



TREVALI

ANNUAL INFORMATION FORM

For the year ended December 31, 2019

March 30, 2020

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PRELIMINARY NOTES

Effective Date of Information

All information in this Annual Information Form (“AIF”) is as of December 31, 2019 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”, “Company” or “Group” 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 to 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, offtake obligations, targeted cost reductions, exploration and expansion potential and 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 and/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 projected results, performance or achievements expressed or implied by such forward-looking 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, including the Company's ability to continue operating; 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 and retain financing as and when required and on reasonable terms; 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 impacting the Company's operations; maintaining good relations with the communities where our mines are located; no significant events or changes impacting the Company relating to regulatory, environmental or health and safety matters; certain tax matters; and 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 volatility of the price of zinc, lead, silver and other metals; currency fluctuations; general global economic conditions as may be impacted by events such as the recent outbreak of the novel coronavirus ("COVID-19") pandemic; inflation risks; operating and financial restrictions due to the Company's revolving credit facility; liquidity risk; the delay or failure to obtain required financing; taxation risks; exchange controls; changes in the Company's production outlook or discrepancies between actual and estimated production; shortages or increased prices for energy and other consumables; failure to replace Mineral Reserves or material changes in Mineral Reserves and Mineral Resources, grades, production or recovery rates; delays or failure to obtain or retain permits or governmental approvals; title risks; risks associated with the Company's mineral assets held outside of Canada; political, legal and economic risks at foreign operations, including risks to personal safety and property related to social unrest and terrorist activity; unexpected regulatory changes at foreign operations; litigation risks and failure of the Company to comply with laws and regulations; opposition from community or indigenous groups; conflicts of interest among directors and officers of the Company; reliance on key personnel; accidents, labour and employment disputes and other risks of the mining industry; actual or perceived damage to the Company's reputation; results and costs of current reclamation activities; operational risks associated with water availability and use of chemicals in production; climate change related risks; seasonal conditions limiting the Company's ability to achieve production forecasts; insurance risks; compliance with anti-corruption laws; cybersecurity risks; risks related to competition and joint venture operations; risks related to underdeveloped infrastructure; actual results of current exploration activities; restrictions on operations; delays, suspensions or technical challenges associated with capital projects; failure of plant, equipment or processes to operate as anticipated; volatility of the trading price of the Company's shares; geotechnical failures resulting in temporary or permanent mine closures; risks associated with serious diseases; as well as those factors discussed in the section entitled "Risks and Uncertainties" 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

	2019	2018	2017
High	\$1.3638	\$1.3642	\$1.3743
Low	\$1.3006	\$1.2803	\$1.2128
Rate at end of period	\$1.3172	\$1.3642	\$1.2545
Average rate for period	\$1.3269	\$1.2957	\$1.2986

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 contains the rules and codes of practice developed by the Canadian Securities Administrators that established minimum standards for all public disclosure of scientific and technical information an issuer makes 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 the U.S. Securities and Exchange Commission (“**SEC**”) Industry Guide 7 (“**SEC Industry Guide 7**”) under the United States *Securities Exchange Act of 1934*, as amended. Under 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. 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, 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. 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 Yan Bourassa (P.Geol.), Trevali’s Vice President, Exploration & Mineral Resources and Nick Espenberg (P.Eng.), Trevali’s Group Lead: Business Planning, 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, All-in Sustaining Cost per pound (“**AISC**”) and Net Debt. 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.

Operating Cost per tonne

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, refining, freight, distribution, royalties, by-product metal revenues, depreciation, depletion, amortization, reclamation, capital sustaining or exploration expenses.

C1 Cash Cost per pound

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 expenses), inventory stock movement, as well as smelting, refining, 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, amortization, reclamation expenses, capital sustaining or exploration expenses.

AISC per pound

This measures the cash costs to produce a pound of payable zinc plus the capital sustaining 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 or exploration expenses.

Net Debt

Net debt demonstrates how the Company's debt is being managed and is defined as total current and non-current portions of debt and lease liabilities less cash and cash equivalents.

CORPORATE STRUCTURE

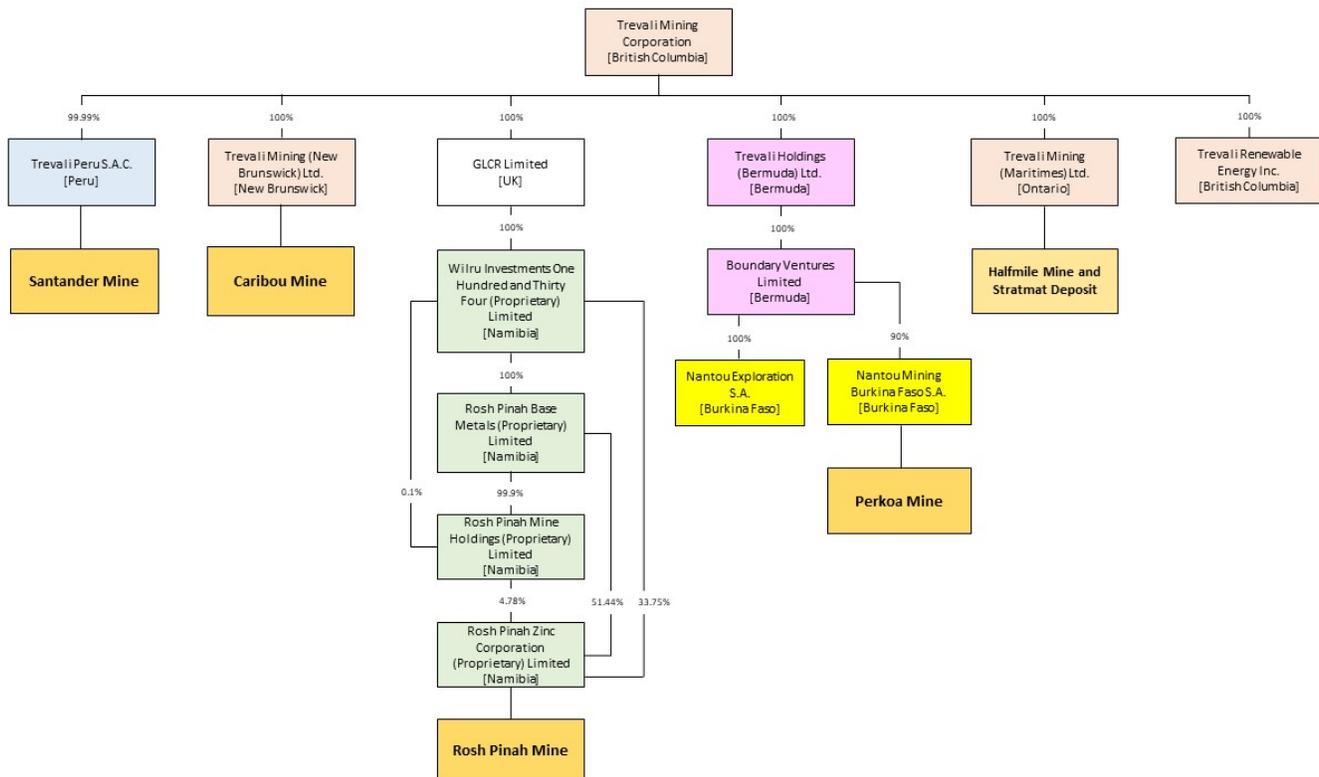
Name, Address and Incorporation

The name of the Company is Trevali Mining Corporation. The Company's head office is located at 1900 – 999 West Hastings Street, Vancouver, British Columbia V6C 2W2, Canada. The Company's registered office is located at 595 Burrard Street, Suite 2600, Vancouver, British Columbia, V7X 1L3, Canada.

The Company was incorporated under the *Business Corporations Act, SBC 2002, c 57* (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

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 30, 2020.



DEVELOPMENT OF THE BUSINESS

Our Business

Trevali is a global base-metals mining company, headquartered in Vancouver, Canada. The bulk of Trevali’s revenue is generated from base-metals mining at its four operational assets: the 90%-owned Perkoa Mine in Burkina Faso (the “**Perkoa Mine**”), the 90%-owned Rosh Pinah Mine in Namibia (the “**Rosh Pinah Mine**”), the wholly-owned Caribou Mine in the Bathurst mining camp, northern New Brunswick, Canada (the “**Caribou Mine**”) and the wholly-owned Santander Mine in Peru (the “**Santander Mine**”). In addition, Trevali owns the Halfmile Mine and Stratmat Properties (“**Halfmile-Stratmat**”), the Restigouche Deposit in New Brunswick, Canada, and the past-producing Ruttan Mine in northern Manitoba, Canada. Trevali also owns an effective 44% interest in the Gergarub Project in Namibia, as well as an option to acquire a 100% interest 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**”) (symbol TV), the OTCQX in the United States (symbol TREV), the Lima Stock Exchange (symbol TV), and the Frankfurt Stock Exchange (symbol 4TI).

Our Strategy and Positioning

Trevali’s strategy focuses on growing production and reducing cost from our four operating mines through exploration, operational excellence and responsible capital allocation, thereby increasing net asset value per share and enhancing value for our shareholders and other stakeholders. We pursue this strategy with a priority on the safety of our employees and a fundamental responsibility to the environment and the communities in which we operate. Our vision is to be the best sustainable underground mining company

focused on new economy metals 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. Management team reorganized to focus on a standard operating platform** – The leadership team and functional talent has been bolstered and reorganized to ensure the effective and efficient management by one company of four operations in distinctly different jurisdictions. Standardization and technology are being implemented and opportunities shared across the portfolio.
- 2. T90 – Transformative business improvement program launched to bring the operations down the cost curve** – Targeting \$50 million in pre-tax annual sustainable efficiencies which will reduce consolidated AISC to \$0.90 per pound of payable zinc. T90 captures a number of projects, programs, and initiatives but largely consists of improvement opportunities unique to each operating site, deployment of standardization and best practices to ensure “one company runs four orebodies,” deploying technology to improve productivity as well as decision making, and the Rosh Pinah 2.0 expansion project (“**RP2.0**”). Investments will be required as part of T90.
- 3. Attractive organic project pipeline and pursuing near-mine mineral resource discoveries** – Focused on advancing both mining and milling studies at each operation and discovering new mineral resources in proximity to existing mine infrastructure.
- 4. Levered to zinc price** – Industry-leading zinc leverage with approximately 90% of the company’s revenue generated from zinc.
- 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.

Three-Year History

Significant Developments

2020 to Date

On March 30, 2020, 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, 2019. On a consolidated basis, total Proven and Probable Mineral Reserves were 2.6 billion pounds of contained zinc, 453 million pounds of contained lead and 14.4 million ounces of silver. For additional information, refer to the news release entitled “Trevali Provides Mineral Reserve and Mineral Resource Update” issued by the Company on March 30, 2020.

Effective March 30, 2020, Jessica McDonald stepped down as a director of the Company, after having joined the Board in October 2017 and subsequently being appointed as Chair of the Board in March 2019. Jill Gardiner was appointed to the role of Chair of the Board, having first joined the Board in July 2019. Ms. Gardiner has a wealth of public company board experience and a strong background in finance, capital markets and corporate governance, making her ideally suited to lead the Board in its oversight role through

the next phase of the Company's development. Ricus Grimbeek, the President and Chief Executive Officer of the Company, was also appointed to the Board to fill the place vacated by Ms. McDonald's retirement.

On March 26, 2020, the Company announced the temporary suspension of operations at the Caribou Mine. The deterioration in the global zinc market, exacerbated by the continuing challenges presented by COVID-19, combined with high concentrate treatment charges, make mine operations at Caribou uneconomic as of the date of this AIF. The Caribou Mine has been placed on a care and maintenance program to preserve the value of the mineral resource and mine assets. For additional information, refer to the news release entitled "Trevali Announces Temporary Suspension of Caribou Mine Operations" issued by the Company on March 26, 2020.

On March 3, 2020, the Company announced that Gerbrand van Heerden had departed as Chief Financial Officer and that Matthew Quinlan had been appointed as Interim Chief Financial Officer. Mr. Quinlan is the former Chief Financial Officer of Dominion Diamonds Corporation and previously worked in the investment banking industry including as Managing Director and Co-Head of CIBC's Global Mining Investment Banking Group.

On February 20, 2020, the Company announced its financial and operational results for the year ended December 31, 2019. The Company exceeded zinc production guidance by producing a record 417 million payable pounds of zinc, a 3% increase over 2018, and achieved record zinc payable sales of 440 million pounds, a 9% increase over 2018. The Company also produced 50.3 million pounds payable lead and 1.5 million ounces of silver, a 21% and 15% increase, respectively, over 2018.

2019

2019 was a transformational year for the Company, highlighted by the hiring of Ricus Grimbeek as President and Chief Executive Officer on April 23, 2019, replacing Dr. Mr. Cruise, who had founded Trevali and served as its Chief Executive Officer since 2008. An experienced mine operator with three decades of progressive experience in the mining industry, Mr. Grimbeek has a proven track record working at all levels of the business. Before joining Trevali Mr. Grimbeek was Chief Operating Officer for Vale Base Metals North Atlantic, was previously President and Chief Operating Officer of South32 Australia and held prior leadership roles with Aluminium Australia, BHP Billiton and Lonmin Platinum.

Under Mr. Grimbeek's leadership and direction, the Company has embarked on an ambitious transformation program, including an enhanced focus on responsible and safe mining and the launch of the T90 business improvement program in Q3 2019 to bring the operations down the cost curve as described in greater detail above. A number of key senior management appointments have been made to support this transformation, including a new Chief Technology Officer and a new Chief Sustainability Officer.

In June 2019, the Company released its inaugural annual Sustainability Report, an important step in becoming more transparent in how the Company manages the elements of sustainability, and a key part of the Company's objective of becoming the world's best sustainable underground mining company.

2019 also saw further renewal of the Board of Directors, with Richard Williams being appointed to the Board in June 2019 and Jill Gardiner being elected at the annual general and special meeting of shareholders in July 2019, with Mike Hoffman and Tony Drescher retiring from the Board. In March 2019, Jessica McDonald was appointed as Chair of the Board, succeeding Mr. Hoffman.

In Q4 2019, the Company successfully completed the Rosh Pinah filtration and grinding project on schedule and budget, with the project expected to result in improved metallurgical recoveries, reduced processing times and reduced inventory levels.

On November 29, 2019, the Company announced that the Toronto Stock Exchange ("TSX") had accepted the Company's notice to implement a normal course issuer bid ("NCIB"). The approval allowed the

Company to purchase, for cancellation, up to 50,000,000 common shares over a twelve-month period beginning December 2, 2020. The Company also renewed its automatic share purchase plan with its designated broker to allow for the repurchase of shares under the NCIB at times when the Company would ordinarily not be permitted to purchase shares due to regulatory restrictions and customary self-imposed blackout periods. Under the previous NCIB, which expired November 18, 2019, the Company purchased a total of 28.6 million shares at a cost of C\$8.9 million. As of the date of this AIF, and in line with its strategy of preserving capital, the Company has cancelled the NCIB effective March 26, 2020.

2018

During 2018, the Company made a number of significant additions to strengthen its executive leadership team, including the appointment of a new Chief Legal Officer and Corporate Secretary, a new Chief People Officer and a new Vice President, Mineral Resource Management.

On November 15, 2018, the Company announced that the TSX had accepted the Company's notice to implement a 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.

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.

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.

2017

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 and an aggregate of 193,432,310 Common Shares with an estimated fair value of C\$244 million. The cash portion of the 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.C., 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, consent rights on any future material asset sales, and the right to purchase concentrates from future assets acquired or put into production by the Company. Pursuant to the Investor Rights Agreement, Glencore agreed to a 36-month standstill and to hold the common shares comprising the share portion of the consideration for a period of at least 24 months following the closing of the Glencore Acquisitions, which hold period expired August 31, 2019. The standstill obligation 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 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.

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. Readers should also refer to the section entitled “Risks and Uncertainties” below for further information regarding the Company’s operations 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. The current regime consists of a democratically elected president, Mr. Roch Marc Christian Kabore, and an appointed Prime Minister and Council of Ministers. The next election is scheduled to be held in November 2020.

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).

Currency

The official monetary unit of Burkina Faso is the West African CFA franc (XOF), 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.

Mineral Rights and Laws

In Burkina Faso, the government owns the title to all mineral rights. Burkina Faso's legal system is based on the French civil law system and customary law. Mining in Burkina Faso is mainly regulated by Burkina Faso's 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 the operations of Nantou Mining Burkina Faso SA (“**Nantou Mining**”) in Perkoa 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 government 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 (as defined below), 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 government 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% Net Smelter Royalty (“**NSR**”) payable to the government on all base metal production in Burkina Faso, as well as a 1% levy to the Community Development Fund (as described below). 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% 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 government 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.

The Perkoa 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 permit.

A 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. Changes to the Mining Code include the introduction of a 1% levy on revenues derived from business in Burkina Faso to serve the development of local communities (the “**Community Development Fund**”), the elimination of the reduced corporate tax rate, resulting in a tax increase from 17.5% to 27.5% and a priority dividend payable to the government of Burkina Faso. The new Mining Code does not apply to the Perkoa Mine, though Nantou Mining has entered into an agreement with the government of Burkina Faso effective January 2020 in relation to Nantou Mining’s voluntary contribution to the Community Development Fund.

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. Readers should also refer to the section entitled “Risks and Uncertainties” below for further information regarding the Company’s operations in Namibia.

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 Dr. Hage Geingob who was re-elected in November 2019.

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 Common Monetary Area of Southern Africa (“**CMA**”).

Mining Industry

Mining contributes to approximately 25% of Namibia’s income and is the largest single contributor to the economy. Namibia has various natural resources being exploited, including diamonds, uranium, copper, gold, lead, tin, lithium, cadmium, zinc, salt, and vanadium.

Mineral Rights and Laws

In Namibia, all mineral rights to the property are vested in the government. 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**”). This Act provides for six types of authorizations and permits:

- A Non-Exclusive Prospecting License (NEPL) exploration authorization valid for six months, and which 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 at a time;
- A Reconnaissance License (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 an EPL, ML or MC 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.

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 it allows for unlimited non-consecutive terms. Mr. Martin Vizcarra, was sworn in as the President of Peru on March 23, 2018.

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 for 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 maintenance fee 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 maintenance fee increases to US\$23.00 per hectare per year 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* (payment for the right to a concession) 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 annual maintenance fee.

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, firstly 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 secondly 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, Bermuda and Burkina Faso. 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 (Pty) Ltd ("**RPZC**") and Nantou Mining Burkina Faso S.A. ("**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 government 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 down 12.9% in 2019 compared to 2018, while the lead price was down 10.8% and the silver price was up 3.4%.

We believe the outlook for the zinc market is supportive of higher prices. In 2019, global consumption of the metal was greater than what the market could supply for a fourth straight year. Over the past year, zinc smelters globally have been slow to respond to increasing treatment charges. As a result, refined zinc inventories have reduced to levels which have not been experienced since July 2007 at a time when the zinc price was approximately \$1.60 per pound. This deficit to refined zinc inventories occurred despite two years of demand contraction. Currently there is much uncertainty with respect to the supply and demand of zinc, and base metals more broadly, due to the challenges presented by COVID-19. The Company believes the current inventory deficit will accelerate as mines will be forced to close due to safety and logistical issues and secondly due to the economics of the current zinc market. With a significant curtailment to global production this should provide fundamental support for lower treatment charges and a higher zinc price as demand outweighs supply.

Sales and Refining

For the year ended December 31, 2019, 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)	179.8	92.0	75.0	70.6	417.4
Lead (million pounds)	-	12.1	26.7	11.5	50.3
Silver (million ounces)	-	0.2	0.7	0.6	1.5

Our revenues by product category for the financial years ended December 31, 2019 and December 31, 2018 were as follows:

Product Revenue	2019	2018
Zinc	88%	89%
Lead-Silver	12%	11%

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, 2019, the Company had the following number of employees and contractors:

Location	Employees	Contractors
Perkoa	338	392
Rosh Pinah	435	177
Santander	75	570
Caribou	259	90
Corporate	31	0
Total	1,138	1,229

New Operating Model; Specialized Skills and Knowledge

In 2019, the Company introduced “the future of mining” concept, shifted its operating model and launched a functional platform to capture scale and attract the best talent to provide “mining as a service” to the operations. Through this process, the Company bolstered its functional teams at the corporate office by recruiting talents with specialized skills and knowledge and mining industry experience, to establish Group standards and procedures, develop roadmaps and long-term plans as well as streamlining and integrating systems and processes, aimed at increasing alignment, efficiency and cohesiveness across the Group. With a diversified asset base, the Company has identified that technical expertise in the areas of technology, business planning, environment, community and government relations, geology, engineering, metallurgical processing and mine operations are crucial to our business. As such, Trevali is invested in recruiting, training and developing qualified employees in these areas in order to build internal capacity and deliver on our goals. Where there are skills shortages within the internal team due to stiff competition for highly skilled employees in the countries the Company operate in, the Company utilizes contracted labour to close skills gaps and provide training to employees. One of the key focuses of Trevali is to continuously grow and develop its employees through cross-collaboration and knowledge sharing, which are supported by our global mobility program, learning and development framework and communication tools and systems.

Sustainability

We believe that operating with sustainability integrated into the way we work is essential to successfully executing on our business strategy. Our achievements were recognized in 2019 by the Institutional Shareholders (“ISS”), when Trevali went from a 9 (lowest performance in our peer group) to a 1 (highest performance in our peer group) for our social performance and a 9 to a 5 for our environmental performance, while retaining a score of 1 in governance in 2019.

In 2019, Trevali worked with employees to identify values that reflect who we are, and the company we aim to be. Four values were identified, including the value of “Care” which means demonstrating care for each other, the environment and the communities we touch”. To thrive in today’s world, we must hear and act

upon the needs of stakeholders. We must anticipate and respond to the needs of future generations, to ensure that we are welcome to operate in any part of the world.

In 2018 and 2019, Trevali has built and embedded a comprehensive management system that identifies and mitigates Environmental, Social and Governance risks and advances opportunities. Trevali joined the Mining Association of Canada (“**MAC**”) at the end of 2019. The MAC “Towards Sustainable Mining” Protocols have been embedded into Trevali’s management system.

Recording, managing and tracking, progress to targets, improvement actions, incidents, audits, inspections, risks, licenses and permitting obligations is governed by the Group Sustainability Reporting Standard and managed through a global online data platform.

Trevali will publish our second sustainability report in the second quarter of 2020 (for the financial year ended December 31, 2019). This will contain our sustainability strategy, our first Task Force on Climate-related Financial Disclosures aligned information, as well as baseline data for our material issues. We will report in accordance with the Global Reporting Initiative core standards.

Safety and Health

We believe that all employees have the right to a safe and healthy workplace. Continuous improvement is designed into the Trevali Safety and Health Standards and procedures as well as our Fatal Risk Controls, which collectively comprise a Safety and Health management system. Our approach to security has improved in 2019, with a focus on training our employees and contractors in the Voluntary Principles on Security and Human Rights.

During 2019, we focused on measuring both leading and lagging safety key performance indicators. We improved our Total Recordable Injury Frequency¹ rate from 12.85 in 2018 to 6.93 in 2019 and used learnings from each incident to improve the way we measure and report the effectiveness of key controls consistently across all four of our operating mines. Our Perkoa Mine had a noteworthy achievement of zero lost time injuries during 2019. In 2019, we also conducted a voluntary review of the health exposure data at all operations to ensure that effective monitoring is in place.

We are continuing to strengthen our critical controls by measuring their effectiveness and using this data to enable response before an incident occurs. We are committed to:

- a proactive safety management culture that comprises of teamwork and collaboration, personal responsibility and clearly defined accountability;
- providing our people with the necessary equipment, tools and training to understand their risk and conduct their work safely;
- operating in compliance with, or exceeding, all statutory requirements within the countries that we operate in;
- working in an inclusive environment free from harassment and discrimination, and taking cognizance of human rights through ethical decision-making and actions;
- believing that working safely is a key step in operational efficiency; and
- continually improving our technology-in-use, management standards and procedures to achieve an injury and disease-free workplace.

¹ Total Recordable Injury Frequency is the number of fatalities, lost time injuries, substitute work, and other injuries requiring treatment by a medical professional per million hours worked.

Environment and climate change

We aim to be responsible stewards of the natural resources that we touch. In 2019, we developed a Trevali Environment Standard that outlines the best practice actions, controls and thresholds required for all operations. We continued to develop baseline environmental data for the Group. We obtained a baseline greenhouse gas emissions balance for all of our facilities, which will enable us to set targets that are aligned with the objectives of the 2015 Paris Agreement on climate change.

We commenced with developing comprehensive facility water level balances, which will optimize our water use, reduce water-related risks and ensure that the human right to water is respected. We developed a climate change action plan, approved by the Trevali board in November 2019, and completed a climate-related physical impacts risk assessment at Rosh Pinah, our longest life asset. Trevali received no environmental fines at any operation in 2019.

Closure

All facilities have a closure provision in place. The estimates for closure are prepared by qualified individuals and reviewed annually as well as revised in line with the regulatory requirements in each jurisdiction or at the time a material change to the mine plan is considered. The Company's provision for future site closure is based on the level of known disturbance at the statement of financial position date, known legal requirements and estimates prepared by internal and third-party specialists. Because Trevali operate underground mines, the cost of land reclamation is much lower than for open pit mines. Plans include costs for stakeholder engagement and consent seeking consultation, earthworks, including land re-contouring and re-vegetation, water treatment, environmental monitoring and demolition. The assumption used in the estimation of the provision are as follows:

	Undiscounted liability for closure (\$)	Remaining LOM (years)	Pre-tax discount rate (%)	Inflation factor (%)	Present value of cash flow required on closure (\$)
Perkoa	8,311	7	2.20	2.10	8,274
Rosh Pinah	5,280	12	10.01	5.50	3,194
Santander	11,626	6	2.30	2.20	11,444
Caribou	24,877	7	1.70	1.40	24,689
Halfmile	534	N/A	1.70	1.40	531
Total					48,132

The following is a continuity schedule of the Company's estimated provisions:

	Year Ended December 31	
	2019 (\$)	2018 (\$)
Beginning of the year	338	392
Accretion	435	177
Change in discount rate	46,727	47,690
Change in estimates	1,455	4,046
Change in foreign exchange rates	(88)	(1,584)
End of the year	(935)	(714)

Tailings

Trevali is committed to the safe and responsible management of tailings during and post operating mine life. A voluntary, independent tailings storage facility (“**TSF**”) assurance review was undertaken for each of the Trevali facilities in 2019, that assessed design, construction and modification, operation and maintenance, monitoring and governance. While no material risks were identified, a Dam Management Standard (aligned with the MAC TSM Protocol on Tailings) was developed and implemented to ensure best practice going forward. In 2019, Trevali responded proactively to the “Investor Mining and Tailings Safety Initiative”, an initiative by the Church of England and others to ensure that tailings risks were understood and disclosed to the market and this disclosure can be downloaded from our website.

Community

We continue to build trusting relationships with communities. We seek to obtain Free, Prior and Informed Consent (FPIC), as recognized by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). We embrace the complexity, diversity, cultural heritage and customs of our employees as well as respecting those of the communities who live around us.

The Trevali Group made investments in community engagement and development, with activities primarily focused on education, health and social enterprise development. In 2019, Trevali received approval from the community to raise our TSF at the Caribou Mine. We also received community approval for significant exploration activities around the Santander mine.

A common group Community Standard, which provides the management system to identify, mitigate and report risks and controls was implemented. This included enhanced transparency obligations over meetings with the community and government, thereby mitigating governance risks, such as bribery or corruption. A platform that enables communities to report grievances and complaints anonymously is being developed and will be implemented after a pilot testing phase in local languages is completed.

MINERAL PROPERTIES

As at December 31, 2019, the Company considered each of the Perkoa Mine, the Rosh Pinah Mine, the Santander Mine and the Caribou Mine to be material mineral projects for the purposes of NI 43-101. Effective March 26, 2020, the Company has indefinitely suspended operations at the Caribou Mine, as

economic conditions make mine operations at Caribou uneconomic at this time. No timeline for a potential restart of operations at Caribou has been defined.

Set forth below is certain scientific and technical information in relation to each of the above-mentioned mineral 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. Scientific and technical information below which is not included in the Perkoa Technical Report has been reviewed and approved by Yan Bourassa (P.Geol.), Vice President, Exploration & Mineral Resources of the Company and Nick Espenberg (P.Eng.), Group Lead: Business Planning of the Company, each of whom is a qualified person under NI 43-101.

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 share 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 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 government of Burkina Faso holds 10%, in accordance with the 2003 Burkina Faso Mining Code. This 10% government 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.

The Perkoa 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 Perkoa Mining Convention is valid for 20 years ending August 25, 2028 and may be renewed for subsequent 5-year periods until the mining reserves have been depleted.

The Perkoa Exploitation Permits were surrounded by the Poa exploration permit and the Guido exploration permit which covered 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 were valid until July 10, 2019 and were no longer able to be renewed. On July 11, 2019, the Perkoa Exploration Permits were immediately reapplied for under Sanguie Exploration and renamed Kikio and Semapoun exploration permits, covering a total area of 235.7 square kilometres. These applications have been accepted and the final granting is pending. Two new exploration permits, namely Viveo exploration permit and Pilimpikou exploration permit, which cover a total area of 374.17 square kilometres to the northeast of Perkoa the were granted to Nantou Exploration on July 19, 2019, for an initial term of 3 years, with the option of 2 renewals for 3 years each. Viveo, Pilimpikou, Kikio and Semapoun are collectively, the “**Perkoa Exploration Permits**”. These application exploration expenditures will be required in order to maintain the Perkoa Exploration 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**”) and Sanguie Exploration S.A. (“**Sanguie Exploration**”), which are both owned 100% by Trevali. Should an exploitation permit for any portion of the Perkoa Exploration Permits be granted, the government shall automatically receive a 10% interest in the new exploitation company that would need to be established. A new mining convention would have to be negotiated in accordance with the new mining code of 2015, currently not applicable to Nantou Mining, and which would entitle the government 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 government 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 test work and produced a Bankable Feasibility Study in December 2005 (“**Perkoa BFS**”) that was completed by Snowden Mining Industry Consultants (see below under “Mineral Processing and Metallurgical Testing”).

In March 2007, AIM Resources was awarded the Perkoa Exploitation Permit 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 May 2014, Blackthorn and Glencore reached an agreement whereby Glencore increased its 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. Mineralization occurs within two continuous VMS lenses, the main Perkoa lens and the Hanging Wall lens. The main lens outcrops on surface and extends to a depth of approximately 620 meters below the topographic surface, characterized by a strike length that varies between 300 and 470 meters with a width that varies between 5 meters to 25 meters. The Hanging Wall lens extends from approximately 100 meters below the topographic surface down to a depth of approximately 820 meters with a strike extension that varies between 250 meters to 350 meters. Thickness of the Hanging Wall lens is narrower than the Main lens, varying from 5 meters to 15 meters.

Exploration

Exploration expenditures for 2019 amounted to \$3.5 million covering both in-mine and regional exploration aiming to discover new sources of mine feed and maintain the Perkoa Exploration Permits in good standing. The application for renewal of Poa and Guido permits which expired on July 10, 2019 were submitted, and renewal was still outstanding at the end of the year.

The areas covered by the Exploration Permits, 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 multiple syn-volcanic mounds. The exploration programs conducted along the Boromo belt by Trevali are targeting more VMS style mineralization using a combination of ground Fluxgate Electromagnetic (“EM”) surveys, laterite and saprolite geochemistry, air core drilling and diamond drilling.

Drilling

As at December 31, 2019, the Perkoa drill hole database contains 538 holes, totaling 116,465 metres, from 151 surface and 387 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.

Perkoa	2019 Drillholes	2019 metres	Total Drillholes	Total metres
Surface Exploration	13	5,917	151	50,905
UG Exploration	13	6,944	41	19,181
UG Infill Drilling	48	5,760	346	46,379
Total	74	18,621	538	116,465

2019 Perkoa In-Mine Exploration

During 2019, a total of 48 holes were completed for underground infill drilling amounting to 5,760 metres. The underground infill drilling program targeted Inferred and Indicated Mineral Resources in the lower levels of the Hanging Wall lens between depths of 500 metres and 800 metres to upgrade the Mineral Resources respectively to Measured and Indicated levels.

The mineralization at Perkoa is closed off at depth for both the Main and Hanging Wall lenses. The 2019 underground exploration drilling program targeted new zones of mineralization in the hanging wall of both ore zones currently in production. A total of 6,944 metres of underground exploration drilling was conducted along 13 holes in 2019, most holes were collared in the footwall of the Main Perkoa lens and drilled past the Hanging Wall lens. A new mineralized VMS horizon was discovered with the underground exploration program, referred to as the T3 horizon. The horizon has been defined over a strike length of approximately 250 metres at depths of approximately 950 metres to 1,100 metres below the topographic surface. The horizon is characterized by massive to semi-massive, fine grained sphalerite and pyrite dominant VMS mineralization with textures similar to the Main and Hanging Wall lenses over widths varying from 1 to 3 metres.

2019 Perkoa Regional Exploration

The focus of the 2019 regional exploration program was focused on drill testing airborne VTEM and ground Fluxgate EM geophysical anomalies, more specifically anomalies located along strike the Perkoa Mine horizon to the northeast and south-west of the mine. A total of 5,917 metres of surface Diamond Drilling (“DD”) drilling was completed in 2019 on 13 holes targeting the Byrhado, AF1, L2T1, southwest and northeast anomalies where new VMS horizons were intersected at AF1 and L2T1 which are respectively located at approximately 5 kilometres to the southwest and 12 kilometres to the northeast.

Air Core drilling programs were also conducted from January to July 2019 to drill test geophysical anomalies with geochemical sampling of the regolith to an average depth of approximately 30 metres. Ground EM surveys have also been completed at multiple prospects during the year targeting both geochemical and geophysical anomalies.

The VMS horizons intersected at the AF1 prospect are associated with a large hydrothermal system with similar footwall Quartz-Sericite-Pyrite (“QSP”) alteration found underlying the Perkoa mineralized lenses. Locally, the pervasive QSP alteration assemblage is wider than 200 metres, but the intersected massive sulphide horizons width is less than 1 metre. At L2T1, the intersected zinc mineralization appears to be associated with remobilized massive sulphide mineralization and is associated with hydrothermal veins, the intersected horizons were narrow and characterized by less than 1 metre width.

2020 Perkoa Exploration Outlook

The planned 2020 exploration program will be a continuation of the 2019 exploration program at Perkoa with underground drilling targeting the T3 horizon along strike and at depth below the 2019 drill intercepts, at total of 12,000 metres has been planned for the T3 horizon exploration program. Regionally, a 5,600 metres program has been planned to follow-up on the AF1 and L2T1 massive sulphide discoveries of the 2019 program and to drill test the new concordant geophysical and geochemical Aswe anomaly which was also discovered in 2019.

Further regional exploration work will continue in 2020 on the Boromo belt along strike the Perkoa deposit in the form of mapping, trenching and ground Fluxgate EM surveys which will focus on discovering the next VMS deposit along the belt.

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. Specific Gravity (“**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 Quality Assurance / Quality Control (“**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, an independent laboratory. 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 fluorescence (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 the Perkoa Mine personnel or contractors. Core samples are conveyed to Ouagadougou by Perkoa transportation personnel or by courier. Pulp sample transport is the responsibility of ALS who relies 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 have 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, indicated that iron sulphide zonation within the orebody and specifically areas with an increased pyrrhotite content could negatively impact recovery and concentrate grade. Future work will focus on enhanced geological modeling of these areas in order to aid mine scheduling so as 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, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Measured	1.68	14.60	-	-	542	-	-
Indicated	2.72	11.42	-	-	685	-	-
Measured & Indicated	4.40	12.64	-	-	1,223	-	-
Inferred	0.81	8.71	-	-	155	-	-

- (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 zinc prices of US\$1.14 per pound.
- (4) 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, 2019, 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, Exploration & Mineral Resources of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Perkoa Mine as at December 31, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Proven	0.67	14.54	-	-	213	-	-
Probable	1.40	11.96	-	-	368	-	-
Proven & Probable	2.06	12.80	-	-	581	-	-

- (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\$1.14 per pound.
- (4) 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, 2019, under the supervision of and approved by Professional Engineer Nick Espenberg (P.Eng.), a Qualified Person as defined in NI 43-101. Mr. Espenberg is Group Lead: Business Planning 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 the Perkoa Mine 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. In 2019, the Perkoa operation achieved an average zinc recovery of 91.3%.

Infrastructure, Permitting and Compliance Activities

Existing surface and underground infrastructure at the Perkoa Mine include an 1,800 to 2,000 tonne per day process plant, a decline and a series of ramp-connected levels, a laboratory, various administrative, workshop, and warehouse buildings and a camp for non-local personnel. Energy for all areas of the mine is produced by self-managed generators, which provides for energy security. Water for the process plant is supplied by pipeline from Seboun dam, 18 kilometres to the northeast of the mine. Water for domestic use at the camp is pumped from three boreholes located on the mine site.

Environmental audits must be carried out in accordance with Article 4 of Decree No. 2013-055 of May 2, 2013. The group Environment Standard provides the thresholds and practices that allow adherence to best

global practices. Regular monitoring and evaluation of environmental performance is undertaken through compliance audits is undertaken by the regulator.

The Perkoa Mine has areas of waste disposal including a TSF, waste treatment facilities and a scats stockpile that generate both general and hazardous waste. The mine currently has a TSF licensed by the Ministry of Environment that comprises three areas. At the present the first TSF cell has been filled and is ready for closure and rehabilitation, the second cell is close to its nominal design storage capacity. The third cell is currently in use for deposition activity and a fourth cell or new TSF is currently under investigation, to be used should exploration results prove new reserves.

Stakeholder management is managed through a tripartite committee, comprised of representatives from Nantou Mining, the local community, and the Burkina Faso government. Perkoa Mine has paid 50% of its contribution for the years 2017, 2018 and 2019 into the Community Development Fund. The remaining 50% will be paid in 2020, with the possibility for the Perkoa Mine to offset its community spend over the past three years. The Perkoa Mine has a procedure in place, signed by Nantou Mining and the Youth Committee on June 12, 2015, to use local unskilled labour and to favour local labour.

In December 2019, Trevali Perkoa received the Knight of National Order (national recognition) for its invaluable efforts in the social and economic development of Burkina Faso. The Perkoa Mine has a strong relationship with the 14 villages that exist around the mine. In 2019, Trevali completed the construction of a youth centre, a grammar school and equipped a literacy center. The Company also completed the construction of housing with piped potable water, the Perkoa Health and Social Promotion Centre, water boreholes for community use, a literacy program and a vocational training center.

The Perkoa HIV/AIDS committee has conducted some sensitization activities, blood screening, food stuff supply to people affected by HIV/AIDS and a hepatitis vaccination campaign on behalf of the local community. Many of the Perkoa contractors have supported these HIV/AIDS initiatives by contributing financially.

The Perkoa operation is protected by security fencing and access control systems. A crew of national police force is permanently on site to reinforce the private security team provided by a local service provider. Trevali security employees and the contractors are trained in the Voluntary Principles on Security and Human Rights, with refresher training provided in 2019. In 2019, a Group Lead: Health and Safety and Security was appointed. Trevali also joined the MAC working group on security, which enables intelligence sharing.

Given the escalation of the threat and frequency of terrorist events in Burkina Faso, in 2019 Trevali undertook a number of risk management activities. An independent security risk management organization conducted a review of the security controls being implemented for the Perkoa Mine and advised the management team. Two projects were undertaken. A desktop crisis management exercise was run with the senior leadership team, using a Burkina Faso terrorist related incident, which helped train and embed the emergency management response procedures already in place. A Trigger, Action, Response and Plan (“TARP”) was developed for the employees located in Burkina Faso, with a focus on mitigating any harm to life and property. This TARP outlines various scenarios that could occur and then defines specific actions that Trevali would take in that event or if a certain “trigger” occurred. Trevali remains in close contact with various government agencies and outreach bodies to monitor the risks and enable response.

Capital and Operating Costs

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

		2018	2019
Zinc Payable production	(million pounds)	184.0	179.8
Operating Cost	(\$/tonne)	105	96
C1 Cash Cost	(\$/lb zinc)	0.80	0.88
All-in Sustaining Cost	(\$/lb zinc)	0.91	0.94
Sustaining Capital	(\$millions)	20.9	6.8

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. Scientific and technical information below which is not included in the Rosh Pinah Technical Report has been reviewed and approved by Yan Bourassa (P.Geol), Vice President, Exploration & Mineral Resources of the Company and Nick Espenberg (P.Eng.), Group Lead: Business Planning of the Company, each of whom is a qualified person under NI 43-101.

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, and where 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 tarred 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**”).

The Rosh Pinah Mine 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 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. An application for renewal of ML 39 was submitted by RPZC in November 2019 to the MME and is currently under consideration, with approval of the renewal term expected prior to the expiry of the current license in November 2020. 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 government land (with government-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 government 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 initially covered an area of 188 square kilometres and overlaps onto Spitskop farm. EPL 2616 expired on November 30, 2019 and was renewed in December 2019, a 25% surface area reduction was applied to the permit which now covers an area of 141 square kilometres.

History

The Rosh Pinah Mine has been in operation since 1969, excluding a short period during the 1990s when it was placed under 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.

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 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 supracrustal sequences.

The base metal mineralization at the Rosh Pinah Mine are contained within the approximately 30 metre thick mineralized sequence locally termed Ore Equivalent Horizon ("**OEH**") which consists of felsic volcanic sequences such as rhyolite domes and volcano-sedimentary sequences formed of volcanoclastic, arkoses and deeper argillitic beddings. 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 which 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. The secondary mineralization style encountered at Rosh Pinah is referred to as carbonate ore. This mineralization style is generally characterized by higher zinc and lead values with a higher economic value and can locally occur as massive sulphide lenses. The argillite mineralization would be similarly derived but is diluted with background bentonitic argillite.

The Rosh Pinah deposit is believed to a VMS deposit located in the vicinity of numerous rhyolitic domes with potentially reworked sedimentary-exhalative ("**SEDEX**") style mineralization further away from the volcanic domes along the sedimentary sequences. The deposit 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 along the Western Flank of the Rosh Pinah fold. The Rosh Pinah

deposit is composed of five main centers of mineralization, located at regular intervals, largely along the same folded horizons. Of these centers, the Western Orefield is the largest discovered to date and is the current focus of mining activities. The Western Orefield extends continuously over a strike length of approximately 2 kilometres and is the most extensive orebody at Rosh Pinah, the orebody width varies from 20 metres to 70 metres and has been defined down to a depth of approximately 1,000 metres below the topographic surface.

Exploration

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 mine life of the Rosh Pinah deposit.

The 2019 underground exploration and infill drilling programs targeted Mineral Resource conversion at depth along the Western Flank of the Rosh Pinah fold at the Western Orefield deposit and in the nose of the fold at depth at the AAB deposit. Deeper exploration drilling also targeted the definition of new Mineral Resources at both the Western Orefield and the AAB deposit.

Drilling

Drilling statistics for 2019 and for the project as at December 31, 2019 are presented below:

Rosh Pinah	2019 Drillholes	2019 metres	Total Drillholes	Total metres
Surface Exploration	13	6,199	916	163,192
UG Exploration	62	15,195	3,117	399,169
Production	198	11,324	6,647	255,791
Total	273	32,718	10,680	818,152

Western Orefield and AAB Exploration

The 2019 drilling program at the Western Orefield and AAB deposit was designed to test the down plunge continuation of the Western Flank and the nose of the Rosh Pinah fold, but also to define new Inferred Mineral Resources at depth. The results at the Western Orefield demonstrate the continuity and consistency of the mineralization from this deposit, where several broad mineralized intervals were intercepted.

The Western Orefield is the northernmost center of mineralization at Rosh Pinah and the majority of the 2019 exploration campaign focused mainly on that orebody with more than 12,000 metres drilled on multiple sections along the strike of the orebody. Drilling in the nose of the Rosh Pinah fold at the AAB deposit returned mixed results as the mineralization is more discontinuous at depth.

Regional Exploration

Ground Fluxgate EM surveys were conducted along the northern extension of the Western Orefield on the Rosh Pinah-Gergarub corridor and also east of the Rosh Pinah Mine to test the ground east of a regional fault that dissects the Eastern Flank of the Rosh Pinah fold. A total of 13 holes were drilled from surface as part of the exploration program and successfully extended the Western Orefield along strike to the north.

2020 Exploration Outlook

The 2020 exploration program will follow-up on the success of the 2019 exploration program with the continuation of the ground Fluxgate EM surveys along the Rosh Pinah-Gergarub corridor and along the eastern flank of the Rosh Pinah fold. The drilling programs will continue to test the northern extension of the Western Orefield along strike and start drill testing EM anomalies along both the Western and Eastern flanks of the Rosh Pinah fold along strike.

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 4% zinc.

Mineral Resource and Mineral Reserve Estimates

The table below shows the Mineral Resource Estimates for the Rosh Pinah Mine as at December 31, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Measured	8.44	7.46	2.12	26.33	1,389	395	7,143
Indicated	7.67	7.18	1.24	20.35	1,214	209	5,016
Measured & Indicated	16.11	7.33	1.70	23.48	2,603	604	12,159
Inferred	5.54	6.16	1.09	24.05	752	133	4,281

- (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 4% ZnEQ.
- (4) 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, 2019, 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, Exploration & Mineral Resources 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, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Proven	4.45	6.52	1.68	22.68	640	165	3,245
Probable	5.34	6.39	1.06	19.01	752	125	3,264
Proven & Probable	9.79	6.45	1.34	20.68	1,392	289	6,509

- (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 Report is 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\$55/tonne, with metal prices of: US\$1.14/lb zinc, US\$0.95/lb lead and US\$18.34/oz silver.
- (4) 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, 2019, under the supervision of and approved by Professional Engineer Nick Espenberg (P.Eng.), a Qualified Person as defined in NI 43-101. Mr. Espenberg is Group Lead: Business Planning 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 silica 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 dewater 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 is 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 Lüderitz.

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 filter press for dewatering. The final zinc concentrate from the filter press is discharged onto a drying floor, where it is further dried and stockpiled until being loaded onto trucks for dispatch to the port of Lüderitz.

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 are sent to the tailings surge sump from which it is pumped to the TSF.

In 2019, the Rosh Pinah operation achieved average recoveries of 85.7% for Zn, 61.1% for Pb, and 42.7% for Ag.

Infrastructure, Permitting and Compliance Activities

The Rosh Pinah Mine underground contains access ramps with a primary crusher and surface ventilation. A 2000 tonne per day ball mill with various flotation circuits comprises the process plant. There is a water

storage dam and a TSF. Engineering workshops, administration offices, a supply chain warehouse and a laboratory to service the mine operations are all within the accessory works area.

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. Mining in Namibia is mainly regulated by the Namibia Minerals Act. An Environmental Impact Assessment (“EIA”) study has been furnished to the Ministry of Environment in line with the requirements of this Act. All permits are current as per the requirements of the Environmental Management Act 7 of 2007 (“Environmental Act”), which came into force in 2012. The Namibia Minerals Act provides that the holder of a mineral license must take all steps to the satisfaction of the Minister to remedy any damage caused by any mining activities.

The Rosh Pinah Mine is managed through the Trevali group Management Standards. In addition, in 2019 Rosh Pinah had a certified ISO 14001: 2015 Environmental Management System, which is valid until August 1, 2020. Regular water, dust, noise and air monitoring occurred and a biannual evaluation of environmental performance through compliance audits were undertaken by an independent consultant in 2019.

Rosh Pinah town is primarily a mining community built for employees. A joint-venture company called RoshSkor was established by Trevali Rosh Pinah Zinc Corporation and Vedanta Resources Skorpion Zinc to manage and operate the town as a private municipality. The Tutengeni township is also supported by RoshSkor and is located outside Rosh Pinah town. RoshSkor is responsible for the implementation of community development projects, which are funded by both mines. Programs include training in needlework, weaving carpets, providing sewage treatment, electricity and potable water to Tutengeni, school funding and service provision jobs such as the removal of waste, waste segregation and cleaning.

Capital and Operating Costs

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

		2018	2019
Zinc Payable Production	(million pounds)	94.2	92.0
Lead Payable Production	(million pounds)	8.5	12.1
Silver Payable Production	(thousand ounces)	115	180
Operating Cost	(\$/tonne)	59	54
C1 Cash Cost	(\$/lb Zn)	0.70	0.84
All-in Sustaining Cost	(\$/lb Zn)	0.90	1.03
Sustaining Capital	(\$millions)	19.5	17.6

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. Scientific and technical information below which is not included in the Santander Technical Report has been reviewed and approved by Yan Bourassa (P.Geol), Vice President, Exploration & Mineral Resources of the Company and Nick Espenberg (P.Eng.), Group Lead: Business Planning of the Company, each of whom is a qualified person under NI 43-101.

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 Minería) 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).

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 initially 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, following which Trevali held an effective 100% interest in Santander by virtue of its control of CMS's Creditors Committee and other related obligations. In 2019, Trevali completed a transaction with CMS and Santander Concesiones S.A.C. pursuant to which direct ownership of the Santander mining concessions has been consolidated with Trevali Peru S.A.C. and arrangements were put in place to conclude the CMS insolvency proceedings.

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 TSF area.

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 Magistral mineralized zones are typically 3 to 12 metres thick, extending approximately 600 metres along strike parallel to the Magistral fault and extending to a depth of approximately 1,000 metres.

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 to an approximate vertical depth of 1,000 metres with individual lenses characterized by thickness varying between 3 and 15 metres. With strike extend of approximately 300 metres.

Exploration and Drilling

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, 2019, a total of 168,887 metres of drilling has been completed at Santander from underground and surface.

Santander drilling statistics for the project as of December 31, 2019 are presented in the table below:

Santander	2019 Drillholes	2019 metres	Total Drillholes	Total metres
Surface Exploration	8	10,070	295	81,773
UG Exploration	7	3,018	251	47,902
Production	124	9,341	627	39,213
Total	139	22,428	1,173	168,887

Magistral Deposits

The objectives of the 2019 Magistral infill and exploration drilling program was to define and convert Inferred Mineral Resource to Measured and Indicated Mineral Resource and to extend the Magistral South deposit at depth and along strike. The drill program at the Magistral Mine aimed to discover extensions to the existing resources and upgrade resources to extend the mine life. The 2019 drilling program consisted of 124 infill underground holes and 7 UH holes targeting the Magistral South area.

Santander Pipe

Eight drill holes totalling 10,070 metres were completed at the Santander Pipe during the 2019 drilling campaign. Drill holes were primarily focused on better defining high grade mantos lenses below the historic workings and extending the mineralization at depth and along strike. Drilling at Santander is expected to continue in the first half of 2020 prior to a Mineral Resource estimate scheduled to be completed in the third quarter.

Regional Exploration

In 2019 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 to be drilled tested in the 2020 exploration program. A ground magneto-telluric survey was undertaken toward the end of 2019 and is expected to be completed in 2020. A large surface mapping and geochemical sampling program was undertaken in 2019 focusing over known mineralization and outcropping limestone east of the Santander Fault. Results from the geochemical program also validate known mineralization and exploration targets; further compilation work is expected to be completed in 2020.

Santander 2020 Exploration Outlook

Drilling programs at Magistral in 2020 will focus on underground infill drilling program below the current underground workings. No deep exploration drilling has been planned for Magistral in 2020.

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 for Mineral Resource conversion purposes, which remains open for expansion at depth, with the goal of defining and adding additional Mineral Resources to support a preliminary economic assessment study.

The magneto-telluric survey is expected to be completed in the first portion of the year in 2020 with interpretation and inversion expected to be finalized in the second quarter, these interpretations will be used to adjust the regional planned drill holes. 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 2020, including Blato, Capilla, Nati and Pujanca, 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 “Trevalli’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 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.

Drill and mine samples are handled and transported only by Santander personnel or contractors for security purposes. 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 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.

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.

Mineral Resource and Mineral Reserve Estimates

The table below shows the Mineral Resource Estimates for the Santander Mine as at December 31, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Santander Mine							
Measured	2.34	4.98	0.68	34.63	257	35	2,609
Indicated	1.24	4.72	0.32	20.53	129	9	816
Measured & Indicated	3.58	4.89	0.55	29.76	386	43	3,425
Inferred	1.07	3.93	0.24	24.97	93	6	861

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Santander Pipe Project							
Measured	0.54	8.09	0.03	16.31	96	0	283
Indicated	3.23	6.43	0.01	11.37	458	1	1,182
Measured & Indicated	3.77	6.67	0.01	12.08	555	1	1,465
Inferred	1.31	5.37	0.02	7.42	156	1	313

- (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\$1.14/lb zinc, US\$0.93/lb lead and US\$18.32/oz silver.
- (4) 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, 2019, under the supervision of and approved by Yan Bourassa (P.Geol.), a Qualified Person as defined in NI 43-101. Mr Bourassa is Vice President, Exploration & Mineral Resources of the Company and accordingly, is not independent.
- (5) 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\$1.14/lb zinc, US\$0.93/lb lead and US\$18.32/oz silver.
- (6) 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, 2019, under the supervision of and approved by Yan Bourassa (P.Geol.), a Qualified Person as defined in NI 43-101. Mr. Bourassa is Vice President, Exploration & Mineral Resources of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Santander Mine as at December 31, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Proven	1.34	4.91	0.46	26.95	145	14	1,163
Probable	0.51	4.74	0.22	19.62	54	2	324
Proven & Probable	1.86	4.86	0.39	24.92	199	16	1,487

- (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\$50/tonne with metal prices of: US\$1.14/lb zinc, US\$0.93/lb lead and US\$18.32/oz silver.
- (4) 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, 2019, under the supervision of and approved by Professional Engineer Nick Espenberg (P.Eng.), a Qualified Person as defined in NI 43-101. Mr. Espenberg is Group Lead: Business Planning 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. Bypasses 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 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.

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 TSF.

The Santander plant is currently processing 2,500 tonnes per day of zinc and lead sulphides, using flotation. The mill receives ore mainly from the Magistral underground zones (mainly Magistral North, Magistral Central, and Magistral South), which is supplemented by excavated historical tailings from a nearby TSF. The metallic sources consist mainly of zinc sulphides (mostly marmatite and a minimum proportion of sphalerite), lead sulfide (galena) and primary and secondary copper sulphides (chalcopyrite, covelite, tetrahedrite-tenantite and bornite); Silver is distributed among lead and zinc sulphides but is in the form of argentite. In 2019, the average metallurgical recoveries were 87.7% for Zn, 82.2% for Pb, and 62.1% for Ag.

In 2019, metallurgical tests were conducted in the three distinct Magistral mining zones to understand metallurgical behaviour in the plant. An additional zinc scavenger cleaner 2 flotation stage was installed that has allowed the plant to increase zinc recovery. Additional zinc recovery was achieved through a maintenance and optimization program implemented on the zinc flotation circuit including replacement of the OK30 cells and optimization of 1, 2, and 3 zinc cleaner cells. The Santander processing plant continues to be operated by Tecnomin Peru S.A.C., a Peruvian contractor, with Trevalli 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 TSF, 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 from river generated power supplied by Volcan.

In 2019, approval of the environmental impact study modification was obtained, which included the deepening of the mine and an expansion of the mine water treatment system. Authorization for discharge of mine water at 550 liters per second was obtained. The environmental and construction permit for a 1.4 metre raise of the existing TSF has been obtained. With the exception of the permitting described above, the Santander Mine requires no additional permits for continued operation and the mine is in material compliance with all applicable regulatory requirements.

Regular community meetings and consultations are held with local stakeholders. Surface land use agreements are in place with the communities of Santa Cruz de Andamarca and Santa Catalina. We have other community development agreements with the community of San José de Baños. Community projects include working with farmers to improve livestock health and yield, building irrigation for improved and all year around pastures as well as development of other social enterprise companies that build agricultural skills and provide community business mining services.

Capital and Operating Costs

Results for production, operating costs and sustaining capital for 2018 and 2019 are summarized below:

		2018	2019
Zinc Payable Production	(million pounds)	56.8	70.6
Lead Payable Production	(million pounds)	7.9	11.5
Silver Payable Production	(thousand ounces)	481	604
Operating Cost	(\$/tonne)	43	45
C1 Cash Cost	(\$/lb Zn)	0.72	07.6
All-in Sustaining Cost	(\$/lb Zn)	0.99	0.99
Sustaining Capital	(\$millions)	14.2	16.3

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 and Blakley is an independent “qualified person” under NI 43-101. Ms. Jacquemin and Mr. Woods are each a “qualified person” under NI 43-101 but are not independent of the Company as they are currently employees of the Company. Scientific and technical information below which is not included in the Caribou Technical Report has been reviewed and approved by Yan Bourassa (P.Geo), Vice President, Exploration & Mineral Resources of the Company and Nick

Espenberg (P.Eng.), Group Lead: Business Planning of the Company, each of whom is a qualified person under NI 43-101.

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 TSF 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.

History

The Caribou Mine has been previously developed and mined by different owners, employing a variety of mining methods.

Early exploration work at Caribou in 1954 by Anaconda Canada Exploration Ltd. (“**Anaconda**”) included an airborne 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 totaling 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, Sheepphouse 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 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. Individual lenses vary in thickness between a few meters to approximately 30 meters and extend over 1,000 metres along strike on the North Limb. Lenses on the Eastern Limb pinch at a depth of approximately 800 metres below the topographic surface while lenses along the North limb have been drilled to a depth of approximately 1,000 metres and are still open at depth.

Exploration

The 2019 exploration and infill drilling program at Caribou mostly targeted Mineral Resource conversion along the Caribou North Limb at depth and along strike. Regionally, generative work was conducted at Murray Brook South with surface fluxgate EM surveys and surface drilling testing a trench anomaly that was outlined during the 2018 exploration program.

Drilling

A total of 114 holes were drilled at Caribou during the 2019 drilling campaign mostly targeting infill drilling and exploration at depth along the Caribou North Limb. Most of the holes were drilled from underground, but a surface campaign was also completed to drill test the most northern part of the Caribou North Limb that is not accessible from the underground workings.

A surface drilling program at Murray Brook commenced late December drill testing surface gossans that had previously been outlined in trenches. One hole, MBS19-002, was drilled in December with the program expected to be completed in 2020. The hole intersected altered felsic volcanics of the Mount Brittain formation with the targeted horizon being the Charlotte Brook member.

Drilling statistics for the project as of December 31, 2019 are presented in the table below for the 2019 drilling program and project to date:

Caribou	2019 Drillholes	2019 metres	Total Drillholes	Total metres
Surface Exploration	7	3,079	95	48,502
UG Exploration	7	1,671	79	17,855
Production	100	6,934	1,454	103,914
Total	114	11,684	1,628	170,271

New Brunswick 2020 Exploration Outlook

The 2020 exploration program in the Bathurst Mining Camp will be focusing primarily on data compilation, analysis of regional databases and targets generation. At Caribou, no major drilling programs have been planned for 2020, but infill and Mineral Resource conversion programs may be undertaken from underground below the current workings.

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 and mine samples are handled and transported only by Caribou personnel or contractors to ensure their security. 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 an independent laboratory, Bureau Veritas Minerals Laboratories, 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, 2019:

Category	Grade						Metal				
	Quantity	Zn	Pb	Cu	Ag	Au	Zn	Pb	Cu	Ag	Au
	Mt	%	%	%	g/t	g/t	M lbs	M lbs	M lbs	K oz	K oz
Measured	6.65	6.67	2.47	-	71.93	-	978	362	-	15,379	-
Indicated	3.81	6.21	2.48	-	75.16	-	522	208	-	9,207	-
Measured & Indicated	10.46	6.50	2.47	-	73.11	-	1,499	570	-	24,585	-
Inferred	5.31	6.11	2.48		74.64		715	290		12,743	

- (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.
- (4) 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, 2019, under the supervision of and approved by Yan Bourassa (P.Ge.), a Qualified Person as defined in NI 43-101. Mr Bourassa is Vice President, Exploration & Mineral Resources of the Company and accordingly, is not independent.

The table below shows the Mineral Reserve Estimates for the Caribou Mine as at December 31, 2019:

Category	Quantity (Mt)	Grade			Metal		
		Zn (%)	Pb (%)	Ag (g/t)	Zn (M lbs)	Pb (M lbs)	Ag (K oz)
Proven	1.54	6.83	2.47	74.00	232	84	3,664
Probable	1.12	6.31	2.59	76.40	156	64	2,751
Proven & Probable	2.66	6.61	2.52	75.04	388	148	6,417

- (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\$1.14/lb zinc, US\$0.93/lb lead and US\$18.33/oz silver.

- (4) *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, 2019, under the supervision of and approved by Professional Engineer Nick Espenberg (P.Eng.), a Qualified Person as defined in NI 43-101. Mr. Espenberg is Group Lead: Business Planning 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.

During Q4 2019, trial mining of a historical mining zone was successful, allowing for inclusion of additional tonnes not previously in the mine plan.

As noted above, the deterioration in the global zinc market, exacerbated by the continued challenges presented by COVID-19 and combined with high concentrate treatment charges, has led to a decision to place the Caribou Mine on a care and maintenance program as of March 26, 2020, in order to preserve the value of the mineral resource and mine assets. No timeline for a potential restart of operations has been defined.

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 trucked to the port at Belledune, New Brunswick. In 2019, the Caribou operation achieved an average zinc recovery of 79% and a lead recovery of 64%.

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 mine water treatment plant and sludge ponds, a TSF, and various office and workshop buildings. The mine has a connection to Energie New Brunswick Power's electrical power grid and an onsite diesel generator which provides emergency back-up power, if required.

The Caribou Mine is a fully permitted facility that allows for mining and milling under its existing Approval to Operate. The mine is in material compliance with all applicable regulatory requirements. In 2019, the company progressed approvals to construct a raise to the current TSF, also known as the South Tributary Tailings Pond (“STTP”) allowing enough deposition capacity for the Life of Mine plan.

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. The current cash security on file with the New Brunswick Department of Energy and Natural Resources totalled \$5 million. Additionally, as per Trevali's Approval to Operate I-10186 (*Cond.19b*), an additional \$6.6 million reclamation bond and a \$1.5 million reclamation bond has been posted with the New Brunswick Ministry of Energy & Natural Resources and the Department of Environment respectively. As at December 31, 2019, the Company has recorded a provision for environmental rehabilitation, mine closure and reclamation activities for Caribou of \$24.7 million, which it expects to settle during the course of mining and during closure. During 2019, Caribou commenced an update to the asset retirement obligation to include and account for the current state of operations. It is anticipated that the update will result in a change in the asset retirement obligation for Caribou.

In May 2011, previous owners of the Half Mile deposit entered into a Cooperation Agreement with the Mi'gmaq First Nation bands. In 2017, a second Cooperation Agreement with the Mi'gmaq bands was signed with in relation to the Caribou mine. Trevali assumed accountability for operating in lin with the intent of both Cooperation Agreements. A full-time Indigenous Benefits Coordinator role was funded, who provides a conduit between the Mi'gmaq bands and who facilitated opportunities including training, scholarships and purchasing and supply opportunities.

Capital and Operating Costs

Results for production, operating costs, and sustaining capital for 2018 and 2019 are summarized below:

		2018	2019
Zinc Payable Production	(million pounds)	72.9	73.9
Lead Payable Production	(million pounds)	24.4	26.7
Silver Payable Production	(thousand ounces)	697	705
Operating Cost	(\$/tonne)	68	73
C1 Cash Cost	(\$/lb Zn)	0.85	1.03
All-In Sustaining Cost	(\$/lb Zn)	1.14	1.17
Sustaining Capital	(\$millions)	20.9	10.7

RISK FACTORS

Trevali is subject to a number of risks and uncertainties due to the nature of our business, including financing, exploration, development and operating of mining properties. Investors should carefully consider the risks and uncertainties described below before making a decision to invest in Common Shares of the Company. The risks and uncertainties described below could have a material adverse effect on the Company's business, financial condition or results of operations, which could result in a decline in the trading price of the Common Shares and the loss of some or all of your investment in the Company. There can be no assurance that the Company will be able to effectively control or address these or other risks that may affect its business. There may also be additional risks and uncertainties not currently known by the Company, or that the Company currently deems immaterial, that could impair the Company's operations.

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, which has been accelerated in recent months in light of the outbreak of the COVID-19 pandemic. This volatility and uncertainty impacts many industries, including the base metals mining industry. 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 base 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; continued recessionary pressures could adversely impact demand for the Company's production; volatile energy, commodity and consumables prices could impact the Company's production costs; and the devaluation and volatility of global stock markets could impact the valuation of the Company's equity and other securities.

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

If Mineral Reserve calculations and life-of-mine plans are required to be revised using significantly lower 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 revolving 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.

The terms of the revolving 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, ability to meet its payment obligations under its debt, and the price of the Common Shares.

The Company is exposed to long-term liquidity risk through the excess of financial obligations due over available assets at any point in time. It is also possible that the Company may not be able to obtain the external financing necessary to continue its exploration and development activities on its properties.

In light of the current prices of the Company's principal commodities and forecasts for such prices through the remainder of 2020, the Company expects that it will be required to draw on its revolving credit facility, or seek other sources of equity or debt finance, in order to ensure availability of sufficient resources to meet its committed and budgeted expenditures for the next twelve months. Additional funds may be required should commodity prices further weaken beyond current levels or the U.S. dollar depreciates significantly.

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.

Epidemics, pandemics or other public health crises, including COVID-19, could adversely affect our operations.

The Company is exposed to diseases and pandemics like malaria, dengue, Zika, other flu like viruses (e.g. avian, swine), HIV and Ebola. 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. The recent outbreak of COVID-19, declared a pandemic in March 2020, and any future emergence and spread of similar pathogens, could have a material adverse effect on global economic conditions which may adversely impact our business and results of operations and the operations of our suppliers, contractors and service providers, and the demand for our production. The COVID-19 pandemic has now resulted in mass production shutdowns and supply chain disruptions due to temporary closure of businesses in affected areas, port closures and other preventative and/or restrictive measures taken by governments. This in turn has had global ripple effects in the mining sector in a rare "twin supply-demand shock" as these measures, along with market uncertainty, have caused an economic slowdown resulting in a decrease in the demand for zinc and negatively impacting base metal prices. Should the COVID-19 pandemic reach and affect the workforce at any of our operations, the Company may see a decline in workforce availability, and may also 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 suspended or delayed. Governments in a number of countries where the Company has operations, including Canada, Burkina Faso, Namibia and Peru, have taken steps to curtail the spread of COVID-19, including the formal declaration of a state of emergency, the introduction of curfews, quarantines and other measures to restrict the movement of individuals and goods, including the closing of borders to

international travel. It is uncertain what similar or more severe measures may be enacted in future, or the effect that any such measures may have on our business and results of operations.

The actual and threatened spread of COVID-19 globally could also have a material adverse effect on the regional economies in which we operate, could continue to negatively impact stock markets, including the trading price of our shares, could adversely impact our ability to raise capital, could cause continued interest rate volatility and movements that could make obtaining financing more challenging or more expensive, and could result in any operations affected by COVID-19 becoming subject to quarantine. Any of these developments, and others, could have a material adverse effect on our business and results of operations, which could significantly increase costs of operations and have a material adverse effect on the Company's business, results of operations, and future cash flow.

Financial projections rely on estimates of future production and costs 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, cash costs and capital costs of production for its operations, and any such information is forward-looking. The Company cannot give any assurance that it will achieve its production estimates. 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 Company's actual production and costs of 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, delays in the construction and commissioning of mining projects, 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.

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. 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.

The Company may be unable to maintain or increase annual production, and changes in the production outlook will have an effect on the Company's cash flow from operations.

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.

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.

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.

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 involve 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 beyond the Company's control and 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, landslides, ground or stope failures, tailings dam failures and other geotechnical instabilities 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.

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, any adverse condition affecting mining, processing conditions, expansion plans, or ongoing permitting activities at any of the Company's operating mines could have a material adverse effect on the Company's financial performance and results of operations.

There are additional political, legal and economic risks at foreign operations.

Trevalli's exploration and development activities and production operations in foreign countries, including its African mines in Namibia and Burkina Faso and its Peruvian mine, 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; limits on foreign ownership; inadequate controls against modern slavery and child labour; social unrest on account of poverty or unequal income distribution; 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.

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.

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 these foreign jurisdictions may offer less certainty as to the judicial outcome or a more protracted judicial process than is the case in North America. Enforcement of laws in foreign jurisdictions 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. 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.

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. Incidences of armed criminal activities have been reported by other companies with operations in Burkina Faso. 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. Moreover, since last year, armed incidents on the roads to mining operations in the western region of the country have been reported.

The Perkoa Mine is outside of this zone as it is located approximately 125 kilometers 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, supply chain disruption, 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. Although the Company has developed procedures regarding these risks, there is no assurance that these measures will be successful, and a failure to maintain the security of personnel, contractors and assets could have a material adverse effect on the Company's financial condition and results of operations.

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 mining sector has increasingly been targeted as a source of revenue. The government of Burkina Faso is 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. 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 government, 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.

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, as well as 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, and a high proportion of Namibia's trade is conducted with SACU members. While the Namibian government is highly dependent on SACU revenue, Namibia's share of such revenue is expected to decline in the foreseeable future, as a result of which the Namibian government may seek 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, a second version of the so-called Namibia Equitable Economic Empowerment Framework bill (the "**NEEEF Bill**"), which proposed, amongst other things, 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 be deemed unconstitutional, the NEEEF Bill caused considerable uncertainty in the Namibian business community and the investor community, both locally and internationally, on account of which it is still under discussion and revision. As of September 2019, the President of Namibia has announced that it is the Government's intention to have the NEEEF Bill tabled in the National Assembly prior to March 31, 2020, but it is not clear if and when the NEEEF Bill will become law. In any event, regulations would first need to be enacted to enable the NEEEF Bill to become operative, and as such it is not currently possible to determine the extent to which the NEEEF Bill would affect the Company. Once enacted, the NEEEF Bill will form the basis for draft legislation concerning empowerment measures in Namibia, similar to the black economic empowerment legislation enacted in South Africa. The Namibian Chamber of Mines was nevertheless pro-active in developing a Mining Charter which aligned to the requirements set out in the NEEEF Bill. Once enacted, the Charter will become gazetted and a new government department established to administer and monitor the mining sector's compliance thereto. The Chamber of Mines performed a self-assessment of all its members, including the Rosh Pinah Mine, and concluded that the Rosh Pinah Mine would be compliant to the proposed Mining Charter and the NEEEF Bill, if enacted in its current form.

In 2016, the Namibian parliament passed a new investment law termed the Namibia Investment Promotion Act ("**NIPA**"), but has not yet come into force as substantial amendments have been made to it after industry stakeholders raised concerns about the possible negative impacts on investment in Namibia. However, we anticipate that an amended or a new repealing Act could be operational by mid-2020. If enacted, NIPA 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. 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 not currently possible to determine the extent to which NIPA 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 workforce 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.

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.

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, Namibia 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.

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 Common Monetary Area of Southern Africa (“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.

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.

Failure to obtain or retain permits would adversely affect the Company’s results of operations, development work and financial condition.

The operations of the Company, including various aspects of exploration, development and expansion of projects, require receipt and maintenance of licenses and permits from various governmental authorities. Failure or delay in obtaining or maintaining required permits and licenses could result in injunctions, fines, suspension or revocation of permits and other penalties, or result in interruption of production, exploration or development. 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 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.

In addition to meeting the requirements necessary to obtain permits and approvals, permits may be invalidated if the applicable regulatory authority is legally challenged that it did not lawfully issue such permits and approvals. 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. 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.

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

As a publicly traded company, the Company is subject to numerous laws, including, without limitation, corporate and securities 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 with, in a number of continents and jurisdictions, increases the risks of non-compliance.

The Company's mining, exploration and development activities are also subject to extensive laws and regulations concerning the environment, employee 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.

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.

The business of exploration for minerals and mining requires significant infrastructure. Infrastructure in some of the jurisdictions in which the Company operates may be underdeveloped, which could have an adverse effect on the Company.

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.

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.

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.

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 jurisdictions 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 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. 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.

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 required to return landforms and biodiversity to their pre-disturbance state and to manage hazardous and non-hazardous waste generated during operations. Community and regulatory engagement is often required before a final landform design is approved. Reclamation costs are uncertain and planned expenditures and provisions 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.

The Company is subject to water management regulations, and its operations are dependent on water availability.

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 water resources be provided to 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.

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.

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.

Mining operations have a carbon footprint.

The Company's mining and processing operations are energy intensive, resulting in a carbon footprint. The Company recognizes that climate change is an international and societal concern and is committed to the ambitions outlined in the Paris Agreement, including the need to stay under two degrees of global average warming. 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 pricing. Legislation related to climate change is also becoming more stringent. Costs associated with reducing emissions can be offset by increasing energy efficiency and technological innovation. Though 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 or other operational performance metrics.

Defects in 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, 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 be reasonable.

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 landowners (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.

While the Company has formal surface access agreements in place for its Santander, Caribou, Rosh Pinah and Perkoa properties, 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 operations and exploration programs, and these delays may be significant.

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.

The Company's revenue from sale of its concentrates is derived from a single customer.

The Company derives its revenue from a single customer, Glencore, who is the sole and exclusive purchaser of 100% of the concentrates produced from the Company's current operations and has a right of first refusal for future concentrate sales produced from any additional properties or assets that the Company may acquire in future. Though the Company does not need to secure future purchasers for its concentrate, any failure to comply with the terms of, or default under, the concentrate off-take agreements could jeopardize the Company's future revenues and could materially and adversely affect the Company's business, financial condition and results of operations.

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 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. 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 employees 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. 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.

Changes in employment 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.

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 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.

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*, 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'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 stakeholder 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.

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: attractive mineral properties; qualified technical expertise, operational experience, service providers, and labour; equipment and suppliers; and 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 effects on the Company's, operations, revenues, and financial condition.

The Company'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 invests 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 reviews 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.

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.

The trading price of the Company's 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, some of which are outside of the Company's ability to control.

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

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

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. The effect of these and other factors on the market price of the Company's 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.

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. The payment of future cash dividends, if any, will be reviewed periodically by our Board of Directors and will depend upon, among other things, conditions then existing including earnings, financial condition and capital requirements, restrictions in financing agreements, business opportunities and conditions and other factors.

DESCRIPTION OF CAPITAL STRUCTURE

The Company is authorized to issue an unlimited number of Common Shares. As at December 31, 2019 and as of the date of this AIF, a total of 802,561,585 Common Shares were issued and outstanding.

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, 2019:

Month	High (C\$)	Low (C\$)	Volume
January	0.445	0.315	74,154,670
February	0.40	0.34	32,600,523
March	0.41	0.335	39,484,615
April	0.485	0.34	39,028,923
May	0.375	0.28	20,620,670
June	0.315	0.255	34,000,255
July	0.305	0.23	25,782,303
August	0.245	0.17	25,315,271
September	0.245	0.175	18,193,950
October	0.23	0.19	14,799,268
November	0.23	0.15	46,758,963
December	0.25	0.18	22,958,365

DIRECTORS AND OFFICERS

As of the date of this AIF, the directors and executive officers of the Company are as set out in the following tables:

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years	Director Since
RICUS GRIMBEEK British Columbia, Canada	President, Chief Executive Officer and Director	President and Chief Executive Officer of the Company (since April 2019); Chief Operating Officer of Vale Base Metals North Atlantic (February 2018 to April 2019); Chief Technology Officer of South32 Limited (April 2017 to October 2017); President and Chief Operating Officer, Australia Region of South32 Limited (December 2014 to March 2017).	March 30, 2020
JILL GARDINER ⁽¹⁾⁽²⁾⁽³⁾⁽⁵⁾ British Columbia, Canada	Chair of the Board	Corporate Director.	July 31, 2019
RUSSELL BALL ⁽¹⁾⁽²⁾⁽⁴⁾ British Columbia, Canada	Director	Chief Executive Officer of Calibre Mining Corp. (since October 2019); 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).	October 11, 2017
Dr. MARK CRUISE ⁽⁴⁾⁽⁵⁾ British Columbia, Canada	Director	Chief Operating Officer of New Pacific Metals Corp. (since November 2019); President and Chief Executive Officer of the Company (February 2009 to April 2019).	March 18, 2008
CHRIS ESKDALE Oberaegi, Switzerland	Director	Head of Zinc Industrial Assets, Glencore.	March 2, 2012
DAN ISSEROW ⁽¹⁾⁽²⁾⁽³⁾ British Columbia, Canada	Director	Chief Executive Officer of Glass 3 Enterprises Ltd. (October 2019 to present); President and Chief Financial Officer of Silica Ventures Inc. (since July 2017); Business consultant (2012 to present).	October 11, 2017
DAN MYERSON Zug, Switzerland	Director	Head-Canadian Zinc Business, Glencore.	August 31, 2017
RICHARD WILLIAMS ⁽¹⁾⁽³⁾⁽⁴⁾⁽⁵⁾ Ontario, Canada	Director	Executive Envoy to Tanzania of Barrick Gold Corporation (February 2017 to November 2018); Chief Operating Officer of Barrick Gold Corporation (September 2015 to February 2018); Chief of Staff of Barrick Gold Corporation (August 2014 to September 2015).	June 4, 2019

Notes:

- (1) *Member of the Audit Committee.*
- (2) *Member of the Compensation and Human Resources Committee.*
- (3) *Member of the Corporate Governance and Nominating Committee.*
- (4) *Member of the Health, Safety, Environment and Community Committee.*
- (5) *Member of the Investment 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.

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years
YAN BOURASSA Ontario, Canada	Vice President, Mineral Resource Management	Vice President, Exploration & Mineral Resources 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)
BRENDAN CREANEY British Columbia, Canada	Vice President, Investor Relations	Vice President, Investor Relations of the Company (since August 2019); Director, Corporate Development and Value Assurance at Goldcorp (November 2016 – May 2019) and various progressive roles at Goldcorp (2012 – 2019).
DEREK DU PREEZ British Columbia, Canada	Chief Technology Officer	Chief Technology Officer of the Company (since July 2019); Principal Consultant at AMC Consultants (April 2019 to July 2019); Director, Digital Transformation of Vale Base Metals North Atlantic (September 2018 to April 2019); Manager, Digital Delivery Centre and Manager, Technology & Improvement of South32 Limited (September 2015 to July 2018); Various progressive roles with BHP Limited (2012 to September 2015).
AMBER JOHNSTON-BILLINGS British Columbia, Canada	Chief Sustainability Officer	Chief Sustainability Officer of the Company (since September 2019); Director – Climate Change and Sustainability of KPMG Australia (May 2018 to September 2019); Head of Sustainability and Reporting (February 2017 to May 2018) and Manager of Sustainability and Reporting (April 2015 to February 2017) of South32 Limited.
STEVEN MOLNAR British Columbia, Canada	Chief Legal Officer and Corporate Secretary	Chief Legal Officer and Corporate Secretary of the Company (since July 2018); Lawyer at McCarthy Tétrault LLP (February 2014 to July 2018).
MATTHEW QUINLAN British Columbia, Canada	Interim Chief Financial Officer	Interim Financial Officer of the Company (since March 2020); Independent Consultant (2018 to 2019); Chief Financial Officer of Dominion Diamonds Corporation (2017 to 2018).
JOANNE THOMOPOULOS British Columbia, Canada	Chief People Officer	Chief People Officer of the Company (since October 2018); Director, Human Resources at BC Hydro (January 2008 to October 2018)

Director and Officer Biographies

Ricus Grimbeek, President, Chief Executive Officer and Director

Mr Grimbeek is an experienced mine operator with three decades of progressive experience in the mining industry, with a proven track record working at all levels of the business. Before joining Trevali Mr. Grimbeek was Chief Operating Officer for Vale Base Metals North Atlantic, was previously President and Chief Operating Officer of South32 Australia and held prior leadership roles with Aluminium Australia, BHP Billiton and Lonmin Platinum. Mr Grimbeek holds a Bachelor of Engineering (Mining) from the University of Pretoria, has completed the Management Development Program from the University of Orange Free State, and holds an Advanced Certificate in Mine Ventilation from the Chamber of Mines.

Jill Gardiner, Chair of the Board

Ms. Gardiner is a professional corporate director and previously spent over 20 years in the investment banking industry, most recently as Managing Director and Regional Head, British Columbia, for RBC Capital Markets. Ms. Gardiner is currently on the board of Capital Power Corporation and previously served as the chair of the board of directors of Turquoise Hill Resources Ltd. and as a director of Capstone Mining Corp., Parkbridge Lifestyle Communities Inc., SilverBirch Hotels & Resorts and Timber Investments Ltd. Ms. Gardiner holds a Bachelor of Science Degree and an MBA, both from Queen's University.

Russell Ball, Director

Mr. Ball is the Chief Executive Officer and a director of Calibre Mining Corp. since October 2019, and previously served as Executive Chairman of Calibre. Previously, 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 qualified as both a Chartered Accountant from the Institute of Chartered Accountants of South Africa and a Certified Public Accountant in Colorado.

Dr. Mark Cruise, Director

Dr. Cruise founded the Company and served as its President and CEO from February 2008 to April 2019. Dr. Cruise is currently Chief Operating Officer of New Pacific Metals Corp., a silver exploration and development company with properties in Bolivia. Dr. Cruise was Vice-President, Business Development of Cardero Resources Corp. 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. 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.

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.

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 Chief Executive Officer of Glass 3 Enterprises Ltd. And the Co-Founder, President and Chief Financial Officer with Silica Ventures. Both Glass 3 Enterprises and Silica Ventures provide a full-service supply and sourcing solution for architectural glass requirements 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.

Richard Williams, Director

Mr. Williams is a former Chief Operating Officer at Barrick Gold Corporation and Barrick's Executive Envoy to Tanzania. He has also served as CEO of the Afghan Gold and Minerals Company and as a non-executive director of Gem Diamonds Limited, listed on the London Stock Exchange. He has an MBA from Cranfield University, a Master's Degree in Security Studies from Kings College London, and a Bachelor of Science in Economics from University College London.

Yan Bourassa, Vice President, Exploration & Mineral Resources

Mr. Bourassa joined the Company in July 2018 as Vice President, Exploration & Mineral Resources 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.

Brendan Creaney, Vice President, Investor Relations

Mr. Creaney joined the company in August 2019 as Vice President, Investor Relations. Previously he was Director, Corporate Development and Value Assurance at Goldcorp from November 2016 to May 2019 and held various positions prior to that at Goldcorp since May 2012. in functions such as Studies and Projects, Capital Allocation, and Strategy. Mr. Creaney also held roles at Barrick Gold Corporation and Novagold Resources. In these various roles he gained extensive experience in finance, technical studies, and mergers and acquisitions, including; leading due diligence teams, the development and review of business cases and valuations, the development and control of projects, and the administration of corporate strategy. He holds a Master of Business Administration specializing in Finance from the University of Manchester and a Bachelors degree in Political Science from the University of Victoria.

Derek du Preez, Chief Technology Officer

Mr Du Preez brings over 25 years of experience working at some of the world's largest and most complex mining operations, leading major digital transformation and innovation programs, championing industry-first applications of IoT and AI technologies and providing strong strategic guidance and technical expertise in relation to feasibility, planning and turnaround strategies to ensure optimal value for the business. Before joining Trevali, Mr. Du Preez was the principal consultant at AMC Consultants. Prior to that he held the position of Director, Digital Transformation, North Atlantic at Vale Canada and Head of Digital Delivery Centre at South 32. He holds a Bachelor of Engineering Technology and Mechanical Engineer's Certificate of Competency from South Africa, is a Technologist Member of the Institute of Engineers Australia in the Mechanical College, and is experienced in Agile Delivery, SCRUM and Design Thinking.

Amber Johnston-Billings, Chief Sustainability Officer

Prior to joining Trevali as Chief Sustainability Officer in September 2019, Ms. Johnston-Billings was a Director at KPMG where she led sustainability strategy and climate change for the Australian firm and supported organisations across a range of sectors, including large diversified multinational and small cap mining companies. She was previously the Head of Sustainability and Reporting at South32 where she designed and led sustainability performance improvement programs, as well as sustainability reporting and disclosure. Ms. Johnston-Billings also worked for the United Nations based in Ghana, where she helped sub-national governments advance the green economy and collaborated with West African communities in mining resource governance and to develop resilience to climate impacts. She holds a Master of Science and Bachelors degree (with Honours) in Psychology, a Diploma in International Climate Policy and Carbon Management and a number of credentials in peace and conflict, circular economy and environmental law.

Steven Molnar, Chief Legal Officer & Corporate Secretary

Mr. Molnar joined the Company as its General Counsel and Corporate Secretary in July 2018 and became Chief Legal Officer in July 2019. Prior to joining the Company, 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.

Matthew Quinlan, Interim Chief Financial Officer

Mr. Quinlan is an accomplished senior financial executive with 20 years of experience in finance, capital markets and the global mining industry most recently as Chief Financial Officer of Dominion Diamond Corporation, and prior as Managing Director & Co-Head of CIBC's Global Mining Investment Banking group. Mr. Quinlan joined the company in a consulting role in October 2019 leading commercial activities and was appointed Interim Chief Financial Officer in March 2020. Mr. Quinlan has significant executive leadership experience spanning strategic business development, financial reporting & analysis, budgeting, investor relations, supply chain, financing and mergers & acquisitions, corporate governance & corporate affairs. Mr. Quinlan holds a Bachelor of Engineering Science (Honours) in Mechanical Engineering and Business Finance from the University College of London & The London School of Economics and Political Science, and is a Chartered Accountant with the Institute of Chartered Accountants of British Columbia.

Joanne Thomopoulos, Chief People Officer

Ms. Thomopoulos joined the Company in October 2018 as Vice President, Human Resources Strategy and became Chief People Officer in July 2019. 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.

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 4,274,061 Common Shares, which together represent approximately 0.53% of the Company's issued and outstanding Common Shares

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

To the knowledge of the Company, after reasonable enquiry, 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.

To the knowledge of the Company, after reasonable enquiry, 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.

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.

Mr. Ball was also a director of Lydian International Limited (“**Lydian**”) from June 2018 until his resignation on March 12, 2020. On December 23, 2019, Lydian filed a petition for protection under the *Companies’ Creditors Arrangement Act* (“**CCAA**”), which was granted to Lydian and its direct and indirect wholly-owned subsidiaries Lydian Canada Ventures Corporation and Lydian U.K. Corporation Limited. A stay was also granted against certain other subsidiaries of Lydian. The supervising court has granted an extension of protection under the CCAA until April 30, 2020.

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 agreed certain standstill obligations (which expire on August 31, 2020) and to hold the shares issued to it as consideration for the Glencore Acquisition for a prescribed period, which expired on 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, the Company and its properties are not subject to, and during the financial year ended December 31, 2019 were not subject to, any material legal proceeding, nor does the Company know of any such material 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 10% 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 has been subject to various appeals by the Fern Trust. All potential avenues have appeal by the Fern Trust have now been exhausted; however, a date 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 adjourned by mutual consent.

Regulatory Actions

Except as disclosed below, 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, 2019; (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 agreement with a court relating to securities legislation or with a securities regulatory authority during the financial year ended December 31, 2019.

On January 26, 2016, Trevali Caribou 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 listed a number of measures that must be in place to protect fish and fish habitat. Trevali has a limited environmental liability agreement with the province of New Brunswick. Trevali and the province worked together to develop and implement an action plan to mitigate environmental risks associated with water run-off and contamination. Actions were undertaken in 2019 and will continue until contamination risks are mitigated.

On June 1, 2018 Trevali Caribou received a written warning from Environment and Climate Change Canada for contravention of subsection 36(3) of the Fisheries Act and the Metal Mining Effluent Regulations pursuant to the Fisheries Act. The contravention was for exceeding the allowable zinc concentration of grab and acute lethality samples collected at the Polishing Pond Discharge over multiple days in May 2018. Trevali increased the throughput of our wastewater treatment plant and zinc levels in discharge water returned to within allowable limits. The Inspector letter stated that “The document is not a finding of guilt or civil liability and is not an administrative adjudication”.

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 "*Three Year History – Significant Developments – 2017*".

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, 2019; or (ii) prior to January 1, 2019 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

Qualified Persons Under NI 43-101

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

To the best of the Company's knowledge, none of the qualified persons 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.

Auditors

The Company's auditors are PricewaterhouseCoopers LLP, Chartered Professional Accountants, who have prepared an independent auditor's report dated February 20, 2020 in respect of the Company's consolidated financial statements as at and for the years ended December 31, 2019 and December 31, 2018. 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.

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, Jill Gardiner, Dan Isserow and Richard Williams, 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 (Chair) – 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.

Jill Gardiner – Ms. Gardiner holds a Bachelor of Science Degree and an MBA, both from Queen's University. She is a professional corporate director and previously spent over 20 years in the investment banking industry, most recently as Managing Director and Regional Head, British Columbia, for RBC Capital Markets.

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.

Richard Williams – Mr. Williams is a former Chief Operating Officer at Barrick Gold Corporation. He has an MBA from Cranfield University, a Master's Degree in Security Studies from Kings College London, and a Bachelor of Science in Economics from University College London.

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.

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⁾
2019	C\$261,000	C\$116,500	C\$11,520	Nil
2018	C\$558,769	C\$120,000	C\$12,120	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 June 28, 2019. 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, 2019.

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 publicly 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.