Santander, Caribou, Rosh Pinah and Perkoa and has entered into agreements with the Company relating to the Glencore Acquisitions as described under the heading *"General Development of the Business – 2017 Recent Developments – Acquisitions and Related Equity and Debt Financings"*.

TRANSFER AGENTS AND REGISTRARS

The transfer agent and registrar of the Common Shares is Computershare Investor Services Inc. at its offices in Vancouver, British Columbia at 3rd Floor, 510 Burrard Street, Vancouver, British Columbia V6C 3B9.

MATERIAL CONTRACTS

The following are contracts that are material to the Company that were entered into either (i) during the financial year ended December 31, 2018; or (ii) prior to January 1, 2018 that are still in effect, other than contracts entered into in the ordinary course of business:

(a) Investor Rights and Governance Agreement dated August 31, 2017 between the Company and Glencore International AG; and

(b) Amended and Restated Credit Agreement dated September 18, 2018 between the Company and the Bank of Nova Scotia, HSBC Bank Canada, Société Générale, Bank of Montreal, the Toronto-Dominion Bank, National Bank of Canada and ING Capital, as amended December 31, 2018.

Copies of the above material contracts have been filed under the Company's profile on the SEDAR website at www.sedar.com and may be obtained from the Company upon request.

INTERESTS OF EXPERTS

Names of Experts

Set forth below are the persons and companies who prepared or certified a statement, report, valuation or opinion described, included or referred to in a filing that the Company made under National Instrument 51-102 – *Continuous Disclosure Obligations* during or relating to the Company's most recently completed financial year.

The Company's auditors are PricewaterhouseCoopers LLP, Chartered Professional Accountants, who have prepared an independent auditor's report dated February 20, 2019 in respect of the Company's consolidated financial statements as at and for the years ended December 31, 2018 and December 31, 2017. PricewaterhouseCoopers LLP has advised that they are independent with respect to the Company within the meaning of the Chartered Professional Accountants of British Columbia Code of Professional Conduct.

The authors of the Technical Reports are listed elsewhere in this AIF.

Interest of Experts

To the best of the Company's knowledge, none of the experts named under "Names of Experts" has received or will receive any registered or beneficial interests, direct or indirect, in any securities or other property of the Company or of any of the Company's associates or affiliates in connection with the preparation or certification of any statement, report or valuation prepared by such person. To the knowledge of the Company, none of the experts so named (or any of the designated professionals thereof) held securities of the Company representing more than 1% of all issued and outstanding securities of any class as at the date of the statement, report or valuation in question.

AUDIT COMMITTEE

Audit Committee's Charter

The charter of the Company's Audit Committee is reproduced as Exhibit "A" to this AIF.

Composition of Audit Committee

The Audit Committee is comprised of Russell Ball, Anton Drescher and Dan Isserow, all of whom are independent directors of the Company within the meaning of National Instrument 52-110 – *Audit Committees* ("**NI 52-110**"). The Chair of the Audit Committee is Mr. Ball. All members of the Audit Committee are financially literate. The members of the Audit Committee are elected by the Board at its first meeting following each annual shareholders' meeting to serve one-year terms and are permitted to serve an unlimited number of consecutive terms.

Relevant Education and Experience

In addition to each member's general business experience, the education and experience of each Audit Committee member that is relevant to the performance of his responsibilities as an Audit Committee member is as follows:

Russell Ball – Mr. Ball qualified as both a Chartered Accountant from the Institute of Chartered Accountants of South Africa and a Certified Public Accountant in Colorado. He was most recently Executive Vice President, Chief Financial Officer and Corporate Development of Goldcorp Inc., a role he assumed in March 2016 after initially joining Goldcorp Inc. in 2013. Prior to his role with Goldcorp Inc., Mr. Ball served in varying capacities for Newmont Mining Corporation, culminating with his appointment as Executive Vice President and Chief Financial Officer.

Anton Drescher – Mr. Drescher has been a Certified Management Accountant since 1981. He is also the President of Westpoint Management Consultants Limited, a private company engaged in tax and accounting consulting for business reorganizations since 1979 and the President of Harbour Pacific Capital Corp., a private British Columbia company involved in regulatory filings for businesses in Canada since 1998.

Dan Isserow – Mr. Isserow is a Chartered Accountant from the Institute of Chartered Accountants of South Africa with financial and business experience across various business sectors. He is currently the President and Chief Financial Officer with Silica Ventures, a company focused on the expanding market for digital sign applications; with customers in Canada and the United States.

Reliance on Certain Exemptions

Except as disclosed below, at no time since the commencement of the Company's most recently completed financial year has the Company relied on any of the exemptions contained in NI 52-110.

In connection with the reconstitution of the Board following completion of the Glencore Acquisitions, effective October 26, 2017, the Audit Committee was reconstituted as a four-member committee comprised of Anton Drescher, Russell Ball, Dan Isserow and Chris Eskdale. Mr. Eskdale is not considered to be independent within the meaning of NI 52-110 as a result of being an officer of Glencore. The Board determined that Mr. Eskdale should not continue to serve as a member of the Audit Committee and he resigned from the Audit Committee subsequent to the year ended December 31, 2017. The Audit Committee has determined that Mr. Eskdale will continue to be invited to participate in committee meetings to the extent that the Audit Committee determines that this is in the best interests of the Company.

Audit Committee Oversight

At no time since the commencement of the Company's most recently completed financial year was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the Board.

Pre-Approval Policies and Procedures

Pursuant to the terms of the Audit Committee Charter, the Audit Committee must review all non-audit services to be provided to the Company by the external auditor.

External Auditor Service Fees (By Category)

The aggregate fees billed by the Company's external auditors in each of the last two financial years for audit fees are as follows in Canadian dollars:

Financial Year Ended	Audit Fees	Audit-Related Fees (1)	Tax Fees (2)	All Other Fees (3)
2018	C$558,769	C$120,000	C$12,120	Nil
2017	C$280,000	C$81,000	C$233,170	Nil

Notes:

(1) Fees charged for assurance and related services reasonably related to the performance of an audit or review of the Company's financial statements, and not included under "Audit Fees".

(2) Fees charged for tax compliance, tax due diligence report, tax advice and tax planning services.

(3) Fees for services other than disclosed in any other column.

ADDITIONAL INFORMATION

Additional information relating to the Company may be found under the Company's profile 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 is contained in the Company's management information circular dated May 8, 2018. Additional financial information is provided in the Company's audited consolidated financial statements and management's discussion and analysis for the financial year ended December 31, 2018.

Exhibit "A"
AUDIT COMMITTEE CHARTER

TREVALI MINING CORPORATION
(the "Company")

I. PURPOSE

Senior management, as overseen by the Board of Directors (the "**Board**") of the Company, has the primary responsibility for the Company's financial reporting, accounting systems and internal controls. The Audit Committee (the "**Committee**") is a committee of the Board established to assist the Board in fulfilling its oversight responsibilities relating to:

1. the Company's accounting and financial reporting processes and systems of internal accounting and financial controls;
2. the timelines, quality and integrity of the Company's financial statements;
3. the Company's compliance with legal and regulatory requirements as they relate to accounting and financial controls and anti-corruption and bribery issues; and
4. the independence and performance of the Company's external auditor.

II. COMPOSITION, PROCEDURES AND ORGANIZATION

A. The Board shall appoint the members and the Chair of the Committee each year for a term of one year and may at any time remove or replace any member of the Committee and may fill any vacancy in the Committee. Committee members may serve any number of consecutive terms.

B. The position description for the Chair of the Committee is attached as Schedule "A" to this Charter.

C. The Committee shall consist of at least three members of the Board, all of whom shall be independent in accordance with the securities laws, rules, regulations and guidelines of all applicable securities regulatory authorities, including without limitation the securities commissions in each of the provinces and territories of Canada and the stock exchanges on which the Company's securities are listed, including without limitation the Toronto Stock Exchange, subject to any exemptions provided thereunder.

D. All members of the Committee shall be, in the determination of the Board, "financially literate", as that term is defined by National Instrument 52-110 – *Audit Committees*, as amended from time to time.

E. The Chair of the Committee shall, in consultation with other members of the Committee, management and the external auditor, as necessary, establish the agenda for the Committee's meetings. The agenda and information concerning the business to be conducted at each Committee meeting shall be communicated to the members of the Committee sufficiently in advance of each meeting to permit meaningful review and discussion.

F. The Committee shall have the power, authority and discretion delegated to it by the Board, which shall not include the power to change the membership of, or fill vacancies in, the Committee.

G. Notice of every meeting of the Committee shall be given to the external auditor, who shall be entitled to attend and be heard thereat.

H. The external auditor shall be entitled to communicate directly with the Chair of the Committee.

I. The Committee shall conform to the regulations which may from time to time be imposed upon it by the Board. The Board shall have the power at any time to revoke or override the authority given to, or acts done by, the Committee except as to acts done before such revocation or act of overriding.

J. At the invitation of the Committee Chair, one or more officers, employees, consultants or advisors of the Company may, or if required by the Committee, shall, attend a meeting of the Committee.

K. The Committee shall meet as often as required to fulfil its duties and at least four times each year on such dates and at such locations as determined by the Chair of the Committee.

L. The Committee shall hold an in-camera meeting with the external auditor at least once per year.

M. The Chief Financial Officer (the "**CFO**") shall be available to advise the Committee, shall receive notice of all meetings of the Committee and may attend meetings at the invitation of the Committee Chair.

N. The quorum for meetings shall be a majority of the members of the Committee, present in person or by telephone or other telecommunication device that permits all persons participating in the meeting to speak and to hear each other. Questions arising shall be determined by a majority of votes of the members of the Committee present, and in the case of an equality of votes, the Chair shall not have a second or casting vote.

O. The Committee shall keep regular minutes of its meetings and record all material matters and shall cause such minutes to be recorded in the books kept for that purpose.

P. A resolution approved in writing by all of the members of the Committee shall be valid and effective as if it had been passed at a duly called meeting. Such resolution shall be filed with the minutes of the proceedings of the Committee and shall be effective on the date stated thereon or on the latest date stated in any counterpart.

Q. The Committee shall have unrestricted and unfettered access to all Company facilities, personnel and documents and to the Company's external auditor and legal counsel, and shall be provided with the resources necessary to carry out its responsibilities.

III. DUTIES AND RESPONSIBILITIES

Without limitation to the foregoing, the following are the primary duties and responsibilities of the Committee:

A. Financial Information

1. make the following recommendations to the Board:

   (a) the external auditor to be nominated for the purpose of preparing or issuing an auditor's report and performing other audit, review or attest services for the Company; and

   (b) the compensation of the external auditor;

2. review the external auditor's proposed audit plan, including:

   (a) the auditor's engagement letter;

   (b) the reasonableness of the estimated audit fees;

(c) the scope of the audit, including materiality, locations to be visited, audit reports required, areas of audit risk, timetable, deadlines and coordination with the internal financial team and key deliverables;

(d) reliance and testing of internal control and internal audit;

(e) involvement of other firms or branches of the external auditor; and

(f) the external auditor's resources scheduled for executing the plan;

3. review the results of the external audit, including:

(a) the post-audit management letter, together with management's response thereto;

(b) the form of the audit report;

(c) any other related audit engagements;

(d) non-audit services performed by the external auditor;

(e) resolution of any disagreements between management and the external auditor regarding financial reporting;

(f) assessment of the auditor's performance; and

(g) meeting with the external auditor to discuss pertinent matters, including the quality of accounting personnel;

4. review all public disclosure of the Company's financial information before the Company publically discloses such information;

5. review the annual and quarterly financial statements and related matters, and recommend their approval to the Board after discussing with management matters such as the selection of accounting policies, major accounting judgements, accruals and estimates;

6. review all public disclosure containing audited or unaudited financial information before release, including any prospectus, annual information form, annual report, interim report, management's discussion and analysis (the "**MD&A**") and press releases which contain financial information about the Company;

B. Interim Financial Statements

1. obtain reasonable assurance on the process for preparing reliable quarterly interim financial statements from discussions with management and, where appropriate, reports from the external auditor;

2. review, or engage the external auditor to review, the quarterly interim financial statements;

3. obtain reasonable assurance from management and satisfy itself that adequate procedures are in place for the review of the Company's public disclosure of audited and unaudited financial information and periodically assess the adequacy of those procedures;

C. Internal Controls and Risk Management

1. establish procedures for:

(a) the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters; and

(b) the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting practices;

2. obtain reasonable assurance from discussions with, and/or reports from, management, and reports from the external auditor that the Company's accounting systems are reliable and that the prescribed internal controls are operating effectively;

3. direct the auditor's examinations to particular areas;

4. request the external auditor to undertake special examinations (e.g., review compliance with conflict of interest policies);

5. review control weaknesses identified by the external auditor, together with management's response thereto;

6. review the appointments of the CFO and key financial executives;

7. review the processes that support the Chief Executive Officer's (the "**CEO**") and the CFO's certification regarding internal controls over financial reporting ("**ICFR**") and be satisfied that they constitute a reasonable approach and are diligently performed;

8. review all design or operational weaknesses in ICFR identified in these processes that could have a material impact on the accuracy and adequacy of the Company's financial reporting;

9. review how management assessed each weakness, and decided on whether it should be disclosed in the MD&A or not;

10. review the completeness and accuracy of the disclosures provided in the MD&A;

11. review, with advice from the external auditor and legal counsel as necessary, the proposed course of action for the CEO and the CFO signing of the certificates and consultation with the appropriate securities regulators when unremedied ICFR design weaknesses are disclosed in the MD&A;

12. in consultation with the Company's CFO, establish standards and procedures with respect to the investment of the Company's idle funds;

13. review and approve disclosed remediation plans;

14. review and approve related party transactions;

D. Anti-Bribery and Anti-Corruption

1. discuss the principal anti-bribery and anti-corruption risks in the Company's business activities and provide oversight of appropriate systems to manage such risk;

2. through the receipt of regular reports by management, review and monitor the anti-bribery and anti-corruption policies and activities of the Company on behalf of the Board to ensure compliance with applicable laws, legislation and policies as they relate to anti-corruption and anti-bribery issues;

3. receive and review reports from management on any non-compliance with the anti-corruption or anti-bribery policies of the Company;

4. in the event of the occurrence of a corruption or bribery incident, receive and review, without delay, a report from management detailing the nature of the incident. Such report

is to be made to the Committee in its entirety, and the Committee will immediately inform the Board at large, which will review the incident and ask the Company's Disclosure Committee to determine the Company's disclosure obligations; and

5. in conjunction with the Board, periodically conduct an internal audit for compliance with the various elements of the Company's anti-bribery and anti-corruption compliance program and test for substantive compliance. This audit may also include the use of an external auditor that specializes in anti-corruption audits

IV. GENERAL

A. The Committee, when it considers it necessary or advisable, may retain, at the Company's expense, outside consultants or advisors to assist or advise the Committee independently on any matter within its mandate. The Committee shall, in consultation with management, have the sole authority to retain and terminate any such consultants or advisors, including the authority to approve the fees and other retention terms for such persons.

B. In addition to the foregoing, the Committee will:

1. assess the Committee's performance of the duties specified in this Charter and report its findings to the Board;

2. report to the Board following each meeting of the Committee on the major discussions and decisions made by the Committee;

3. review and assess the adequacy of this Charter annually and recommend any proposed changes to the Board; and

4. perform such other duties as may be assigned to the Committee by the Board from time to time or as may be required by applicable stock exchanges, regulatory authorities or legislation.

C. The Company is party to an Investor Rights and Governance Agreement (the "**IRG Agreement**") with Glencore International AG ("**Glencore**"), pursuant to which Glencore has certain rights, including, without limitation, with respect to nomination of directors and appointments to committees of the Board. As per the IRG Agreement, if any provision of this Charter conflicts with any provision of the IRG Agreement, the IRG Agreement shall prevail.

D. The function of the Committee is one of oversight. While the Committee has the duties and responsibilities set forth in this Charter, members of the Committee are not employees of the Company and are entitled to rely on the integrity of the Company's management. The Committee's responsibilities are set out in Section III of this Charter. Therefore, it is the duty of the Company's management and not the duty of the Committee to:

1. ensure that the Company complies with its financial reporting, accounting systems and internal controls;

2. ensure that the Company complies with laws, regulations or other obligations; and

3. take any action or assume any responsibility for any violation of such laws, regulations or other obligations or otherwise take any remedial action connected therewith.

SCHEDULE "A"

TREVALI MINING CORPORATION
(the "Company")

POSITION DESCRIPTION FOR THE CHAIR OF THE AUDIT COMMITTEE

I. PURPOSE

The Chair of the Audit Committee (the "**Committee**") of the Board of Directors (the "**Board**") of the Company shall be an independent Director who is elected by the Board to act as the leader of the Committee in assisting the Board in fulfilling its financial reporting and control responsibilities to the shareholders of the Company.

II. WHO MAY BE CHAIR

A. The Chair will be selected from amongst the independent Directors of the Company who have a sufficient level of financial sophistication and experience in dealing with financial issues to ensure the leadership and effectiveness of the Committee.

B. The Chair will be selected annually at the organizational meeting of the Board, and will serve for a one-year term.

III. RESPONSIBILITIES

Without limitation to the foregoing, the following are the primary responsibilities of the Chair:

1. chair all meetings of the Committee in a manner that promotes meaningful discussion;
2. ensure adherence to the Committee's Charter and that the adequacy of the Committee's Charter is reviewed annually;
3. together with the Chair of the Board, the Chief Financial Officer and the Company's external auditor, create and monitor a work plan for the Committee;
4. provide leadership to the Committee to enhance the Committee's effectiveness;
5. provide information to the Board relative to the Committee's issues and initiatives and review and submit to the Board an appraisal of the Company's independent auditor and any internal auditing functions;
6. ensure that the Committee works as a cohesive team with open communication, as well as open lines of communication among the independent auditor, financial and senior management and the Board for financial and control matters;
7. ensure that the resources available to the Committee are adequate to support its work and to resolve issues in a timely manner;
8. ensure that the Committee serves as an independent and objective party to monitor the Company's financial reporting processes and internal control systems, as well as to monitor the relationship between the Company and the independent auditor to ensure independence;
9. ensure that procedures are in place to assess the audit activities of the independent auditor and any internal audit functions;

10. ensure that procedures are in place to review the Company's public disclosure of financial information and assess the adequacy of such procedures periodically;

11. ensure clear hiring policies are put in place for partners and employees of the external auditor;

12. ensure procedures are in place for dealing with complaints received by the Company regarding accounting, internal controls and auditing matters, and for employees to submit confidential anonymous concerns regarding questionable accounting or auditing matters; and

13. management of the Committee, including:

    (a) adopting procedures to ensure that the Committee can conduct its work effectively and efficiently, including Committee structure and composition, scheduling, and management of meetings;

    (b) preparing the agenda for the Committee meetings and ensuring pre-meeting material is distributed in a timely manner and is appropriate in terms of relevance, format and detail;

    (c) ensuring Committee meetings are appropriate in terms of frequency, length and content;

    (d) obtaining and reviewing the annual report from the independent auditor with the Committee, and arranging meetings with the external auditor and financial management of the Company to review the scope of the proposed audit for the current year, its staffing and the audit procedures to be used;

    (e) overseeing the Committee's participation in the Company's accounting and financial reporting processes and the audits of its financial statements;

    (f) ensuring that the external auditor reports directly to the Committee, as representatives of the Company's shareholders; and

    (g) annually reviewing with the Committee its own performance.