



**ANNUAL INFORMATION FORM**

**For the year ended December 31, 2014**

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## TABLE OF CONTENTS

	Page
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS .....	i
PRELIMINARY NOTES AND CURRENCY PRESENTATION .....	iii
GLOSSARY OF GENERAL TERMS .....	iii
GLOSSARY OF MINING TERMS .....	vi
CORPORATE STRUCTURE .....	1
GENERAL DEVELOPMENT OF THE BUSINESS .....	1
DESCRIPTION OF THE BUSINESS .....	9
MINERAL PROPERTIES .....	10
RISK FACTORS .....	38
DIVIDENDS.....	48
DESCRIPTION OF CAPITAL STRUCTURE.....	48
MARKET FOR SECURITIES.....	49
ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTIONS ON TRANSFER.....	50
DIRECTORS AND OFFICERS.....	50
CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS .....	55
CONFLICTS OF INTEREST .....	56
LEGAL PROCEEDINGS AND REGULATORY ACTIONS .....	56
INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS.....	57
TRANSFER AGENTS AND REGISTRARS.....	57
MATERIAL CONTRACTS .....	57
INTERESTS OF EXPERTS .....	58
AUDIT COMMITTEE.....	58
ADDITIONAL INFORMATION.....	60
EXHIBIT “A” AUDIT COMMITTEE CHARTER.....	1

## CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Statements contained in this Annual Information Form (“AIF”) that are not historical facts are forward-looking statements (within the meaning of the Canadian securities legislation and the *U.S. Private Securities Litigation Reform Act of 1995*) that involve risks and uncertainties. Forward-looking statements include, but are not limited to, statements with respect to the future price of metals; the estimation of mineral reserves and resources, the realization of mineral reserve estimates; the timing and amount of estimated future production, costs of production, and capital expenditures; costs and timing of the development of new deposits; success of exploration activities, permitting time lines, currency fluctuations, requirements for additional capital, government regulation of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims, limitations on insurance coverage and the timing and possible outcome of pending litigation. In certain cases, forward-looking statements can be identified by the use of words such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or state that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved”. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Trevali Mining Corporation (the “Company”) to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

Such risks and other factors include, among others, risks related to the integration of acquisitions; risks related to operations; risks related to joint venture operations; actual results of current exploration activities; actual results of current reclamation activities; conclusions of economic evaluations; changes in project parameters as plans continue to be refined; future prices of metals; possible variations in ore reserves, grade or recovery rates; failure of plant, equipment or processes to operate as anticipated; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental approvals or financing or in the completion of development or construction activities, as well as those factors discussed in the sections entitled “Risk Factors” in this AIF. Although the Company has attempted to identify important factors that could affect the Company and may cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. 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. The forward-looking statements in this AIF speak only as of the date hereof.

Forward-looking statements and other information contained herein 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.

Various factors or assumptions are typically applied by the Company in drawing conclusions or making the forecasts, projections, predictions or estimations set out in forward-looking statements based on information currently available to the Company. These factors and assumptions include, but are not limited to:

- the success of the Company’s operations;
- prevailing commodity prices and exchange rates;
- the availability of capital to fund future capital requirements relating to the Company’s existing assets and projects, including but not limited to future capital expenditures relating to expansion, upgrades and maintenance shutdowns;
- future operating costs of the Company’s assets; and
- prevailing regulatory, tax and environmental laws and regulations.

Mineral resources are not mineral reserves and do not have demonstrated economic viability. Inferred mineral resources are estimated on limited information not sufficient to verify geological and grade continuity or to allow technical and economic parameters to be applied. Inferred mineral resources are too speculative geologically to have

economic considerations applied to them to enable them to be categorized as mineral reserves. There is no certainty that mineral resources can be upgraded to mineral reserves through continued exploration.

## PRELIMINARY NOTES AND CURRENCY PRESENTATION

Throughout this AIF, Trevali Mining Corporation is referred to as the “**Company**” or “**Trevali**”. Unless otherwise specified certain information herein is as at December 31, 2014, being the date of the Company’s most recently completed financial year. The information herein has been updated as necessary.

Unless otherwise specified, in this AIF all references to “**dollars**” or to “**\$**” are to Canadian dollars and all references to “**US dollars**” or to “**US\$**” are to United States of America dollars.

## GLOSSARY OF GENERAL TERMS

The following is a glossary of certain general terms used in this AIF:

<b>“Assignment of Credit Rights Agreement”</b>	means the assignment of credit rights agreement dated November 15, 2013 between Trevali Peru, the Company and Los Quenuales.
<b>“Board of Directors”</b>	means the board of directors of the Company.
<b>“Caribou Property”</b>	means the Caribou polymetallic deposit near Bathurst, New Brunswick.
<b>“Combination Agreement”</b>	means the combination agreement dated May 14, 2012, as amended, between Maple, Trevali Mining (New Brunswick) Ltd. and the Company in respect to the acquisition by the Company of the Caribou Property.
<b>“Common Share”</b>	means a common share without par value in the capital of the Company.
<b>“Company” or “Trevali”</b>	means Trevali Mining Corporation.
<b>“Conditional Assignment of Mining Rights”</b>	means the conditional assignment of mining rights agreement executed on September 3, 2010 between Trevali Peru, the Company and Los Quenuales.
<b>“First Addendum”</b>	means the first addendum executed on October 28, 2012 by the Company, Trevali Peru and Los Quenuales in respect to certain changes to provisions contained in the Maintenance and Operation Agreement and Purchase and Sale Agreement. The First Addendum provided that Los Quenuales may grant Trevali Peru a loan in the amount of up to US\$20M in order for Trevali Peru to pay for certain expenses set forth in the Maintenance and Operation Agreement.
<b>“Framework Agreement”</b>	means the framework agreement for the development and operation of the Santander Project, executed on September 3, 2010 by Trevali Peru, the Company and Los Quenuales which sets forth the main terms and conditions for the development and operation of the mine in respect to the Santander Project, including the Trevali Plant.
<b>“Glencore”</b>	means Glencore Xstrata plc and its related affiliates.
<b>“Glencore Debenture”</b>	means the US\$2 million debenture issued by the Company to Glencore.
<b>“Glencore Working Capital Facility”</b>	means the US\$20 million working capital facility provided the Company by Glencore.
<b>“Halfmile Property”</b>	means the Halfmile polymetallic deposit near Bathurst, New Brunswick.
<b>“Huampar Property”</b>	means the Huampar silver mine in Peru.
<b>“Kria”</b>	means Kria Resources Ltd. (now forming part of Trevali Maritimes).
<b>“Los Quenuales”</b>	means Empresa Minera Los Quenuales S.A., a company wholly-owned by Glencore.

<b>“Maintenance and Operation Agreement”</b>	means the maintenance and operation agreement executed September 3, 2010 by Trevali Peru and Los Quenuales in respect to the construction, maintenance and operation services in relation to the Trevali Plant during pre-operative and operative stages, as well as operation and maintenance of the Trevali Plant and the tailing storage facilities of the Santander Project during the operative stage of such project. This agreement was modified by the First Addendum and the Second Addendum.
<b>“Maple”</b>	means Maple Minerals Corporation (now forming part of Trevali New Brunswick).
<b>“New Santander”</b>	means Santander Concesiones S.A.C., a Peruvian Company.
<b>“NI 43-101”</b>	means National Instrument 43-101 - <i>Standards of Disclosure for Mineral Projects</i> .
<b>“NSR” or “Net Smelter Royalty”</b>	<p>means, with respect to the Santander, Halfmile and Stratmat Properties, the total gross proceeds effectively received, under arm’s length transactions, from the sales of ore minerals, concentrates, metal precipitates, non-metallic substances, and, generally, everything that may be obtained and/or produced from the minerals contained in the Santander Property, minus:</p> <ul style="list-style-type: none"> <li>(a) charges for mineral processing, smelting, and refining of the products (including handling and processing charges, interest, provisions, and settlement fees, sampling, assaying, classification, and representation costs, independent representative’s and arbitrators’ fees, penalties, and other processing charges;</li> <li>(b) transportation costs (including freight, insurance, security, taxes, handling, port fees, overstay, demurrage, and shipping costs incurred for or during carriage) from the port of shipment to the port of destination of the products; and</li> <li>(c) any sales tax, consumption tax, ad valorem tax or production tax assessable or imposed on the production or sale of the products.</li> </ul>
<b>“NPI” or “Net Profit Interest”</b>	means, with respect to the Caribou Property, a 10% royalty payable on the net profits derived from the sale of minerals, metals, concentrates and material mined from the Caribou Property, all as more particularly described in the applicable royalty agreement.
<b>“Note Offering”</b>	means the offering completed by the Company on May 30, 2014 in respect of the issuance of 52,500 units (each a <b>“Unit”</b> and collectively the <b>“Units”</b> ) consisting of 12.5% senior secured notes (each a <b>“Note”</b> and collectively the <b>“Notes”</b> ) due May 30, 2019 and Common Share purchase warrants (each a <b>“Warrant”</b> and collectively the <b>“Warrants”</b> ) for aggregate gross proceeds of \$51,450,000. Each Unit consisted of \$1,000 principal amount of Notes and 123.2 Warrants. Each whole Warrant is exercisable until May 30, 2019 at an exercise price of \$1.26 per Common Share.
<b>“Properties”</b>	means the Santander Property, Halfmile Property, Caribou Property, Stratmat Property, Ruttan Property and Huampar Property.
<b>“Purchase and Sale Agreement”</b>	means the purchase and sale agreement executed on September 3, 2010 by Trevali Peru and Los Quenuales which sets forth the main terms for (a) the construction, testing, commissioning and start-up of the Trevali Plant; (b) the transfer of property of the Trevali Plant by Los Quenuales to Trevali Peru and the acquisition of all necessary goods and services for the installation and delivery of the Trevali Plant from Los Quenuales to Trevali Peru. This agreement was modified by the First Addendum.

<b>“RMB”</b>	means RMB Resources, the resource financing division of FirstRand Group of South Africa.
<b>“RMB Bridge Facility”</b>	means the \$30 million mezzanine debt facility provided by RMB to the Company in April, 2013. The RMB Bridge Facility was paid-off in full on May 30, 2014 from the proceeds of the Note Offering.
<b>“Ruttan Property”</b>	means the Ruttan copper-zinc massive sulphide deposit in Manitoba.
<b>“Santander”</b>	means Compania Minerales Santander S.A.C., a Peruvian Company.
<b>“Santander Off-Take Agreements”</b>	means the agreements entered into by Glencore, Trevali and Trevali Peru on September 3, 2010 pursuant to which Glencore has agreed to acquire the aggregate lead and zinc production for the Santander Project during its whole life.
<b>“Santander Project”</b>	means the project involving the exploration and exploitation of certain mining concessions located in Peru and the operation of the Trevali Plant.
<b>“Santander Property”</b>	means the Santander silver, zinc and lead property located in the Department of Huaral, Peru.
<b>“Second Addendum”</b>	means the second addendum executed on December 5, 2012 effecting certain changes to the Maintenance and Operation Agreement to include additional terms applicable to the loan referred to in the First Addendum.
<b>“Share Unit Plan”</b>	means the Company’s share unit plan dated May 1, 2013.
<b>“Shareholder Rights Plan”</b>	means the Company’s shareholder rights plan dated June 19, 2013.
<b>“Stratmat Property”</b>	means the Stratmat polymetallic deposit near Bathurst, New Brunswick.
<b>“Third Addendum”</b>	means the third addendum to the Framework Agreement between Trevali Peru, the Company and Los Quenuales executed on November 15, 2013.
<b>“Tingo Power Station”</b>	means the ~1.6 megawatt Tingo hydroelectric plant and transmission lines located approximately 17 kilometers to the west of the Santander Property.
<b>“Trevali BVI”</b>	means Trevali Mining (BVI) Ltd., a British Virgin Island subsidiary of the Company.
<b>“Trevali Maritimes”</b>	means Trevali Mining (Maritimes) Ltd., an Ontario subsidiary of the Company formed by the amalgamation of Kria and Kria Resources Inc.
<b>“Trevali New Brunswick”</b>	means Trevali Mining (New Brunswick) Ltd., a New Brunswick subsidiary of the Company formed by the amalgamation of Maple and Trevali Mining (New Brunswick) Ltd.
<b>“Trevali Peru”</b>	means Trevali (Peru) S.A.C., a Peruvian subsidiary of the Company.
<b>“Trevali Plant”</b>	means the concentrator plant constructed on the Santander Property.
<b>“Trevali Renewable”</b>	means Trevali Renewable Energy Inc., a British Columbia subsidiary of the Company.
<b>“TSX”</b>	means the Toronto Stock Exchange.

## GLOSSARY OF MINING TERMS

The following are abbreviations and definitions of terms used in the mining industry and in this AIF:

<b>“Ag”</b>	is the scientific symbol and abbreviation for silver.
<b>“Au”</b>	is the scientific symbol and abbreviation for gold.
<b>“Cu”</b>	is the scientific symbol and abbreviation for copper.
<b>“cut-off grade”</b>	is used to define the lowest grade of the mineral deposit that has reasonable prospects for commercial development. In establishing the cut-off grade, it must realistically reflect the location, scale of the deposit, continuity, assumed mining method, metallurgical processes, costs and reasonable metal prices.
<b>“g/t”</b>	means grams per tonne.
<b>“ID2”</b>	means Inverse Distance Squared, being a method of estimating metal resources.
<b>“lbs”</b>	means pounds.
<b>“m”</b>	means metre or metres.
<b>“Metallurgy”</b>	the science and art of extraction of metals from their ores and producing a saleable product or concentrate.
<b>“Mineralization”</b>	the process by which minerals are introduced and concentrated within a host rock, and the product of this process.
<b>“oz”</b>	means ounces.
<b>“Pb”</b>	is the scientific symbol and abbreviation for lead.
<b>“tpd”</b>	means tonne per day.
<b>“Zn”</b>	is the scientific symbol and abbreviation for zinc.
<b>“ZnEQ*”</b>	equals $((\text{Ag Price(g)} \times \text{Ag Recovery} \times \text{Ag Grade}) + (\text{Pb Price(t)} \times \text{Pb Recovery} \times (\text{Pb Grade(\%)} / 100) + (\text{Zn Price(t)} \times \text{Zn Recovery} \times (\text{Zn Grade(\%)} / 100))) / \text{Zn Price(t)}$ . Golder utilized the US dollar three year rolling average price for all three metals. Price for silver is (\$25.99/oz) and that for Pb (\$2,205), Zn (\$2,094) and Cu (\$7,782) is per tonne. A recovery of 85% was applied to Ag, 90% for Pb, 85% for Zn and 60% for Cu for calculating the ZnEQ formula. The pounds of metal are in-situ and have not had any mining factors applied to them.

The terms “Mineral Resource”, “Measured Mineral Resource”, “Indicated Mineral Resource” and “Inferred Mineral Resource” used in the Company’s disclosure are Canadian mining terms as defined in accordance with NI 43-101 under the guidelines set out in the Canadian Institute of Metallurgy and Petroleum Standards. Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability.



## CORPORATE STRUCTURE

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

The head office and registered office of the Company are located at:

**Head Office:** Suite 2300 – 1177 West Hastings Street  
Vancouver, British Columbia  
V6E 2K3

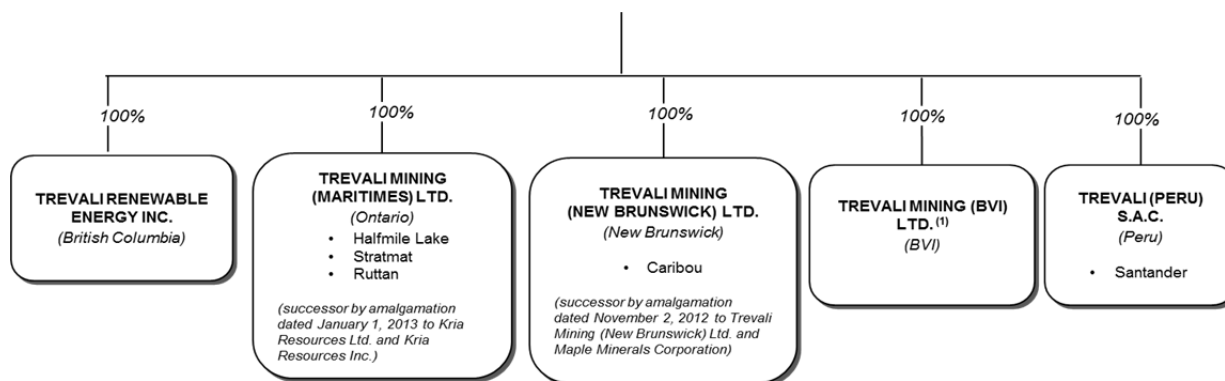
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**Registered Office:** Suite 2300 – 1177 West Hastings Street  
Vancouver, British Columbia  
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Telephone: 604-408-1661  
Fax: 604-408-7499

Website: [www.trevali.com](http://www.trevali.com)  
Email: [info@trevali.com](mailto:info@trevali.com)

The following chart sets out all of the Company’s subsidiaries as at the date hereof, their jurisdictions of incorporation and the Company’s direct and indirect voting interest in each of these subsidiaries.



Footnote: <sup>(1)</sup> Trevali Mining (BVI) Ltd. was formed on August 19, 2013. It is currently inactive. It is the intention of Trevali to affect an internal tax reorganization such that the shares of Trevali (Peru) S.A.C. will be transferred (and become a wholly-owned subsidiary of) Trevali Mining (BVI) Ltd.

## GENERAL DEVELOPMENT OF THE BUSINESS

### Overview

The Company’s principal business is the acquisition, exploration and development of polymetallic properties (zinc-lead-silver-copper). The Company currently has four material polymetallic deposits in Canada and Peru. In Canada,

the Company owns the 3,000 tonne-per-day Caribou mill and associated polymetallic deposit (the “**Caribou Property**”) and the Halfmile and Stratmat polymetallic deposits near Bathurst, New Brunswick (the “**Halfmile-Stratmat Properties**”). In Peru, the Company has the exclusive right for a period of 50 years (with an automatic 50 year extension) to engage in exploration, development, exploitation, processing and commercialization of the Santander zinc, lead and silver property located in the province of Huaral, Departamento de Lima, Peru (the “**Santander Property**”). In addition to its material properties, the Company also has the past-producing Ruttan copper-zinc massive sulphide deposit in Manitoba (the “**Ruttan Property**”) and an option to acquire the past-producing Huampar silver mine in Peru (the “**Huampar Property**”).

### **Three Year History**

The following describes the material development of the Company’s business over the last three years.

#### ***Acquisition and Development of the Santander Property***

On December 11, 2007, Trevali Peru was assigned all of Santander’s interest in the Santander Property for a period of 50 years with an automatic 50 year extension. Santander’s interest includes the right to engage in exploration, development, processing and commercialization activities in respect of the Santander Property. The consideration payable by the Company to Santander is a 3.5% net smelter royalty. In addition, Trevali Peru also acquired from Santander a long-term lease of the Tingo Power Station.

On May 15, 2009, the Company signed a memorandum of understanding with Glencore regarding the development of and metal concentrate sales from the Santander Property.

In July 2009, the Company entered into an addendum agreement to the assignment agreement above referred, pursuant to which, subject to ratification by all of the creditors of Santander, the Company and Santander agreed to suspend the US\$100,000 minimum monthly payment until such time as the Company had generated US\$51,000,000 of revenue subject to the 3.5% NSR Royalty above referred, at which time the Company would be obligated to recommence paying the greater of the monthly NSR Royalty and the minimum monthly payment. It should be noted, however, that 70.2% of such NSR Royalty would actually be payable to the Company as the Company is the largest single creditor of Santander in relation to its bankruptcy proceedings. In consideration for the suspension of the minimum monthly payment, the Company agreed to advance to Santander by way of loan all necessary funds to cover the ongoing costs of Santander’s bankruptcy proceedings estimated to be US\$250,000 per annum. In addition, the Company was granted the exclusive right, up to September 30, 2015, to acquire the mineral concessions which comprise the Santander Property for a payment equal to the balance of the Santander liabilities outstanding on the date the Company exercises the right plus US\$300,000. The terms of the addendum agreement were subsequently approved by the Santander creditors at a creditors meeting held on September 16, 2009. On March 15, 2011, the creditors of Santander approved the spin-off of the Santander Property in favor of a new company, Santander Concesiones S.A.C. (“New Santander”), effective on the issuance of a public deed for the spin-off. Pursuant to Peruvian law, under a spin-off procedure, the shareholders of the company that is being reorganized (Santander) will be the shareholders of the company which receives the assets (New Santander).” See also Risk Factors under the heading “Challenge of Bankruptcy Authority”.

On September 3, 2010, the Company, Glencore’s Peruvian subsidiary, Los Quenuales and Trevali Peru entered into the Framework Agreement, the Purchase and Sale Agreement and the Maintenance and Operation Agreement for the development, construction and operation of the Santander Property. Key terms of these agreements at the time were as follows:

- The Company would retain 100% ownership of the Santander Property;
- Glencore would provide, construct and operate a 2,000 tonne-per-day mill and flotation plant (now completed) to produce saleable zinc and lead-silver concentrates;
- Glencore would provide project management and operational expertise at cost on a contractor-basis to design, develop and operate the mine;

- The Company would acquire the plant and associated infrastructure following commercial concentrate production thereby securing full ownership of the new mill and processing complex; and
- The Company would secure a life-of-mine concentrate off-take agreement whereby Glencore would buy 100% of the mine project production at international benchmark terms.

On April 24, 2012, the Company announced it received Directorial Resolution N°: 122-2012-MEM/AAM from the General Bureau of Environmental Affairs of the Ministry of Energy and Mines of Peru (*Ministerio de Energia Y Minas - MEM*) approving its environmental impact study for the Operations Phase of the Santander Property.

On March 15, 2011, the creditors of Santander approved the spin-off of the Santander Property in favor of New Santander, effective on the issuance of a public deed for the spin-off. Pursuant to Peruvian law, under a spin-off procedure, the shareholders of the company that is being reorganized (Santander) will be the shareholders of the company which receives the assets (New Santander). The public deed of the spin-off is dated December 28, 2012 and the registration procedure for the spin-off is in progress and is expected to be completed in the second half of 2015. On December 28, 2012, Trevali Peru and the principal holder of 99.8869% of the shares of New Santander (the “**Principal Shareholder**”) executed an option agreement for the shares of New Santander. The amount that Trevali Peru is obliged to pay to the Principal Shareholder to exercise the option will be equal to the total amount of the pending debts in Santander, plus US\$300,000 and applicable taxes. Following the repayment of such debts, Santander will be duly liquidated and Trevali Peru will own the Santander Property.

On July 5, 2012, the Company announced the results of its 2012 independent NI 43-101 mineral resource estimate update for the Santander Property. The report is available under the Company’s profile on the SEDAR website at [www.SEDAR.com](http://www.SEDAR.com). See also “Mineral Properties”.

On November 6, 2012, the Company announced that it had arranged the Glencore Working Capital Facility. The Glencore Working Capital Facility was to cover short-term capital and cash management needs at the Santander Property during the commissioning/ramp-up phase and in ongoing operations.

On November 15, 2013, the Company and Trevali Peru (herein collectively, “**Trevali**”), and Los Quenuales, a wholly-owned indirect subsidiary of Glencore (herein collectively, “**Glencore**”) entered into (i) the Third Addendum for the development and operation of the Santander Property, which included amendments to the existing mine and plant Maintenance and Operation Agreement executed on September 3, 2010, the Santander plant Purchase and Sale Agreement executed on September 3, 2010 and the Conditional Assignment of Mining Rights executed September 3, 2010, and (ii) the Assignment of Credit Rights Agreement. The Third Addendum confirms, among other things, the amounts (including debt service obligations) owing by Trevali to Glencore in respect to (i) a US\$20 million Glencore Working Capital Facility first made by Glencore to Trevali in October, 2012 and bearing interest at LIBOR plus 5%; and (ii) the cost US\$43,870,000 including refundable Peruvian GST of US\$6,692,034 calculated at 18% of the Trevali Plant. The Trevali Plant price above referred, which bears no interest, and the Glencore Working Capital Facility, together with any default interest, as applicable, is to be paid by Trevali to Glencore on a monthly basis over a five year repayment term based on a fee schedule per ton of ore treated at the Trevali Plant.

The Assignment of Credit Rights Agreement confirms, among other things, the specific security documents and instruments Trevali has agreed to grant Glencore in order to secure the repayment of all obligations owing to Glencore by Trevali (herein, the “**Trevali Obligations**”). The Assignment of Credit Rights Agreement also assigns to Glencore all funds, monies and cash flows derived from certain credit rights owed to Trevali under the Santander Off-Take Agreements with Glencore in respect of lead and zinc production at the Trevali Plant. As Glencore has contractually agreed to purchase all lead and zinc production from the Trevali Plant during its life of mine, the Assignment of Credit Rights Agreement further requires the repayment of the Trevali Obligations in stages, and in each stage, on a priority (waterfall) basis.

On August 15, 2013, the Company announced that it had commenced zinc and lead-silver concentrate production from its metallurgical plant at the Santander Mine.

On February 20, 2014, the Company announced that its Santander Zinc-Lead-Silver operations in Peru had achieved commercial production following successful commissioning in Q3 and Q4 of 2013.

On July 2, 2014, the Company announced that it closed an agreement selling its wholly-owned Tingo Power Station to Volcan Compañía Minera S.A. ("**Volcan**") for USD\$13.5 million. Through the agreement, the Company monetized the Tingo Power Station, a non-producing, non-core asset to the Company's main business of mine development and metal production.

The Company's first full-year 2014 Santander production was approximately 50.4 million payable pounds of zinc, 23.3 million payable pounds of lead and 914,600 payable ounces of silver. 2014 full-year recoveries averaged 88% for zinc, 85% for lead and 75% for silver. Annual mill throughput was 709,140 tonnes with average head grades of 4.24%, 1.89%, 1.64 ounces/ton for zinc, lead and silver respectively. Total concentrate production was 54,204 tonnes and 19,375 tonnes of zinc and lead respectively. For the year ended December 31, 2014, the Company shipped and sold from its Santander mine, 53,703 tonnes of zinc concentrates containing approximately 48 million pounds of payable zinc; and 18,911 tonnes of lead-silver concentrates containing approximately 6.1 million pounds of payable lead and 891 thousand ounces of payable silver. The Company had gross revenues of approximately USD \$86 million. Income from mining operations was \$12.7 million and the net loss for the year was \$7 million. The net loss for the year is a combination of a one-time loss as a result of the Company's disposal of its Tingo Hydroelectric facility earlier this year; deferred income tax expense of \$3.3 million as well as lower than expected revenues in the fourth quarter as a result of lower lead and silver prices.

#### ***Significant Acquisition of Kria and Development of the Halfmile Property and Stratmat Property***

On April 7, 2011, the Company completed the acquisition of the Halfmile Property, Stratmat Property and Ruttan Property through the acquisition of Kria by way of a plan of arrangement and changed its name to "Trevali Mining Corporation". On June 8, 2011, the Company filed a business acquisition report, a copy of which is available for review under the Company's profile on the SEDAR website at [www.SEDAR.com](http://www.SEDAR.com).

On January 31, 2011, Kria received an Industrial Lease and Licence of Occupation from the *New Brunswick Department of Natural Resources* and an Approval to Construct and Operate from the *New Brunswick Department of Environment* permit to Construct and Operate the Halfmile Property, together with the required permit and mining lease from the *New Brunswick Department of Environment* granting approval to construct and operate the Halfmile Property.

On July 19, 2011, the Company finalized an impact benefits agreement with the Mi'gmaq First Nations of New Brunswick. The agreement builds upon and formalizes the working relationships between the Company and the Mi'gmaq First Nations, and the Company's planned development of the Halfmile Property.

On December 14, 2011, the Company received a mining lease for the Halfmile Property from New Brunswick's Department of Natural Resources and Energy. The mining lease is valid for an initial period of twenty years and is renewable for additional twenty-year periods for up to a total of eighty years.

On January 6, 2012, initial mineral production commenced from the uppermost portions of the Halfmile Property with toll-processing at Xstrata's Brunswick-12 Mill and continued to advance its underground development at the Halfmile Property during the balance of 2012. The Company ceased test-mining at the Halfmile deposit in mid-2012 in order to preserve the deposit and focus efforts on future contemplated stand-alone mining and milling operations.

On November 25, 2013, the Company provided an update on its Halfmile-Stratmat work programs in New Brunswick. The Company confirmed the following works programs were in progress at Halfmile and Stratmat, namely: ongoing geotechnical and resource definition drilling; ongoing environmental baseline studies being; ongoing archeological impact assessment being conducted and ongoing tailings basin study initiated at all of which were being managed by Stantec Consulting. The aim of the above-described programs is to provide additional information required to make a technical decision on the potential of the deposits to possibly support a new stand-alone milling facility.

On February 26, June 20, September 3, November 25, 2014 and January 19 and March 2, 2015, the Company provided updates and geochemical assay results on its approximately 26,000m, 49 drill-hole, Stratmat resource definition drill program. The program was designed to increase confidence in the current resource and upgrade the category from Inferred to Indicated. The program was successful resulting in the discovery of a New Zone between the Main Zone and S1, as well as significant expansion of the S5 Zone. SRK Consulting has been retained to provide an updated, independent resource estimate for the Stratmat deposit. It is anticipated that the estimated will be completed during the second quarter of 2015. See also "Mineral Properties".

### ***Significant Acquisition of Maple and Development of the Caribou Property***

On November 2, 2012, the Company completed the acquisition of the Caribou Property, through the acquisition of Maple by way of an amalgamation between Maple and the Company's wholly-owned subsidiary, Trevali (New Brunswick) Ltd. In connection with the acquisition, Maple shareholders received 20,000,010 Common Shares and 3,999,986 common share purchase warrants (the "**Maple Warrants**"). Each Maple Warrant entitled the holder to acquire one Common Share at a price of \$2.00 and expired unexercised on November 2, 2013.

On November 6, 2012, the Company announced that it had entered into a concentrate off-take agreement with Glencore for future metal concentrates produced from the Caribou Property at international benchmark terms.

On January 17, 2013, the Company filed a business acquisition report in respect to its acquisition of the Caribou Property, a copy of which is available for review under the Company's profile on the SEDAR website at [www.SEDAR.com](http://www.SEDAR.com).

On January 17, 2013, the Company announced the results of an independent mineral resource estimate for the Caribou Property. The NI 43-101 technical report dated February 25, 2013 (updated November 21, 2013) is available under the Company's profile on the SEDAR website at [www.SEDAR.com](http://www.SEDAR.com).

On January 30, 2013, the Company finalized a limited environmental liability agreement with the Province of New Brunswick regarding the historic environmental liabilities at the Caribou Property. Under the agreement, the Company will be responsible for all environmental liability and reclamation costs associated with the Caribou Property on closure, other than in respect to any historic liabilities.

On May 1, 2013, the Company announced that it had received an "approval to operate" for its Caribou Property from the Province of New Brunswick.

On May 13, 2014, the Company announced the results of an independently prepared Preliminary Economic Assessment ("**Caribou PEA Report**") for its Caribou Property. The base case Caribou PEA Report indicates positive economic results for the Caribou underground mining operation and mill complex with a pre-production capital expenditure of \$36.3 million, a post-tax internal rate of return ("**IRR**") of 56.9%, post-tax net present value ("**NPV**") of \$106 million at a 5% discount rate, and average annual payable production of approximately 93 million lbs. zinc, 32.5 million lbs. lead, 3.1 million lbs. copper, 730,000 ozs. silver and 1,500 ozs. gold. The Caribou PEA Report study was conducted in accordance with the definitions in NI 43-101 by SRK Consulting (Canada) Inc. as the lead independent consultant, with contributions from other independent consultants commissioned by Trevali - Holland & Holland Consulting and Stantec Consulting. The results of the economic analysis represent forward-looking information that are subject to a number of known and unknown risks, uncertainties and other factors that may cause actual results to differ materially from those presented.

The summary section from the Caribou PEA report, as amended, is substantially reproduced under the "Mineral Properties" section of this AIF and the full text is available for review on the SEDAR website at [www.sedar.com](http://www.sedar.com).

On June 26, 2014, the Company announcing that it had commenced both surface and underground construction and rehabilitation activities at the Caribou Property to facilitate mine and mill commissioning in the first half of 2015. The Company also filed the NI 43-101 technical report in respect of the Caribou Property entitled "Technical Report on Preliminary Economic Assessment for the Caribou Massive Sulphide Project, Bathurst New Brunswick, Canada".

On September 18 and December 18, 2014, the Company announced that the Caribou Property project remains on schedule for commissioning in the first half of 2015. A summary of key current activities was also provided, namely that the Semi-Autogenous Grinding Mill had been installed, the IsaMills inspected along with associated support equipment and that the Zn and Pb flotation cells were available. Underground progress included the construction of a new portal, dewatering and refurbishment of approximately 3-years' worth of underground development and positive progress on an underground paste-fill study.

On May 14, 2015, the Company filed on SEDAR an amended "*Technical Report on Preliminary Economic Assessment for the Caribou Massive Sulphide Zinc-Lead-Silver Project, Bathurst, New Brunswick, Canada*" dated May 14, 2015 prepared by SRK. The amended Caribou PEA Report reconciles results, specifically the estimates of mineral resources not included in the Company's mine plan, whereby it was not previously broken down into specific resource categories. The mineral resources not included in the Company's mine plan have now been categorized as approximately 2,033,000 tonnes of Measured and Indicated Resource and 1,027,000 tonnes of Inferred Resource.

On May 19, 2015, the Company announced that it had commenced mill commissioning at its Caribou Property following the recent successful initiation of underground mining.

#### ***Acquisition of Ruttan Property***

On July 31, 2012, the Company made the final option payment to acquire a 100% interest in the Ruttan Property. There has been no significant exploration activity at the Ruttan Property during 2013 or 2014.

#### ***Option of the Huampar Property***

On May 18, 2011, the Company signed a memorandum of understanding with Nueva Condor Inc. wherein Nueva Condor agreed to grant to the Company the exclusive option to acquire all of the outstanding shares of its Peruvian subsidiary Nueva Condor S.A., 100% owner and holder of the Huampar Property for a period of four years from the date of execution of the memorandum of understanding. The Company paid US\$50,000 upon signing the memorandum of understanding.

On April 4, 2014 the memorandum of understanding was superseded and replaced by a definitive Stock Purchase Agreement by which the registered owner of 100% of the shares of Nueva Condor S.A. transferred all of his shares to the Company (the "SPA").

Pursuant to the terms of the SPA, the price for the Nueva Condor shares includes: (i) the issuance of 900,000 Common Shares, (ii) a cash payment of US\$350,000 to be paid in monthly installments of US\$5,000 as from the date of execution of the memorandum of understanding, (iii) an amount in cash equivalent to 5% of the recognized value of the credits listed on Schedule 3 of the SPA and (iv) a 3% net smelter royalty, of which 2% may be purchased in 1% tranches for 4 years as from January 3, 2012 for payments of US\$1.5 million and US\$2 million.

Payments detailed in (i) and (iii) above, and a US\$100,000 annual advance payment (deductible from the net smelter royalty payments), will be due upon the seller's compliance with the covenants set forth in the SPA.

To date the seller has not fully complied with the covenants, therefore payment of the consideration is not due.

#### ***Financings and Credit Facilities***

The following describes the equity financings and credit facilities the Company has made or put in place over the course of the last three years.

On January 16, 2012, the Company repaid an outstanding loan of US\$8,645,260 due to Cardero Resource Corp. as follows: (i) US\$5,000,000 in cash; and (ii) the balance of US\$3,645,260 (equivalent to \$3,734,569) satisfied by issuing to Cardero 4,149,521 units at a deemed price of \$0.90 per unit, with each unit being comprised of one Common Share and one-half of one transferrable common share purchase warrant. Each whole warrant will entitle

the holder thereof to purchase one Common Share at a price of \$1.10 until January 16, 2014. The warrants expired unexercised on January 16, 2014.

On March 2, 2012, the Company completed a non-brokered private placement with Glencore of 12,620,282 Common Shares at a price of \$1.42 (US\$1.4263) per Common Share for gross proceeds of US\$18 million. The proceeds from this private placement were used to advance the Santander Property and to provide working capital facilities for the Halfmile Property.

On July 5, 2012, the Company announced that it had entered into an agreement with Auramet Trading LLC for a receivables working capital line of credit of US\$5 million. The funds were used by the Company to support the Halfmile Property and for general corporate purposes. The balance outstanding under the line of credit was paid on November 7, 2012.

On July 25, 2012, the Company completed a brokered flow-through private placement financing of 14,987,500 common shares at a price of \$1.03 per flow through share for aggregate gross proceeds of \$15,437,125. The Company paid the underwriters a cash commission of \$771,856.25. The gross proceeds from offering were used to fund continued underground development and exploration infrastructure at the Halfmile Property and exploration expenditures at the Stratmat Property, which constitute Canadian exploration expenses as defined in the *Income Tax Act* (Canada).

On August 15, 2012, the Company entered into a bridge-loan credit facility agreement with Sprott Resource Lending Partnership. The facility is for a principal amount of \$10 million at an interest rate 11% per annum, compounded and payable monthly, and due and payable in full on or before August 31, 2013. In consideration of the facility, the Company made a share bonus payment of \$250,069, being 2.5% of the principal amount of the facility, payable in 329,472 Common Shares at a deemed price of \$0.759 per share. A structuring fee in the amount of \$150,000 was also paid to Sprott. Proceeds of the facility were applied towards ongoing underground development of the Halfmile Property, upgrades/reactivation of the Caribou Property, and for general working capital purposes.

On November 2, 2012, the Company amended the \$10,000,000 bridge-loan credit facility agreement with Sprott dated August 15, 2012, increasing it to \$16,000,000 under similar terms. The additional proceeds were used to redeem Maple's \$6,000,000 debenture issued in 2012 to Breakwater Resources Ltd. (now known as "Nyrstar NV"). In connection with Sprott's advance of an additional \$6,000,000 to the Company, Sprott received a \$60,000 structuring fee and 158,127 Common Shares.

On September 26, 2012, the Company entered into a mandate with RMB, the resource financing division of the FirstRand Group of South Africa, to arrange up to US\$60,000,000 in corporate debt financing in order to repay current debt and to fund its stand-alone mining operations near Bathurst, New Brunswick. The funding mandate contemplated a: (i) US\$30,000,000 corporate facility repayable over a 5-year term bearing interest of LIBOR + 5.5% per annum; and (ii) US\$30,000,000 pre-paid gold and silver facility based upon spot prices at time of closing. The facility with RMB was subsequently completed on April 30, 2013 (as discussed below).

On November 6, 2012, the Company announced that it had arranged the US\$20-million Glencore Working Capital Facility for the Santander Property during the commissioning/ramp-up phase and in ongoing operations. The secured working capital facility is payable over a 4-year period following commercial production at the Santander Property and bears an interest rate of LIBOR +5%. The Glencore Working Capital Facility was amended pursuant to the Third Addendum (as discussed below).

On March 28, 2013, the Company announced that it closed a brokered flow-through private placement of 5,000,000 common shares at a price of \$1.00 per flow through share for aggregate gross proceeds of \$5,000,000. In connection with the private placement, the Company paid a cash commission of \$225,000. The gross proceeds raised from the offering is being used to fund continued underground development and exploration infrastructure at the Halfmile Property and exploration expenditures at the Stratmat Property.

On April 30, 2013, the Company announced that it had closed the \$30,000,000 RMB Bridge Facility which was associated with the Company's previously contemplated and announced \$60,000,000 RMB senior debt and precious metals facility. The RMB Bridge Facility was repayable on the earlier of: (a) June 30, 2014, (b) the date on which

Trevali, or one of its guarantor subsidiaries under the facility, receives the proceeds of any equity financing where the aggregate amount of equity raised is over \$30,000,000 for the six month period ending on that date, or (c) the date on which an amount is first drawn under any further debt or other facility which may be arranged before the final repayment date. The RMB Bridge Facility bore interest of LIBOR + 8.5% per annum and had an arrangement fee of 5.0% and 3,000,000 warrants to purchase the Common Shares exercisable at an exercise price of \$1.05 per share until June 30, 2015. The RMB Bridge Facility, which had been used to repay current debt, to fund certain costs associated the Company's Santander Property, to fund certain development costs associated with the Company's stand-alone mine and mill operations in the Bathurst Camp of New Brunswick, and for general corporate working capital purposes, was paid off in full on May 30, 2014 from the proceeds of the Note Offering.

On June 12, 2013, the Company announced that it had closed a \$10,903,020 bought-deal private placement consisting of 18,171,700 Common Shares at a price of \$0.60 per Common Share. In connection with the closing, the Company paid a cash commission equal to 5.0% of the gross proceeds of the offering to the underwriters. The proceeds from the offering was used to advance mine commissioning and production start-up at the Company's Santander Mine, to advance the Company's New Brunswick projects, and for general corporate working capital purposes.

On November 28, 2013, the Company completed a bought-deal offering of 55,430,000 Common Shares (inclusive of 7,230,000 Common Shares issued pursuant to the exercise in full of the underwriters' over-allotment option) at a price of \$0.83 per Common Share for aggregate gross proceeds of \$46,006,900. The net proceeds of the offering was used to reduce the size of the proposed RMB Bridge Facility, for the restart of the Caribou mine and mill at the Bathurst Mining Camp (New Brunswick) operations and for general working capital purposes.

On May 30, 2014, the Company announced that it had closed an offering of 52,500 units (each a "**Unit**" and collectively the "**Units**") consisting of 12.5% Senior Secured Notes due May 30, 2019 (each a "**Note**" and collectively, the "**Notes**") and Common Share purchase warrants (each a "**Warrant**" and collectively the "**Warrants**") at a price of \$980 per Unit, for aggregate proceeds of \$51,450,000. Each Unit consisted of \$1,000 principal amount of Notes and 123.2 Warrants. Each whole Warrant entitled the holder thereof, subject to certain conditions, to purchase one Common Share at an exercise price of \$1.26. The Warrants expire on May 30, 2019. The Units were issued on a private placement basis pursuant to exemptions from the prospectus requirements under Canadian securities legislation (herein, the "**Note Offering**"). The net proceeds from the Note Offering was and is being used to: (i) to pay-out the RMB Bridge Facility; (ii) to fund Trevali's asset build-out of the Caribou Mine and Mill in New Brunswick; (iii) to repay Trevali's US\$2 million convertible debenture owing to Glencore; and (iv) for general working capital purposes.

On March 2, 2015, the Company announced that it had closed a non-brokered flow-through financing for aggregate gross proceeds of approximately \$5.1 million (comprised of 4,436,957 Common Shares issued at a price of \$1.15 per Common Share). The proceeds will be spent on qualifying Canadian exploration expenditures at the Company's New Brunswick exploration properties.

### ***Shareholders Rights Plan***

On April 22, 2010, the Board of Directors adopted a shareholders rights plan which was approved by the Company's shareholders at the Company's annual general meeting held on May 27, 2010. As the shareholders rights plan had an initial three year term, an amended shareholder rights plan ("**Shareholder Rights Plan**") was presented to and approved by the Company's shareholders at the Company's annual and special meeting held on June 19, 2013.

### ***Share Unit Plan***

On May 1, 2013, the Board of Directors adopted a share unit plan ("**Share Unit Plan**") to: (i) provide the Company's Directors, officers and Service Providers (as defined in the Share Unit Plan) the opportunity to participate in the progress of the Company by granting to such individuals awards that align to the long-term success of the Company; (ii) support and emphasize the achievement of the Company's performance objectives; (iii) ensure that the interests of key persons are aligned with the success of the Company; and (iv) provide compensation opportunities consistent with Trevali's compensation philosophy statement in order to attract, retain and motivate Directors and senior management critical to the long-term success of the Company and its subsidiaries.



## *Exchange Listings*

On October 7, 2010, the Common Shares commenced trading on the TSX under the symbol “TV”.

On November 3, 2010, the Company commenced trading on the OTCQX International quotation system in the United States under the symbol “TREV”.

On June 15, 2011, the Company’s Common Shares were approved for listing on the Main Board of the Bolsa de Valores de Lima in Peru on June 15, 2011 under the trading symbol “TV”. The Company’s shares are also listed on the Frankfurt Stock Exchange under the symbol “4T1”.

The Company is currently a reporting issuer in all provinces of Canada.

## **DESCRIPTION OF THE BUSINESS**

### **Summary**

The Company is a zinc-focussed base metal mining company with operations in Canada and Peru. Domiciled in Vancouver, British Columbia, it has the exclusive right for a period of 50 years (with an automatic 50 year extension) to engage in exploration, development, exploitation, processing and commercialization of the Santander Property, a zinc-lead-silver mine project located in the Central Peruvian Polymetallic Belt approximately 215 km from Lima, Peru. The Company, through its wholly-owned subsidiary, Trevali Peru, entered into a definitive development agreement with Glencore’s Peruvian subsidiary, Los Quenuales, for the development, construction and operation of the Santander Property. On August 15, 2013, the Company announced that it had commenced commissioning its 2,000 tonne-per-day Santander operation and subsequently declared commercial production on February 20, 2014.

The Company also owns the Caribou Property which is comprised of the 3,000 tonne-per-day Caribou mill and the associated Caribou deposit, the Halfmile Property and the Stratmat Property (together, the “**Halfmile-Stratmat Property**”) near Bathurst, New Brunswick and the Ruttan Property in Manitoba. The Company is currently advancing its Caribou Property into production with commissioning anticipated to commence in the second quarter of 2015.

### **Competitive Conditions**

The zinc, lead and silver exploration and mining business is a competitive business. The Company competes with numerous companies that have financial resources significantly in excess of those of the Company, in the search for (i) attractive mineral properties; (ii) qualified service providers and labour; and (iii) equipment and suppliers. The ability of the Company to acquire additional mineral properties in the future will depend on its ability to operate and develop its present properties and on its ability to select and acquire suitable producing properties or prospects for development or exploration in the future.

Trevali is the only primary zinc producer (as defined by greater than 50% revenues from zinc) currently listed on the TSX.

### **Specialized Skill and Knowledge**

The Company has an experienced management and technical team. Dr. Mark Cruise (PGeo), President, Chief Executive Officer and Director, is a base metal specialist with extensive global base-metal experience from grassroots exploration through resource definition to production in Europe and the Americas. Anna Ladd (CPA), Chief Financial Officer, has served as Vice President Finance and Chief Financial Officer for a number of TSX listed junior mining and development companies in addition to several mid-size to senior gold and base metal producers including Grande Cache Coal, Kinross Gold Corporation and Vale Inco’s base metal operations. Daniel Marinov (R.P. Geo), Vice-President of Exploration, has over 21 years of international experience in the mining and mineral exploration industry with Rio Tinto and Anglo American in senior geologist and management roles. Paul Keller (P.Eng.), Chief Operating Officer, brings extensive mine operations experience in Canada with 28 years of

experience at Rio Algom and Barrick. Most recently, Mr. Keller was Manager of Technical Services for a major Canadian mining contractor where he led a team of engineers and designers on various mining contracts for mid-tier to major mining companies.

## **Market**

The Company's principal products are zinc, lead and silver. For the period ended December 31, 2014 the Company's production from its Santander operations was approximately 50.4 million pounds payable zinc, 23.3 million pounds payable lead and 914,600 payable ounces of silver. The Company has life-of-mine concentrate offtake agreements with Glencore, a leading miner and commodity trader, for all concentrates produced at the Santander Property and from the Caribou deposit and has received numerous expressions of interest regarding the marketing and potential sale of any future concentrates from the Halfmile Property and the Stratmat Property. Consequently, the Company does not presently foresee any significant issues with securing buyers for any future metal concentrates.

## **Environmental Matters**

The Company's exploration, development and mining activities are subject to various laws and regulations governing environmental protection, employee health and safety, wastes disposal, remediation of environmental sites, reclamation, mine safety, toxic substances and other matters. Compliance with applicable laws and regulations requires forethought and diligence in the conduct of the Company's activities. Further information is provided under the heading "Risk Factors".

## **Dependence on Foreign Operations**

At the present time, the Company's only operating business unit is the Santander Mine in Peru.

## **Effect of Seasonal Variation**

The Company is capable of developing and operating all of its projects year-round, however some seasonal factor's such as extreme cold, heavy rain, snowfall in the winter months and/or a late freeze-up may limit the Company's ability to undertake some surface activities.

## **Employees**

As at December 31, 2014, the Company had a total of 50 employees and full time consultants and was utilizing the services of approximately 85 contractors at its Caribou Project and 350 contractors at its Santander Project respectively.

## **MINERAL PROPERTIES**

The following is a description of the Company's material properties.

### **Santander Property, Province De Huaral, Peru**

On November 26, 2013, the Company filed an amended NI 43-101 technical report in respect of the Santander Property entitled "*Technical Report and July 2012 Resource Update – Santander Property, Province of Huaral Peru*" dated November 26, 2013 (effective July 5, 2012) (the "**Santander Report**"), prepared by Greg Greenough, P. Geo, and Brian Thomas, P. Geo, of Golder Associates Ltd., each of whom is a "qualified person" within the meaning of NI 43-101 and is independent of the Company. Portions of the amended technical report were prepared by Dr. Mark Cruise, PGeo and Paul Keller, P. Eng., both senior officers of the Company.

The summary section from the Santander Report is substantially reproduced below and the detailed disclosure in the Santander Report is incorporated by reference herein. Portions of the summary are based on assumptions, qualifications and procedures which are not fully described in this AIF. Reference should be made to the full text of the Santander Report which is available for review on the SEDAR website at [www.sedar.com](http://www.sedar.com).

The Company also provides below an operational and development summary for its Santander Property since the date of the Santander Report. See “Mining Developments and Development Since the Date of the Santander Report”.

**The Company cautions that Trevali has not defined or delineated any proven or probable reserves for its Santander Property and mineralization estimates may therefore require adjustment or downward revision based upon further exploration or development work or actual production experience. Mineral resources that are not mineral reserves do not have demonstrated economic viability.**

**The Company also cautions that the decision by the Company to proceed to develop Santander and extract mineralization proceeded without the Company first establishing reserves supported by a technical report and completing a pre-feasibility or feasibility study. Accordingly, there is a higher risk of technical and economic failure at Santander because development proceeded without first establishing reserves supported by a technical report and completing a feasibility study. This is particularly relevant as the Company has proceeded with development at Santander on indicated and inferred resources without first completing a preliminary economic report.**

### **Summary**

Trevali Mining Corporation (“Trevali”), Vancouver, BC, Canada, retained Golder Associates Ltd. (“Golder”), Mississauga, ON, Canada, to provide an independent technical report in support to the press release dated July 5, 2012, reporting an updated Mineral Resource Estimate for the Santander Property located in the province of Huaral, Peru. The Santander Property currently contains significant Silver-Lead-Zinc mineralization observed across five distinct deposits: Magistral North, Central and South, Puajanca South and the Santander Pipe.

This technical report has been completed in conformance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines referred to in Companion Policy 43-101CP to National Instrument (NI) 43-101.

Greg Greenough, P. Geo of Golder is the Qualified Person (QP) responsible for the preparation of the technical report.

A site visit was conducted by Brian Thomas, P. Geo of Golder, on November 3, 2011. The purpose of the visit was to fulfill the site visit requirements specified under NI 43-101 and to familiarize Golder personnel with the property. The trip was led by Mr. Daniel Marinov, Chief Geologist, of Trevali.

The Santander Property currently contains significant Silver-Lead-Zinc mineralization observed across five distinct deposits: Magistral North, Central and South, Puajanca South and the Santander Pipe. The July 5, 2012 Mineral Resource Estimates for the Santander Project are as follows:

- A total Indicated Mineral Resource of 6.264 million tonnes with an average grade of 3.62% zinc, 1.30% lead, 43 grams per tonne (g/t) silver and 0.07% copper for an estimated in situ metal inventory of 500 million lbs zinc, 180 million lbs lead, 8.7 million oz. silver and 10.2 million lbs. copper at 3% ZnEQ cut-off.
- A total Inferred Mineral Resource of 13.845 million tonnes grading 4.62% zinc, 0.40% lead, 21 g/t silver and 0.11% copper for an estimated in situ metal inventory of 1,410 million lbs zinc, 121 million lbs lead, 9.4 million oz. silver and 34.9 million lbs copper at a 3% ZnEQ cut-off.
- Mineralization remains open for expansion in all four deposits identified to date: Magistral North, Central and South, Puajanca South and the Santander Pipe.

### ***Location and Site Description***

The Santander Property is located in west-central Peru, approximately 215 kilometres east-northeast of Lima. The property is accessible by road and is situated in moderate to locally steep terrain at an elevation ranging from 4,200 metres to 5,000 metres above sea level. The property covers an area of 4,454.7 hectares.

### ***Property Tenure***

The Santander Property consists of 66 mineral concessions covering 950.7 hectares and six petitorios covering 3,504 hectares. The property is owned by Compañía Minerales Santander S.A.C. of Lima, Peru (“Santander”) and, effective December 11, 2007, Trevali’s Peruvian subsidiary, Trevali Peru S.A.C., was assigned all of Santander’s interest in the Santander Silver-Zinc Property located in Province of Huaral, Departamento de Lima, Peru (the “Santander Property”) (being 100% legal and beneficial ownership) for a period of fifty years with an automatic fifty-year extension.

### ***Geology and Mineralization***

The property is underlain by a package of Cretaceous clastic and carbonate sedimentary rocks that have been tightly folded into a series of northwest-trending anticlines and synclines. A large number of northeast to east-west trending faults and fractures are observed on the property and represent important mineralization controls. At a regional scale, the intersection of these faults and the northwest trending fold structures are the loci for intrusion of subvolcanic stocks, hydrothermal activity and associated polymetallic mineralization.

Mineralization at the Santander Property can be classified as a carbonate replacement deposit (“CRD”) or a high temperature carbonate (HTC) deposit type. Such deposits contain very significant Silver mineralization and are frequently observed in Mexico and Peru, the world’s number 1 and number 2 Silver producers, respectively.

At the Santander Property, Silver, Lead, Zinc, Copper and Iron sulphide mineralization is intimately associated with garnet-rich skarn and/or associated lower temperature gangue which forms pipe-like, as well as replacement or “manto” type concentrations. The main mineralized concentration discovered to date, the Santander Pipe, occurs as an annular ring of massive to semi-massive sphalerite with accompanying argentiferous galena, pyrrhotite and minor chalcopyrite which surrounds a central core of garnetiferous skarn. The Santander Pipe had dimensions of 120 metres in diameter and was mined to a vertical depth of 480 metres using a combination of open pit and sub-level stoping methods. Mineralization remains open at depth.

There are at least four other mineralized zones known on the property termed the Magistral (includes the North, Central and South Deposits) and Pujanca Prospect. These zones are more replacement or manto-like in character and were in the process of being explored and developed when operations ceased at the property in August 1992. Exploration of the Magistral Deposits resumed in late December 2007, the results of which are the subject of this independent report.

### ***Exploration Concept***

Trevali’s exploration concept focuses on the fact that modern exploration techniques, such as structural and alteration mapping, geochemistry, remote sensing and geophysics, had never been utilized on the large property package. This coupled with their in-house base metal exploration, definition and production expertise suggested that additional mineralization, potentially sufficient to justify refurbishment and re-commencement of mining operations, could be discovered in a relatively short timeframe and with relatively low technical risk.

### ***Status of Exploration, Development and Operations***

Zinc-Lead mineralization was discovered and explored on the property at least as far back as the early 1900s. Sporadic exploration work continued until the mid-1950s when St. Joe Lead Corporation (“St. Joe”), New York, USA, developed and commenced production of the Santander Pipe in 1958. The Santander Pipe operated both as an open pit and underground operation. Production continued until August 1992 when a combination of economic and political factors led to cessation of mining operations. During the 34-year production history, approximately

8,000,000 tonnes of ore were milled. Average head grade was approximately 7% Zinc with significant Lead-Silver and minor Copper credits. Recent exploration conducted by Trevali consisted of geological prospecting, geophysical surveying and diamond drilling, predominantly focusing on the Magistral Deposits.

### **Mineral Resources**

The July 2012 Mineral Resource Estimates for the Magistral, Puajanca South and Santander Pipe Deposits is tabulated by cut-off grades from 1.0% to 5.0% Zinc Equivalent (“ZnEQ”) in Table 1-1.

The total Indicated Mineral Resource Estimate for Magistral North, Central-South and Puajanca South, using a 3.0% ZnEQ cut-off grade, is 6.264 million tonnes containing 43 g/t Silver, 1.30% Lead, 3.62% Zinc and 0.07% Copper.

The total Inferred Mineral Resource Estimate, using a 3.0% ZnEQ cut-off grade, is 13.845 million tonnes containing 21 g/t Silver, 0.40% Lead, 4.62% Zinc and 0.11% Copper.

**Table 1-1:  
July 2012 Total Mineral Resource at Magistral, Puajanca South and Santander Pipe,  
Tonnes and Grade at Various ZnEQ % Cut-offs**

Resource Category	Cutoff ZnEQ (%)	Million Tonnes	Grade					Contained Metal			
			Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	ZnEQ (%)	Ag (M.t.ozs)	Pb (M.lbs)	Zn (M.lbs)	Cu (M.lbs)
Indicated	1.00	8.544	35	1.06	3.05	0.06	4.92	9.613	200.258	574.066	11.523
	2.00	7.609	38	1.16	3.29	0.07	5.34	9.354	193.803	552.595	11.162
	3.00	6.264	43	1.30	3.62	0.07	5.95	8.740	179.734	500.218	10.199
	4.00	4.844	50	1.49	3.98	0.08	6.67	7.786	158.638	425.203	8.734
	5.00	3.556	58	1.70	4.34	0.09	7.46	6.592	133.510	340.513	7.013
Inferred	1.00	22.511	18	0.32	3.42	0.09	4.00	12.987	156.602	1,696.071	42.334
	2.00	18.065	20	0.36	3.99	0.10	4.62	11.496	142.313	1,589.804	39.263
	3.00	13.845	21	0.40	4.62	0.11	5.27	9.373	121.089	1,410.485	34.900
	4.00	10.145	23	0.45	5.24	0.13	5.93	7.346	101.423	1,171.555	28.699
	5.00	6.612	24	0.54	5.92	0.15	6.70	5.207	78.885	862.537	21.149

**Notes:**

Total tonnes and contained metal are expressed in millions and rounded to the nearest thousand.

The troy ounces (t.oz) and pounds (lbs) in the table are in situ and have not had mining or milling factors applied to them.

The ZnEQ was defined based on the following formula:

$$\begin{aligned} \text{ZnEQ} = & (\text{Silver Price(g)} * \text{Silver Recov} * \text{Silver Grade(g/t)} \\ & + \text{Lead Price(t)} * \text{Lead Recov} * (\text{Lead Grade(\%)} / 100) \\ & + \text{Zinc Price(t)} * \text{Zinc Recov} * (\text{Zinc Grade(\%)} / 100) \\ & + \text{Copper Price(t)} * \text{Copper Recov} * (\text{Copper Grade(\%)} / 100)) \\ & / \text{Zinc Price(t)} \end{aligned}$$

**The Company cautions that it has not defined or delineated any proven or probable reserves for its Santander Property and mineralization estimates may therefore require adjustment or downward revision based upon further exploration or development work or actual production experience. Mineral resources that are not mineral reserves do not have demonstrated economic viability.**

The World Bank June 2012 forecast SEC 3-year trailing average price was used for all four metals. Price for Silver is per ounce (\$25.99) and per tonne for Lead (\$2,205), Zinc (\$2,094) and Copper (\$7,782). A metallurgical recovery of 85% was applied to Silver, 90% to Lead, 85% to Zinc and 60% to Copper.

The total Mineral Resource Estimate for the Magistral, Puajanca South and Santander Pipe Deposits is based on the Ordinary Kriged interpolation method and Silver, Lead, Zinc and Copper capped assay values. The bulk density for Magistral and Puajanca South was also estimated using Ordinary Kriging. The bulk density for Santander Pipe was assumed from historical mining records.

Summarized in Table 1-2 is the independent March 2009 Mineral Resource Estimate completed by Golder for the Main Tailings Impoundment based on 0.25% to 4.0% Zinc cut-off grades for the Indicated Mineral Resource category. The total Indicated Mineral Resource Estimate for the Main Tailings Impoundment using a 0.75% Zinc cut-off grade is 4.168 million tonnes at a grade of 1.94% Zinc. The resources are based on Ordinary Kriged capped values.

**Table 1-2:  
March 2009 Indicated Mineral Resources for the Main Tailings Impoundment Tonnes  
and Grade at various Zinc % Cut-offs**

<b>Cut-off</b>	<b>Million Tonnes</b>	<b>Zn (%)</b>
0.25	4.192	1.93
0.50	4.192	1.93
<b>0.75</b>	<b>4.168</b>	<b>1.94</b>
1.00	3.829	2.03
1.25	3.317	2.17
1.50	2.744	2.34
1.75	2.157	2.54
2.00	1.656	2.74
2.25	1.220	2.96
2.50	0.886	3.18
2.75	0.630	3.41
3.00	0.452	3.63
3.25	0.328	3.82
3.50	0.216	4.06
3.75	0.137	4.32
4.00	0.087	4.56

### ***Conclusions***

The Santander Property is a formerly producing property with a number of known and partly defined Zinc-rich skarn and replacement occurrences. The historical data derived from past production and exploration enable an understanding of the mineralization. Past exploration was always focused on the areas immediately adjacent to the producing mines or mineral occurrences that outcropped on the surface.

The property is easily accessible by road and has its own power source, an existing camp capable of housing several hundred workers and a 2,000-tonne-per-day mill that is currently under construction and near completion.

A third independent NI 43-101 mineral resource has been completed for the Santander Property for Trevali for the Magistral North, Magistral Central-South, Puajanca South and Santander Pipe deposits and is based on drilling information collected in 2007-2011 exploration programs under the direction of Trevali and, in the case of Santander Pipe, historical drilling.

The July 2012 total Indicated Mineral Resource Estimate for Magistral North, Central-South and Puajanca South, using a 3.0% ZnEQ cut-off grade, is 6.264 million tonnes containing 43 g/t Silver, 1.30% Lead, 3.62% Zinc and 0.07% Copper.

The July 2012 total Inferred Mineral Resource Estimate, using a 3.0% ZnEQ cut-off grade, is 13.845 million tonnes containing 21 g/t Silver, 0.40% Lead, 4.62% Zinc and 0.11% Copper.

The completed project has met the initial objectives through the work completed to date which has resulted in the definition of three significant mineral deposits, all of which remain open. In addition, several advanced targets have been identified for follow-up exploration and resource definition programs. These results coupled with the pre-existing infrastructure justify Trevali's and partner's Glencore International's development track approach to the Santander Project.

**The Company cautions that it has not defined or delineated any proven or probable reserves for its Santander Property and mineralization estimates may therefore require adjustment or downward revision based upon further exploration or development work or actual production experience. Mineral resources that are not mineral reserves do not have demonstrated economic viability.**

### *Mining Operations and Development Since the Date of the Santander Report<sup>1</sup>*

<sup>1</sup>Mr. Paul Keller, P.Eng. – Chief Operating Officer of Trevali is the Qualified Person (QP) responsible for this section.

Since the date of the Santander Report, Trevali's wholly-owned subsidiary, Trevali (Peru) S.A.C. has contracted Glencore International Plc's wholly-owned Peruvian subsidiary, Empresa Minera Los Quenuales S.A. ("Glencore"), to operate, under Trevali supervision, the Company's permitted 2,000 tonne-per-day Santander mine and mill.

Mining is presently exploiting the three Magistral deposits and recently discovered associated zones – termed *Magistral South*, *Magistral Central – Fatima* and *Magsitral North - Rosa* respectively, with ongoing development and planning on an annual go-forward basis. All underground ramp development work required to exploit the Company's 2015 production plan is complete and the Company has commenced work on anticipated 2016 development and associated mine planning which will be ongoing throughout the year.

Mining utilizes the Avoca mining method, specifically, longhole stopes with 15 meter sublevels, retreating to a center pillar and backfilled with unconsolidated waste as the stope rings are blasted and excavated. Development drifts of 4 to 5 meters wide are stabilized with a variety of ground support methods such as bolts and screen, shotcrete and/or cable bolts contingent on local ground conditions.

Mineralized material is trucked to the approximately 50,000 tonne capacity Coarse Feed Stockpile where blending occurs in order to optimize Mill recoveries. Liberation of metals follows a well-established and standard base metal sulphide flotation flow sheet with primary through to tertiary crushing feeding into a Rod-Ball mill circuit followed by Zn and Pb (Ag) flotation and drying into the respective concentrate storage warehouses. Plant tailings are stored on-site within an impermeably lined, closed, tailings basin.

Processing Plant recoveries to date range from 87-90% for Zn, 86-90% for Pb and 74-80% for Ag to produce Zn concentrates grading 49-50% and Pb-Ag concentrates grading 56-59% Pb containing 39-55 oz/t Ag. Trevali transports the concentrates via truck to Callao, Lima's port, where they are purchased by Glencore under international benchmark terms.

2014 production totaled 50.4-million payable pounds of zinc, 23.3-million payable pounds of lead and 914,600 payable ounces of silver. Cash costs for 2014 were US\$47.33 per tonne milled. 2015 production guidance is estimated at approximately 48-50 million pounds of payable zinc, 23-25 million pounds of payable lead and 850,000-950,000 ounces of payable silver. Cash costs for 2015 are estimated at US\$48-51 per tonne milled.

The Company also plans an approximately 6,000 metre surface and underground resource definition and exploration program in order to better define the deeper levels of the Magistral zones and facilitate longer range (~3 year) mine planning studies from 2016 and beyond. Contingent on results, commodity prices and permitting, future exploration will seek to fully define the depth extents of the Magsitral zones in addition to the Santander Pipe and Puajanca zone all of which remain open at depth.

**The Company cautions that such exploration program may not result in defining any proven or probable reserves that have demonstrated economic viability.**

As per the Company's plant purchase agreement with Glencore, the Company has until 2019 to purchase the Santander Mill.

**The Company also cautions that the decision by the Company to proceed to develop Santander and extract mineralization proceeded without the Company first establishing reserves supported by a technical report and completing a pre-feasibility or feasibility study. Accordingly, there is a higher risk of technical and economic failure at Santander because development proceeded without first establishing reserves supported by a technical report and completing a feasibility study. This is particularly relevant as the Company has proceeded with development at Santander on indicated and inferred resources without first completing a preliminary economic report. See "Risk Factors".**

### **Caribou Property, New Brunswick, Canada**

On June 27, 2014, the Company filed a NI 43-101 technical report in respect of the Caribou Property entitled "*Technical Report on Preliminary Economic Assessment for the Caribou Massive Sulphide Project, Bathurst New Brunswick, Canada*" dated June 26, 2014 (the "Caribou PEA Report"), prepared by Yao Hua (Benny) Zhang P.Eng., and Gilles Arseneau, P. Geo. of SRK Consulting (Canada) Inc. ("SRK"), Leonard Holland, C.Eng. of Holland and Holland Consultants Ltd and Jeffery Barrett, P.Eng. of Stantec Consulting Ltd. who are "qualified persons" within the meaning of NI 43-101 and are independent of the Company.

On May 14, 2015, the Company filed on SEDAR an amended "*Technical Report on Preliminary Economic Assessment for the Caribou Massive Sulphide Zinc-Lead-Silver Project, Bathurst, New Brunswick, Canada*" dated May 14, 2015 prepared by SRK. The amended Caribou PEA Report reconciles results, specifically the estimates of mineral resources not included in the Company's mine plan, whereby it was not previously broken down into specific resource categories. The mineral resources not included in the Company's mine plan have now been categorized as approximately 2,033,000 tonnes of Measured and Indicated Resource and 1,027,000 tonnes of Inferred Resource.

**The estimated plant feed is partially based on Measured, Indicated and Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the Caribou PEA Report, as amended, based on these mineral resources will be realized. The reader is cautioned that the mineralized material should not be misconstrued as a mineral resource or a mineral reserve.**

The summary section from the Caribou PEA Report, as amended, which is preliminary in nature, is substantially reproduced below and the detailed disclosure in the Caribou PEA Report, as amended, is incorporated by reference herein. Portions of the summary are based on assumptions, qualifications and procedures which are not fully described in this AIF. Reference should be made to the full text of the Caribou PEA Report which is available for review on the SEDAR website at [www.sedar.com](http://www.sedar.com).

**The Caribou PEA Report, as amended, is based, in part, on inferred mineral resources and not mineral reserves and does not have demonstrated economic viability. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is therefore no certainty that the conclusions of the Caribou PEA Report will be realized.**

**The Company also cautions that the decision by the Company to proceed to develop Caribou (the expected restart of the Caribou mine and commencement of production is planned for the second quarter of 2015) and extract mineralization proceeded without the Company first establishing reserves supported by a technical report and completing a pre-feasibility study or feasibility study. Accordingly, there could be a higher risk of**



**technical and economic failure at Caribou because development is planned to proceed without first establishing reserves supported by a technical report and completing a feasibility study.**

## **Summary**

The Caribou project is a past producing polymetallic deposit, located 50 kilometres (km) west of Bathurst, New Brunswick, Canada. Trevali Mining Corporation (Trevali) wholly owns the Caribou mine and mill complex, consisting of a historically developed underground mine and a fully permitted 3,000 tonne per day (tpd) processing mill, flotation recovery plant, metallurgical and geochemical laboratories, and a tailings management facility. Trevali is a Canadian public company domiciled in Vancouver, British Columbia with shares listed on the TSX under the symbol TV.

The Caribou underground mine has significant underground development workings and mineral resources. It is a massive sulphide zinc-copper-lead-silver+/- gold deposit. SRK Consulting (Canada) Inc. (SRK) completed a resource estimate for the Caribou project, outlining seven high grade mineralized lenses, documented in “Independent Technical Report for the Caribou Massive Sulphide Project, Bathurst, New Brunswick, Canada”, dated February 25, 2013, amended November 21, 2013. In January 2014, SRK was commissioned by Trevali to prepare a preliminary economic assessment (PEA) for the Caribou project by working with independent consultants Holland and Holland Consultants (Holland and Holland), Stantec Consulting Ltd. (Stantec), and Trevali.

This technical report summarizes the technical information that is relevant to support the disclosure of the preliminary economic assessment results for the Caribou project pursuant to Canadian Securities Administrators’ National Instrument 43-101. It provides a summary of the work completed by the independent consultants. The opinions contained herein and effective May 13, 2014, are based on information collected by the various consultants throughout the course of their investigations.

## **Property Description and Ownership**

The Caribou project is located in Restigouche County in the province of New Brunswick. The property lies within National Topographical System (NTS) map sheet 21O/09. The Caribou deposit is located on an existing mine site with extensive pre-existing infrastructure. The property is approximately 7 km long in the east-west direction and 5 km wide in the north-south direction. The north-eastern and northern limits of the property are intersected by Highway 180.

The Caribou property consists of a single Mining Lease, ML-246 covering 3,105.7 hectares (ha). The lease has a 20 year term and is set to expire on October 27, 2028. It is owned 100% by Trevali.

## **Geology and Mineralization**

The Bathurst Mining Camp (BMC) occupies a roughly circular area of approximately 70 km 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 rocks in the BMC are divided into five groups: the Miramichi, Tetagouche, California Lake, Sheephouse Brook, and Fournier groups, which are largely in tectonic contact with one another. The lower part of each group is dominated by felsic volcanic rocks and the upper part by mafic volcanic rocks, which are overlain by carbonaceous shale and pelagic chert. The basalts are both tholeiitic and alkalic and show a progression from enriched, fractionated continental tholeiites to alkali basalts to more primitive, mantle-derived midocean ridge, tholeiitic pillow basalts. Most massive sulfide deposits of the Bathurst mining camp are associated with felsic volcanic rocks in each group.

## Exploration Status

Trevalli conducted a drilling program between February and April 2014 and completed four drill holes to test different property-wide geophysical anomalies (Titan 24 IP) for a total of 2,179 metres (m), and a fifth borehole successfully tested deep mineralization down plunge of the Caribou deposit, approximately 450 meters down-dip of the currently defined resource. The previous drilling program on the property was carried out by Blue Note Mining Inc. in early 2009.

## Mineral Resource and Mineral Reserve Estimates

Block model quantities and grade estimates for the Caribou project were classified according to the *CIM Definition Standards for Mineral Resources and Mineral Reserves* (November 2010) by Guy Dishaw, PGeo, of SRK, under the supervision of Dr. Gilles Arseneau, PGeo. Both are independent Qualified Persons as this term is defined in National Instrument 43-101.

Mineral resources were considered for the Measured category for blocks generally above the lowest mined levels, developed within the mineralized domains. Within this volume, most blocks were estimated by at least three composite samples from a minimum of two drill holes from the first and second interpolation passes, which searched out to 35 metres. Mineral resources were considered for the Indicated category where blocks were estimated by at least three composite samples from a minimum of two drill holes from the first and second interpolation passes which searched out to 35 metres (exclusive of the volume considered for Measured). Measured and Indicated candidate blocks were reviewed in three dimensions to assess how they related to each other and the borehole data. The Measured and Indicated candidate blocks were used to design wireframe models of the final Measured and Indicated category volumes. All remaining estimated blocks within the estimation domains were classified as Inferred. Mineral resources are summarized in Table i below. There are no mineral reserves at the Caribou project.

**Table i: Mineral Resource Statement\*, Caribou Project, Bathurst, New Brunswick, SRK Consulting, May 13, 2014.**

Category	Quantity (Mt)	Grade					Metal				
		Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	Cu (%)	Au (M oz)	Ag (M oz)	Pb (M lbs)	Zn (M lbs)	Cu (M lbs)
<b>Underground**</b>											
Measured	5.61	0.84	84.64	2.93	6.91	0.46	0.15	15.28	362.69	855.36	56.94
Indicated	1.62	1.06	83.68	2.94	7.28	0.34	0.06	4.36	104.95	259.87	12.14
Measured and Indicated	7.23	0.89	84.43	2.93	6.99	0.43	0.21	19.64	467.64	1,115.23	69.08
Inferred	3.66	1.23	78.31	2.81	6.95	0.32	0.14	9.21	226.60	560.44	25.80

\* Mineral resources are not mineral reserves and do not have demonstrated economic viability. All figures are rounded to reflect the relative accuracy of the estimate. All composites have been capped where appropriate.

\*\* Underground mineral resources are reported at a cut-off grade of 5% Zn equivalent. Cut-off grades are based on price for Au of US\$1470 per ounce, Ag is US\$26 per ounce, Cu is US\$3.39 per pound, Pb is US\$1.18 per pound, and Zn is US\$1.14 per pound, and exchange rate US\$1.00 per Canadian dollar. A recovery of 83% was applied to Zn, 71% was applied to Pb, 57% was applied to Cu, 45% was applied to Ag, and 40% was applied to Au.

**Readers are cautioned that Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is therefore no certainty that the conclusions of the Caribou PEA Report will be realized.**

## Mine Hydrogeology and Geotechnical

There is no specific hydrogeological study to support the design of a mine dewatering system for the PEA. The PEA mine dewatering system design is based on a review of historical records from previous mining which indicated peak dewatering rates in the range of 12.6 litres per second (L/s) or 200 US gallons per minute (GPM). Considering the increased depth of planned mining, a worst case scenario was estimated at 42.9 L/s for the PEA.

There is no current, comprehensive geotechnical study. SRK reviewed historical geotechnical information, past mine design practices and stope production records, and concluded that the rock mass conditions are suitable for an

AVOCA type open stoping method. Similar to previous Caribou operations, stope dimensions were set at 20 m long by 20 m high by lens width.

An SRK sill pillar recovery assessment suggests partial recovery that varies with depth, averaging 27% overall.

### **Underground Mining**

Modified AVOCA is the main mining method planned, supplemented by up hole retreat for partial sill pillar recovery. Modified AVOCA stopes will employ unconsolidated waste rock as backfill. The mine plan includes 87% of tonnes from modified AVOCA stoping with down holes on 20 m sublevels and waste rock fill, and 13% of tonnes from longhole retreat using up holes with no backfill for sill areas between mining fronts. Crown pillar recovery is not considered in the PEA due to lack of geotechnical information.

Access to the underground mine will be by a connected dual ramp system from existing portals in the upper 100 m of the mine and a single ramp system below. New ramps required at depth are designed at an average gradient of -15% with dimensions of 5.0 m width by 5.0 m height. Existing ramps in the upper mine will be slashed to the same size to accommodate planned air flows. A planned connection between the two ramps is 390 m long between elevations 2473 and 2415 m.

Stope sequencing will generally be a retreat along strike from lens extremities or strategic starting points to access crosscuts. Plant feed will be hauled to surface by 45-tonne capacity trucks loaded by Load-Laul-Dump vehicles (LHDs). Waste rock broken underground will be hauled by 45-tonne capacity ejector type trucks to empty stopes as backfill, or to surface (mainly during pre-production). Plant feed will be stored in remuck bays along the ramps prior to truck haulage. In addition to the ejector type trucks, LHDs will fill empty stopes with waste rock from development, supplemented with waste rock back hauled from existing surface waste rock stockpiles.

During sill pillar mining late in the mine life, up holes will be drilled only to a designed length to preserve a non-recoverable portion of the sill pillar. Mining will be on retreat with remote mucking by LHDs.

Ventilation is planned at 425 cubic metres per second (cms) or 900,000 cubic feet per minute (cfm) for a production rate of 3,000 tonnes per day (tpd), providing an estimated 29% contingency. Intake will be through two existing fresh air raises (FAR), to be slashed out to 4.7 m by 4.7 m cross section. Exhaust will be through the main ramp and a planned return air raise (RAR) in the lower mine, and through the main ramp, the shaft, the old conveyor ramp, and the main services raise in the upper mine.

An existing main sump located on the 2360 Level will pump clear water to surface through the main services raise. Planned secondary pump stations located on all main levels will direct water to the main sump for pumping to surface.

### **Plant Feed Estimate**

There are no mineral reserves declared for the Caribou project. In the PEA, all mineral resources categories, including Measured, Indicated, and Inferred resources, were considered for inclusion into the mine plan. The resource block model was used for the design of mining shapes targeting all mineral resources above an in situ net smelter return (NSR) cut-off value (CoV) of \$100/t based on a zinc price of US\$1.00/pound (lb), lead price US\$1.00/lb, copper price US\$3.00/lb, silver price US\$21.00/ounce (oz), gold price US\$1200.00/oz, exchange rate of US\$0.95 per Canadian dollar, an initial estimated total site cost of \$84.43 per tonne processed (comprising of site operating cost of \$74.93/t and royalties of \$9.50/t), and initial metallurgical zinc recovery of 83.6%, lead recovery of 64.7%, copper recovery of 42.2%, silver recovery of 35.3%, and gold recovery of 7.6%. Mining recovery and dilution parameters were applied based on the selected mining method and geotechnical considerations. External dilution averages 16% with an averaging \$43.15/t NSR. Mining recoveries vary from 27% to 94% dependent on stope category, with an average of 77%.

The estimated life-of-mine (LoM) plant feed is summarized in Table ii below. There is no Mineral Reserve at the Caribou Project.

Table iii: Plant Feed Estimate

Category	Plant Feed						
	Tonnes (kt)	Zn (%)	Pb (%)	Cu (%)	Ag (gpt)	Au (gpt)	NSR (\$/t)
Measured	2,461	6.18	2.45	0.32	68.20	0.89	131
Indicated	554	6.19	2.48	0.35	67.70	0.88	132
<b>Subtotal of Measured and Indicated</b>	<b>3,014</b>	<b>6.18</b>	<b>2.46</b>	<b>0.33</b>	<b>68.11</b>	<b>0.89</b>	<b>131</b>
Inferred	3,138	6.04	2.52	0.35	67.70	0.83	130
<b>Subtotal of Inferred</b>	<b>3,138</b>	<b>6.04</b>	<b>2.52</b>	<b>0.35</b>	<b>67.70</b>	<b>0.83</b>	<b>130</b>

\* Figures have been rounded.

\*\* The estimated plant feed is partly based on Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the preliminary economic assessment based on these Mineral Resources will be realized.

\*\*\* The reader is cautioned that the mineralized material should not be misconstrued as a mineral resource or a mineral reserve. The quantities and grade estimates are derived from the block model and include mining dilution and losses.

### Production Schedule

The underground mine will be contractor operated from start-up to the end of the first year of production (2015), and owner operated from Q1 2016 to the end of mine life (~Q1 2021). Monthly LoM development and production schedules were prepared and consolidated into an annual schedule for reporting. The underground mine pre-production period is defined as a 9-month period from April 1, 2014 (re-start of mine dewatering and rehabilitation) to December 31, 2014. In H1 2015, the average production rate will be 2,040 tpd, which is 68% of the designed underground mine capacity. The mining production period extends from January 1, 2015 to March 2021 for 6.3 years. At full production the planned mining rate is 3,000 tpd or 1,095,000 tonnes per annum (tpa). The LoM total plant feed is 6,152,000 t.

LoM lateral development is estimated at 31,200 m, including 3,200 m capitalized and 28,000 m expensed. LoM vertical development is estimated at 1,300 m, all capitalized. The lateral development advance rate was scheduled to a maximum of 360 m/month, or 120 m/month/jumbo. LoM waste rock broken is approximately 926,000 t. Definition drilling costs are budgeted but no detailed definition drilling plan has been prepared.

Total required backfill of 2,325 kt will be sourced from underground development waste (889 kt) and surface waste stockpile (1,336 kt). The surface waste stockpile has been reviewed by Trevali and deemed to be sufficient make up for the LoM.

### Metallurgy and Processing

Based on the metallurgical results available from previous operations and laboratory testwork, future metallurgical performance (top section of Table iii) has been estimated for the rehabilitated Caribou processing plant that will include a new copper separation circuit.

Based upon in-depth discussions with previous operations technical staff, it is anticipated that the primary grind of 30 microns can be achieved with the existing equipment, with the possibility of improving on previous operations through the use of the replacement SAG mill.

The future forecast metallurgy is based on additional capital expenditure aimed at optimizing the primary grind in conjunction with improvements to regrinding of the lead and zinc ahead of cleaning. It is based on testwork results obtained from finer grinding. It represents possible upside only, and is not incorporated into the capital budget or the financial model.

**Table iii: Predictive Metallurgy**

	Grades						Recoveries (%)				
	Wt (%)	Pb (%)	Cu (%)	Zn (%)	Ag (g/t)	Au (g/t)	Pb	Cu	Zn	Ag	Au
<b>Anticipated Metallurgy at 30 micron primary grind</b>											
Feed	100.0	2.44	0.40	6.05	71	0.93	100.0	100.0	100.0	100.0	100.0
Pb Conc	3.52	45.00	0.40	6.05	655	2.00	65.00	3.52	3.52	32.5	7.58
Cu Conc	0.90	8.00	20.00	5.50	394	3.10	2.62	45.00	0.73	5.00	3.00
Zn Conc	10.16	1.22	0.70	50.00	126	0.91	5.08	17.79	84.00	18.11	10.00
Tailing	85.41	0.78	0.16	0.83	37	0.86	27.30	33.69	11.75	44.50	79.42
<b>Anticipated Future Metallurgy with fully refitted grinding circuit</b>											
Feed	100.0	2.44	0.40	6.05	71	0.93	100.0	100.0	100.0	100.0	100.0
Pb Conc	3.80	45.00	0.40	6.05	655	2.00	70.00	3.66	3.66	35.00	8.16
Cu Conc	1.00	8.00	20.00	5.50	391	2.79	2.79	50.00	0.77	5.50	3.00
Zn Conc	10.20	1.22	0.70	51.00	125	0.91	5.14	18.00	86.00	18.00	10.00
Tailing	85.00	0.63	0.13	0.68	35	0.86	22.07	28.34	9.57	41.5	78.84

The planned 3,000 tpd process flowsheet is identical to the flowsheet used during previous operations with the addition of a copper circuit to recover the copper values evident in the Caribou plant feed.

### Project Infrastructure

The basic infrastructure required for the project is in place, and has been kept in a serviceable state since the 2008 mine closure. Power has been maintained and heat has been supplied to buildings that could not otherwise be protected against freezing.

With minor repair or rehabilitation, the surface infrastructure supporting the underground mine can be restored to an operating state for the mine re-opening. With underground mine dewatering in progress, underground rehabilitation and development slashing work will be started to prepare for production start-up. No new major underground infrastructure is needed in the early years of production.

The process plant is a multi-level structure occupying an area of approximately 4,000 m<sup>2</sup>. Primary plant feed crushing will be contracted out. Grinding, a lead flotation circuit, and a zinc flotation circuit are in place. By undertaking repair work and replacing the SAG mill, the 3,000 tpd capacity process plant will be brought to a functional condition. A new copper flotation circuit will be added to the existing lead and zinc circuits in the existing plant building in order to maximize the revenue from the plant feed.

### Market Studies and Contracts

Zinc, lead and copper concentrate offtake agreements are in place with Glencore Xstrata plc, a large, diversified resource conglomerate and commodity trader, for LoM feed at International Benchmark terms, as defined by average respective commodity price on the London Metal Exchange for the relative shipping period.

The following contracts will be part of the construction and/or operation of the Caribou mine:

- Dewatering of the underground mine;
- Underground rehabilitation and development slashing work will be conducted by a mining contractor during pre-production, and during year one of production all mining will be done by contractor;
- Production drilling and blasting;
- Primary crushing on surface of the plant feed.

SRK has not reviewed any of these contracts or documents related to tendering.

## **Social and Environmental Aspects**

The Caribou mine falls within the BMC, an area with a long history of mining. With the recent closure of the Brunswick-12 Mine (B-12 Mine), the area is in need of employment opportunities in mining, and has a large pool of experienced mining personnel, contractors, and service providers available to service the project.

The re-opening of the Caribou mine will make use of the existing infrastructure on an already disturbed site. The site is fully permitted and consists of a water treatment plant and sludge ponds, and a tailings management facility. The Caribou site has been previously operated by various companies and the proposed start-up does not represent a significant variance to previous operations.

On January 31, 2013 Trevali entered into a Limited Environmental Liability Agreement with the province of New Brunswick, where the province would accept the environmental liability associated with historic operations.

At present, the monies being held in securities for the Caribou mine site are included in the assets that were acquired by Trevali Mining New Brunswick Ltd. (TMNBL). The current reclamation assets on file with the province total \$4,733,000. Based on the current reclamation plan, a total of \$6,250,000 reclamation security bond is required to be on file with the New Brunswick Department of Natural Resources (NBDNR). TMNBL will post an additional \$1,517,000 to top up the current reclamation security. Additionally, as per Trevali's Approval to Operate I-8310 (*Cond.15b*), an additional \$1,500,000 environmental protection bond will also be posted with the New Brunswick Department of Environment and Local Government (DELG or NBDELG).

## **Capital and Operating Cost Estimates**

Capital and operating costs are presented in Canadian dollars as at the second quarter of 2014 (2Q14).

Caribou project total capital cost estimate is \$125.1 million, comprised of \$36.3 million in pre-production capital and \$88.8 million in sustaining capital over LoM. Many costs within the PEA are based on direct supplier/contractor quotations including the following:

- Major mine mobile equipment quotations;
- Mining contractor quotations as cost base for development and production;
- Material supply quotations;
- Building rehabilitation quotations;
- Consumables - fuel, power and explosives.

The remaining capital cost estimates were prepared to an accuracy level of +/- 40%. The capital cost estimates include a \$6 million contingency for the mine and \$0.7 million for the process plant. Cost estimates for the underground mine are based on contractor operation from start-up to Q4 2015, and owner operation from Q1 2016 to the end of mine life.

Site operating costs averaging \$74.77 per tonne processed are estimated for the period from January 1, 2015 through to March 2021, which consists of \$37.06/t-milled mine operating cost, \$30.14/t-milled mill operating cost, \$1.59/t-milled environmental operating cost, and \$5.99/t-milled general and administration (G&A) operating cost.

## **Indicative Economic Results**

The Caribou project has been evaluated on a discounted cash flow basis. The cash flow analysis was prepared on a constant 2014 Canadian dollar basis. No inflation or escalation of revenue or costs has been incorporated. The base case assumed metal prices are zinc price of US\$1.00/lb, lead price of US\$1.00/lb, copper price of US\$3.00/lb, silver price of US\$21.00/oz, gold price of US\$1200.00/oz, and exchange rate of US\$0.95 per Canadian dollar.

The financial analysis performed as part of this PEA used the following base case assumptions. The pre-tax present value of the net cash flow with a 5% discount rate (NPV5%) is \$150 million using the base case metal prices. Project post-tax NPV5% at the base case metal prices is \$106 million. The internal rates of return (IRR) are respectively 69% pre-tax and 57% post-tax.

The payback period is expected to be approximately two years at the base case metal prices. The payback period is defined as the time after production start that is required to recover the initial expenditures incurred.

The key economic indicators of NPV5% and IRR are most sensitive to changes in metal prices and then plant feed head grades. This is attributed to the fact that metal prices and head grades affect directly the entire revenue stream. The project is slightly more sensitive to changes in operating costs than to capital costs. Of the parameters examined the project is least sensitive to changes in the external dilution.

This preliminary economic assessment is preliminary in nature. The results of the economic analysis performed as a part of this PEA are based in part on Inferred mineral resources. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.

## **Conclusion and Recommendations**

This PEA was prepared by a group of independent consultants to demonstrate the economic viability of an underground mine and mill complex targeting all mineral resources defined in the Caribou project. This technical report provides a summary of the results and findings from each major area of investigation to a level that is considered to be consistent with that normally expected for a PEA of a resource development project.

The results of the PEA indicate that the re-opening of the proposed Caribou project has financial merit at the base case assumptions considered. The results are considered sufficiently reliable to guide Trevali's management in a decision to advance the project to a prefeasibility study or a feasibility study.

Analysis of the results of the investigations has identified a series of risks and opportunities associated with each of the technical aspects considered for the development of the proposed project.

The key risks include:

- There is uncertainty in the actual required quantities of mine rehabilitation and drift slashing due to restricted underground access during dewatering. An increased or decreased quantity of rehabilitation/slashing work and/or schedule delays or ahead schedule could affect the PEA economic results;
- There is a risk of increased external dilution beyond the planned amount. This would reduce the mill head grade and have a negative impact on revenue;
- The project risk associated with the concentrator operation and metallurgical performance is minimal. However there is a risk that the predictive metallurgy will not be consistently achieved with a negative impact on the revenue;
- A process related risk at present is the ability to recruit suitably trained staff for a relatively difficult plant feed to process; however as noted a skilled labour pool from the recently closed B-12 Mine is locally available;
- The Caribou mine site is a fully permitted facility that allows for mining and milling under the existing certificate of approval (CofA). The addition of a copper circuit to produce a copper concentrate will need to be permitted.

The key opportunities include:

- Exploration potential to increase the mineral resources of the Caribou project with additional drilling targeting the deep extension below the currently defined mineralization zones;
- Maximize sill pillar recovery by replacing waste backfill with paste backfill. A trade-off study would be needed;
- Further stope design optimization will lead to reduced internal dilution and increased plant feed head grades, potentially head grades increase by 3% to 4.5%;
- Further detailed mine planning work could possibly bring more mineralized material into the mine plan;

- Further definition drilling should convert some of the existing Inferred mineral resources to Indicated or Measured category. This will be a benefit for future higher level technical studies;
- Owing to the historical operations being based upon a mixture of Caribou and Restigouche plant feed with the Restigouche plant feed known to be the more difficult to process, the potential to improve the predicted metallurgical forecast for Caribou plant feed only, is most likely.

Analysis of the results and findings from each major area of investigation suggests several recommendations to be considered during the next study stage of the project, including:

- Drill three HQ diamond drill holes to collect samples of the mineralization for metallurgical testing;
- Evaluation of backfilling alternatives, such as paste backfill, that may be more cost efficient than the planned use of unconsolidated rock fill and has potential to increase sill pillar recovery rate;
- Optimize stope design and re-evaluate minimum mining width and the smallest mobile equipment size in order to reduce internal dilution and improve total mining recovery of the Caribou mineral resources;
- Perform a comprehensive geotechnical study to support future mine design including generation of a three-dimensional lithological model, a three-dimensional structural model, development of three-dimensional geotechnical design domains and establishment of representative geotechnical parameters for each domain; and development of excavation support requirement guidelines for both in waste and in mineralization;
- Review hydrogeological information and assess the requirement for development of a hydrogeological model;
- Draw on experience from the detailed operational logs of past producers at Caribou to focus efforts on the critical areas to improve plant efficiency and increase metallurgical performance moving forward;
- Engineering and planning studies should commence in mid-2014 for the environmental infrastructure upgrades;
- Continue discussion with provincial department on permitting the addition of a copper circuit;
- Review CofA permit conditions regularly to ensure compliance is achieved and condition deadlines are met.

#### **Halfmile – Stratmat Property, New Brunswick, Canada**

On October 17, 2011, the Company filed a preliminary economic assessment in respect of the Halfmile Property and Stratmat Property entitled “*Halfmile Lake-Stratmat Preliminary Economic Assessment*” with an effective date of October 18, 2010 (the “**Halfmile-Stratmat PEA**”), prepared by Mike McLaughlin, P. Eng., Paul Daigle, P. Eng., David Tyson, M.Sc., R.P. Bio., Peter Broad, P. Eng., Pacifico Corpuz, P.Eng. and Daniel Sweeney, P. Eng. of Wardrop and Aleksandar Zivokovic, P. Eng., each of whom is a “qualified person” within the meaning of NI 43-101 and is independent of the Company.

The summary section from the Halfmile-Stratmat PEA is substantially reproduced below and the detailed disclosure in the Halfmile-Stratmat PEA is incorporated by reference herein. Portions of the summary are based on assumptions, qualifications and procedures which are not fully described in this AIF. Reference should be made to the full text of the Halfmile-Stratmat PEA which is available for review on the SEDAR website at [www.sedar.com](http://www.sedar.com).

**The Halfmile-Stratmat PEA, which is preliminary in nature, is based only on inferred mineral resources and not mineral reserves and does not have demonstrated economic viability. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is therefore no certainty that the conclusions of the Halfmile-Stratmat PEA Report will be realized.**



## Summary

### Location and Regional Geology

The Halfmile Lake Property is located in Northumberland County in northeast New Brunswick and is situated approximately 60 km southwest of Bathurst, and 70 km northwest of Miramichi. The Property covers three mineral claim groups known as Halfmile Lake Central, Halfmile Lake South and Halfmile Lake North, and covers an area of 1104.8 ha.

The Stratmat Property is located in Northumberland County in northeast New Brunswick and is situated approximately 45 km southwest of Bathurst, and 55 km northwest of Miramichi. The Property consists of 54 mineral claims in one mineral claim block located in northeast New Brunswick and covers an area of 828.6 ha.

Geologically, the Halfmile Lake and Stratmat areas are underlain by rocks of Ordovician age of the Tetagouche Group within the Miramichi Zone of northern New Brunswick. The Tetagouche Group is composed primarily of dacitic to rhyolitic volcanic rocks disconformably underlain by quartz-wackes and pelites of the Miramichi Group. Thin-bedded feldspathic wacke/shale and alkali basalts of the Boucher Brook Formation conformably overlie the felsic package. The Ordovician rocks of the Bathurst Camp have undergone greenschist facies metamorphism and a complex history of polyphase folding and faulting.

Mineralization of the deposits consists of banded pyrite-rich massive sulphides, breccia-matrix pyrrhotite-rich sulphides (semi-massive), black argillite and chert. Banded sulphides tend to contain the highest zinc concentrations. The stratigraphy hosting the Halfmile Lake deposit is overturned such that the sulphide sheet is structurally overlain by a pyrrhotite-chalcopyrite-quartz stringer zone that locally contains high copper values.

Within the Bathurst Mining Camp, most deposits are zoned vertically and laterally due to high temperature, vent proximal, veined and brecciated core to vent-distal hydrothermal sediments. Metal zoning consists of:

1. Vent complex pyrrhotite, magnetite, pyrite, chalcopyrite,  $\pm$ sphalerite,  $\pm$ galena.
2. Bedded pyrite, sphalerite, galena,  $\pm$ chalcopyrite.
3. Bedded pyrite,  $\pm$ sphalerite,  $\pm$ galena.

The vent complex is commonly underlain by a highly deformed sulphide stringer zone that can extend hundreds of meters and cuts hydrothermally altered volcanic and sedimentary rocks. Hydrothermal alteration is zoned and laterally widespread (1-5 km).

Kria Resources Ltd. (Kria) commissioned Wardrop Engineering (Wardrop) to produce a National Instrument 43-101 (NI 43-101) compliant Preliminary Economic Assessment (PEA) and Technical Report. The technical report is presented in this document and conforms to the standards set out in NI 43-101, Standards and Disclosure for Mineral Projects and is in compliance with Form 43-101F1.

### ***Resource Estimate***

#### *Halfmile Lake*

Wardrop carried out an internal validation from the original assay and the drill hole database on five (4.4%) of the 113 drill holes used by Noranda. Wardrop validated the dataset by comparing the original assay certificates and associated data against the digital dataset. In total, 124 samples were checked. Data verification was completed on silver, gold, copper, lead, and zinc values.

Table 1.1 is a summary of the specific gravity data used for the resource model.

**Table 1.1 Summary Statistics for Specific Gravity Data**

Average	Minimum	Maximum	Standard Deviation	Count
3.48	2.05	5.38	0.69	1,577

The final resource is interpolated using the inverse distance (ID<sup>2</sup>) method, the nearest neighbour (NN) method was also completed as a check. The results of the resource estimate are presented in Table 1.2 and Table 1.3, at a 5% zinc equivalent (ZnEQ) cut-off. The following metallurgical recoveries were applied to the ZnEQ for the resource estimate: 89.7% zinc (Zn), 72% lead (Pb), 60% copper (Cu), and 48.6% silver (Ag).

**Table 1.2 Summary Statistics for Specific Gravity Data**

Location	Tonnes	ZnEQ	%Zn	%Pb	%Cu	Ag (g/t)
Upper Zone	1,192,700	7.96	6.72	2.31	0.43	16.95
Lower Zone	4,472,200	9.65	8.68	2.81	0.12	37.94
Deep Zone	0	0.00	0.00	0.00	0.00	0.00
North Zone	597,200	7.56	6.78	1.40	0.49	4.84
<b>Totals</b>	<b>6,262,100</b>	<b>9.13</b>	<b>8.13</b>	<b>2.58</b>	<b>0.22</b>	<b>30.78</b>

**Table 1.3 Halfmile Lake Property Inferred Resource Estimate at 5% ZnEQ Cut-Off**

Location	Tonnes	ZnEQ	%Zn	%Pb	%Cu	Ag (g/t)
Upper Zone	156,100	8.08	7.20	2.64	0.17	6.19
Lower Zone	1,071,000	9.01	8.06	2.76	0.08	38.55
Deep Zone	4,825,700	6.86	6.37	1.60	0.15	17.04
North Zone	25,400	7.46	6.19	1.55	0.73	6.19
<b>Totals</b>	<b>6,078,200</b>	<b>7.27</b>	<b>6.69</b>	<b>1.83</b>	<b>0.14</b>	<b>20.51</b>

The resource estimate was completed using Gemcom GEMSTM 6.14 modelling software. The geological interpretation was made based on a combination of geology (massive sulphide intervals) and a ZnEQ grade limit of 3%. Grades were interpolated in 5 m x 5 m x 5 m blocks using ID<sup>2</sup>.

**Readers are cautioned that Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is therefore no certainty that the conclusions of the Halfmile-Stratmat PEA Report will be realized.**

Capping levels were set at 27% for zinc, 4% for copper, 9% for lead, and 200 g/t for silver. Table 1.4 is a summary of the capping effects of the data set used in the resource model.

**Table 1.4 Capping Levels Summary**

Element	Capped Value	Number of Samples Capped
Zn (%)	27	18
Cu (%)	4	6
Pb (%)	9	15
Ag (g/t)	200	9

Wardrop concludes that the above resource estimate indicates the possibility of hosting an economic deposit and warrants further investigation and development.

#### *Stratmat*

The results of the NI 43-101 compliant resource estimate are presented in Table 1.5 at a 5% zinc equivalent (ZnEQ) cut-off. The following metallurgical recoveries were applied to the zinc equivalent for the resource estimate: 89.7% zinc, 72% lead, 60% copper, 48.6% silver and 70% gold.

**Table 1.5 Stratmat Property Inferred Resource Estimate at 5% ZnEQ Cut-Off**

Location	Tonnes	ZnEQ	%Pb	%Zn	%Cu	Ag (g/t)*	Au* (g/t)
Stratmat All Zones	5,524,500	8.16	2.59	6.11	0.40	54.21	0.62

The resource estimate was conducted using MineSight 4.5 modelling software. The geological wireframes were constructed based on a combination of geology (massive and semi-massive sulphides) and a zinc equivalent grade cut-off of 2%. The mineral resource was estimated by interpolating grades into 3 m cube blocks using inverse distance weighting.

Wardrop concludes that the above resource estimate indicates the possibility of hosting an economic deposit and warrants further investigation and development.

Wardrop recommends that a comprehensive review of the drill hole database be conducted to verify the integrity of the dataset. As part of the review of the historical data, Wardrop also recommends that a drilling program be established to increase the level of confidence in the historical data. Chain of custody and drill data are lacking. To this end, Wardrop recommends the drill program include a minimum of seven drill holes for an approximate total of 3,000 m. These holes will twin several historic holes to confirm survey and/or assay data. Also these holes will serve to further define the interior of the deposit, and to delineate the deposit longitudinally where drilling is scarce. The budget is estimated at approximately \$600,000.

## ***Mining***

### *Halfmile Lake*

The Upper, Lower and Deep Zones at Halfmile Lake will produce 11.6 million tonnes of ore over a 20-year mine life, at a nominal rate of 2,000 t/d (714,000 t/a). The mine design is based on using a combination of three underground mechanized mining methods - Mechanized Cut and Fill (MCF) 75.4%, Avoca 9.3% and Long Hole (LH) 15.3%. The Upper Zone will provide the source of earliest ore and will be mined entirely using the MCF method.

The mine will operate on two, 11-hour shifts per day, seven days per week.

Access to the zones will be provided by the main ramp driven at a grade of -15%, using a 2-boom electric/hydraulic jumbo drill, 8 yd<sup>3</sup> scooptram and one 50 t haul truck, from a surface elevation of 531 m above sea level. Initially, waste from ramp development will be trucked to surface and dumped at a pad, which will be used for both ore and waste handling. A crusher will be located at the dump pad to process the ore, which will then be trucked off-site to a new mill located at the HSM site. The crusher will also crush waste to be used as backfill, which will then be backhauled to the stopes with the haul trucks. When production begins in the Upper Zone, 60% of the waste will be trucked directly to the mined-out stopes as backfill material.

A scissor lift truck will be used for rock bolting and installing mine services. The ramp will be equipped with permanent mine services for compressed air, dewatering, process water, power, instrumentation and controls and ventilation. Re-mucks and truck load-outs will be cut at 150 m and 300 m intervals respectively. Storage space and temporary sump facilities will be located at inactive re-muck cut-outs. Level access drifts will be excavated at vertical intervals of 30 m. Electrical sub stations will also be excavated at 550 m intervals along the ramp.

Once the ramp reaches the 200 Level horizon, an exploration drift will be driven in order to undertake definition diamond drilling of the Lower Zone. Similarly, at the -70 Level, another exploration drift will be driven to conduct a diamond drilling program for the Deep Zone. Access to diamond drilling horizons will also be excavated at the 200, 94, 65, and -70 Levels.

The MCF method will be used in areas where the ore dips at less than 40 to 45°. The Upper Zone dips at an average of 32° and will be mined using the MCF method. A sill pillar will be left in the center of the zone in order to establish two concurrent mining levels.

The Avoca method will be used in areas where the ore dips at more than 32 to 40° but not steep enough for practical LH mining.

Drilling for both the Avoca and LH methods will involve the use of in-the-hole (ITH) drills for 3.5 inch holes. Ammonium nitrate fuel oil (ANFO) will be the prime blasting agent supplemented by the use of packaged emulsions (15%). All mucking will be executed with 8 yd<sup>3</sup> load-haul-dump (LHD) units equipped for remote mucking operations.

The main ventilation infrastructure for the Halfmile Lake Project will consist of main Fresh Air Raises (FAR) and Return Air Raises (RAR) to the zones, and will be interconnected with designated levels to service ramp, development, and productions operations. At a steady state, 680 kcfm will be delivered underground to be distributed to the working areas. Two surface fans at each of the FAR (2 x 800 hp) and RAR (2 x 700 hp) will be controlled with Variable Frequency Drives (VFD's) to provide an increasing volume of air at various stages of the Life-of-Mine (LOM). A heater house with propane burners, rated at 9.5MM BTU/hr, will be provided to heat the fresh air during the winter months.

Submersible and centrifugal electric pumps, with an overall installed capacity of 800 gallons per minute (gpm), will be used to pump mine water from ramp and drift headings and designated sumps on the levels.

The main underground shop will be located in the Lower Zone at the -70 Level and will be equipped with a 25 t overhead crane, hose reel assemblies and lubricant dispensing equipment, welding bay and equipment, hydraulic presses, tire changing area, lube and warehouse areas, and a complete set of non-personal mechanics tools and boxes. The shop will be equipped with a fire suppression system, fire doors, communications center, and offices.

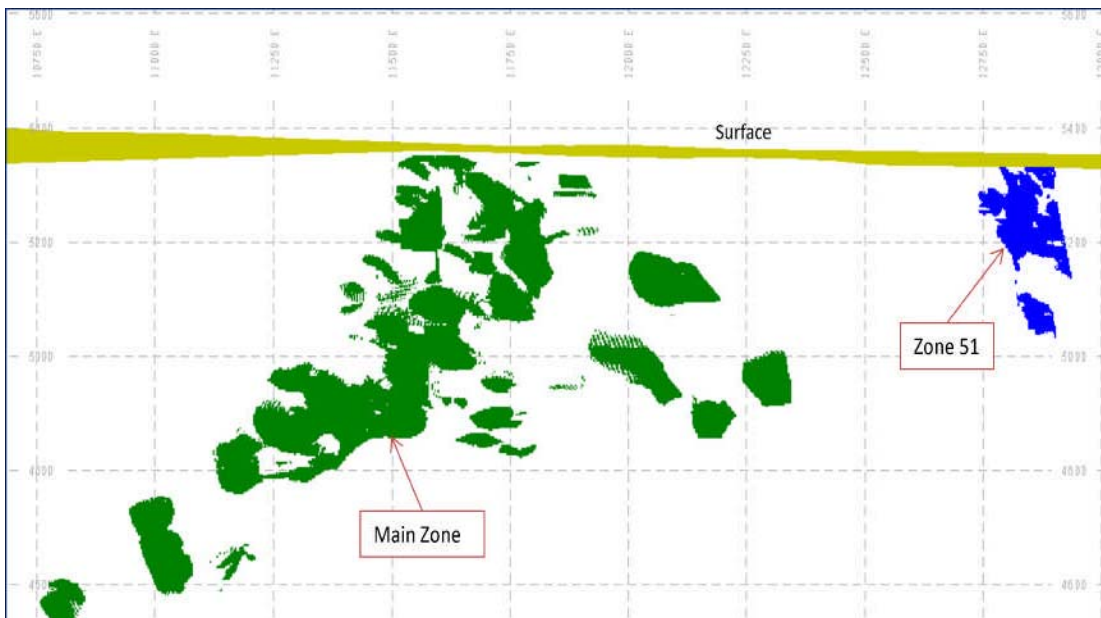
A satellite shop will be provided in the Upper Zone at the 200 elevation (330 Level) with similar facilities as the main shop, but with reduced office space and work areas.

#### *Stratmat*

The two ore zones in the Stratmat site, Main Zone and Zone 51, are 1000 m apart and will be mined separately. Extraction of the 6,672,816 t of Stratmat ore will be planned at a rate (peaking at 2000 t/d) to complement the Halfmile Lake production for a total 4000 t/d (1,428,000 t/a) feed to the mill at Heath Steele Mine (HSM). The Stratmat ore will last 11 years.

The ore zones consist of stringers and blobs. Those in Zone 51 are reasonably clustered whereas those in the Main Zone are spaced vertically and laterally, see Figure 1.1.

**Figure 1.1      Stratmat Deposit (Grade shell @4.8% ZnEQ cut off) Vertical Section Looking North**



To sustain the planned production, the Main Zone is sub-divided into four zonal mining phases separated by crown pillars to allow mining to proceed concurrently from any two or more phases. A description of boundary and estimated resource of each phase are as follows:

Phase 1 : Surface to 5181 el - 642,895 t at 7.866 ZnEq

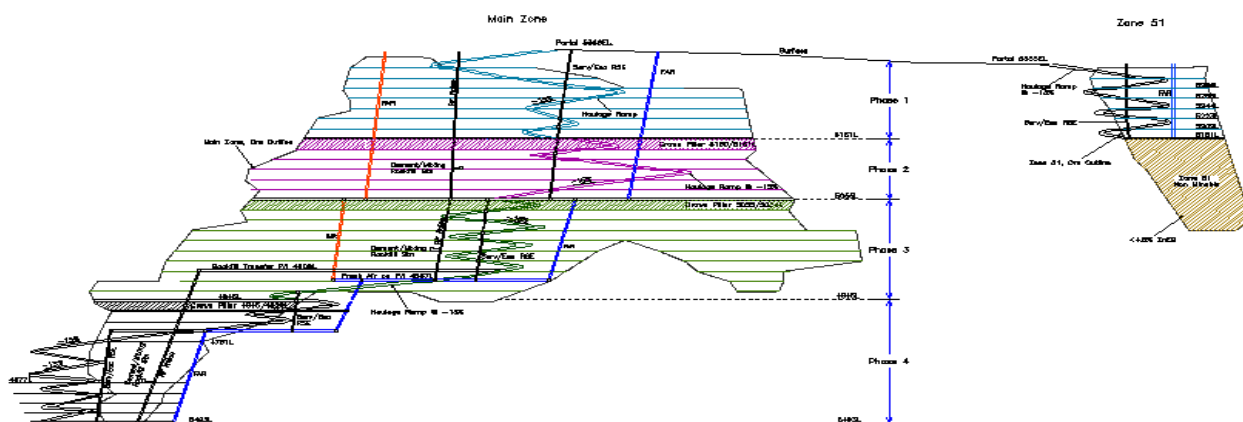
Phase 2 : 5181 el to 5055 el - 772,120 t at 8.175 ZnEq

Phase 3 : 5055 el to 4845 el - 3,241,304 t at 8.773 ZnEq

Phase 4 : 4845 el to 4593 el - 1,073,146 t at 9.653 ZnEq

Overlain by minimal overburden, the economic reserves extends to 127 m below surface in Zone 51, 773 m in the Main zone (Figure 1.2).

**Figure 1.2 Mine Longitudinal View**



The mining methods to be employed are the same as those at Halfmile Lake excluding the Avoca method because of no apparent suitable ore zone. Approximately 80% of the Stratmat reserves will be mined by LH and 20% by MCF. These methods are described in Section 1.4.1 above.

Separate ramps, identical in size and grade (nominal -15%) will be driven simultaneously to access the Main Zone and Zone 51. As in Halfmile Lake, conventional equipment will be used – 2-boom jumbo drill, 8 yd<sup>3</sup> load-haul-dump, 50-t truck, scissor lift and support vehicles.

As a ramp reaches the elevation of a sub-level, the main crosscut on that sub-level will be collared a short distance to provide a temporary re-muck bay.

A service/escape raise will be driven in leapfrog fashion with a main ramp, i.e., the raise will be driven from a collared sub-level to the one above. Permanent mine services for compressed air, dewatering, process water, power, instrumentation and controls and ventilation will be installed in this raise. The immediate advantage of this raise is the provision of an escape way, a ventilation airway and shorter lengths of service lines during ramp development. Once the raise is equipped, the ventilation tubing and service lines installed in the ramp section above will be removed and re-used on the ramp being driven below.

On every second sub-level, a truck load out will be cut as well. Storage space and temporary sump facilities will be established in unused cross cuts.

Upon reaching the 5181 elevation, lateral development to the ore zones will be carried out, followed by infrastructure and pre-production development. Production will start in an area as soon as the required infrastructure

and safety amenities are in place. Pre-production development will continue until the total mine production rate has ramped up to 2,000 t/d and sustained.

As the Main Zone ramp reaches the 5055 elevation (305 Level), an exploration drift will be developed for a diamond drilling program.

While production is in progress above the 5181 elevations in both zones, the ramp in the Main Zone will be continued to the lower levels. Upon reaching the 5055 elevation (bottom of Phase 2), lateral and infrastructure development will be done in the same concept as described above. The rate of such development will be geared to the timely replacement of exhausted resources in the upper zone. This strategy will be repeated down to the Phase 3 and Phase 4 of the Main Zone.

Ventilation fresh air, 156 kcfm, will be delivered to the Zone 51 workings. One x 120 hp fan on each of the FAR and RAR will control the airflow. In the Main Zone, 730 kcfm will be required during the peak production period. Two 670 hp fans on the FAR and two 500 hp fans with VFD drives will be installed. To heat the fresh air during the winter months, a heater house will be built in each zone equipped with propane heaters with a capacity of 9.5 MM BTU/hr for the Main Zone and 2.2 MM BTU/hr for Zone 51.

Backfill for Zone 51 and Phase 1 of the Main Zone will be delivered by ore haulage trucks on the return trip from surface. For the zones below Phase 1, backfill will be dumped into a backfill raise, retrieved and hauled to empty stopes by a dedicated fleet of trucks equipped with ejector box.

Mine water in Zone 51 will be pumped directly to the water retention pond on surface by a 150 hp pump at the rate of 400 gpm. In the Main Zone, an identical pump arrangement will be established in each of the mining phases and linked. Thus when the mining has progressed to Phase 4, water will be pumped to surface in 4 stages.

Running repairs will be done in a small shop underground. All major repairs and preventive maintenance work will be done in the shop on surface.

### ***Tailings Management Facility***

This PEA follows recommendations to expand the existing Heath Steele Tailings Management Facility (TMF) in order to accommodate combined Half Mile Lake and Stratmat tailings production. The HSM site previously underwent closure and reclamation and this includes the existing TMF.

The options study for the HSM's TMF expansion was completed in 1994 (Geocon Atlantic, 1994). At the time of the study the HSM operation was expected to cease in 1997. This was to be followed by the start of the discharge of tailings from the HML operations. A total of five expansion options were studied and "Option 5" was recommended, and followed herein, as a preferred option on the basis of the lowest estimated cost and most favorable classification of merits and demerits. This option consists of:

Constructing a powerline dam to establish a north cell (enclosed by the dam and surrounding high ground).

Raising the north road embankment, old tailings dam and internal dam to increase the storage capacity of the upper cell.

The actual cessation of the HSM operations took place in 1999 due to a change of the HSM mine plan. The Powerline dam was constructed and the north cell was established in 1996 in order to accommodate additional tailings produced by HSM operations.

The final crests of raised containment structures are set at El. 2376.2m and these accounts for 12,2M m<sup>3</sup> of tailings storage (15% contingency included), a 0.9 m deep closure water cover and 1.5 m of freeboard. The construction of containment structures will be carried out in stages in order to avoid expensive upfront capital spending. Stages 1, 2 and 3 raises are planned in years -1, 6 and 16, and their costs are estimated at \$7.4 million, \$7.2 million and \$5.6 million respectively.

Uncertainties remain in costs of foundation treatment measures that may be required to address shared environmental liability issues that may arise. Future site evaluations should be carried out with the ultimate goal in seeking a reduction of financial effects of potential future liabilities with respect to environmental impacts in addition to historic disturbance.

The internal dam overflow spillway modification or relocation may be required based on extent of encroachment of the raised internal dam into the west abutment. Furthermore, capacities of the main dam overflow spillway (north abutment) and emergency spillway (west abutment) should be re-evaluated to account for any changes in the lower cell water balance impacted by any changes within upper and north cells resulting from the subject TMF expansion. These potential changes may have an impact on overall capital cost.

Other significant risks related to economic items revolve around site uncertainties such as reliability of information from former studies/designs used herein, availability of borrow materials, volume estimates, expected density of tailings and topography.

### ***Mineral Processing and Metallurgical Testing***

This section is based on historical data and, no new metallurgical tests had been performed. Wardrop's primary source of information comes from several Noranda Feasibility Studies (1995, 1998, and 2000). Additional reports on metallurgical testing at SGS Lakefield and various tailings studies and closure plans were also reviewed to obtain the necessary information for the process flow sheet and metallurgical parameters.

Wardrop has conducted a trade-off study for the mill location and investigated various mill production rate options, as well as developing the process capital and operating cost evaluations. Wardrop also reviewed potential smelter terms for the concentrates. Under the terms of the option agreement that Kria has with Xstrata, Xstrata has first right of refusal on the concentrates. At the time of this report no smelter agreements were in place with Xstrata, therefore it was chosen to include the cost of shipping to an overseas smelter in Asia along with relative Net Smelter Returns (NSR) world terms.

For the scope of this report the emphasis was placed on options involving the current tailings management facilities located at Heath Steele Mines which Kria Resources has a property option on. Further studies are warranted on investigating options of locating the tailings management facilities on site at Halfmile Lake or utilization of other existing tailings and/or milling sites. The Noranda feasibility studies all presented scenarios using the Heath Steele site for metallurgical processing, thus this direction was chosen to be utilized given the design scope for this report. Further work is warranted to accurately evaluate the location of the metallurgical processing facilities including the TMF.

### ***Metallurgical Test Programs***

Metallurgical test programs were conducted at the Brunswick Mines and the Lakefield (now SGS Lakefield) Laboratories by Noranda. Several batch tests and lock cycle tests were performed at both facilities. Furthermore, a mineralogical evaluation was completed at Noranda to provide additional information to help characterize the metallurgical response. Pilot plant testing was not considered necessary at this time.

Based on the lock cycle tests assay results, the bulk zinc-lead concentrate contained 19.26% lead and 35.7% zinc at a favourable zinc/lead ratio of 1:9. The silver content was 205 g/t.

The copper in the copper concentrate was 20.13%, the lead in the lead concentrate was 46.24%, and the zinc in the zinc concentrate was 53%. Most of the silver was distributed to the lead concentrate with 307.7 g/t of silver (Noranda, 1998).

Lock cycle test results also indicated that the Halfmile Lake ore will yield total recoveries of 25.96% for copper, 89.72% for zinc, 48.56% for silver and 72.07% for lead. A lead concentrate of 46% lead and a zinc concentrate of 53% zinc are anticipated (Noranda, 1998).

The mineralogical studies on the Halfmile Lake ore samples showed good potentials for the zinc concentrate. With a zinc concentrate containing 53% zinc and recovery of nearly 85%, the iron levels of 8%, lead levels of 2%, low copper levels and relatively low arsenic, cadmium, manganese and cobalt levels, a good quality concentrate was expected to be produced from the Halfmile Lake ore (Noranda, 1998).

### ***Mill Tonnage***

Mine production capacity from both the open pit and underground operations at HML was assessed to be between 1,500 to 1,900 t/d. For the purposes of this study, only the underground mining volume will be considered in the operational costs for the mill. However, the HML mill feed was calculated at 2,000 t/d in consideration of the potential combined capacity for the open pit and underground operation.

The mine production schedule for Stratmat shows an initial capacity of 1,500 t/d for the first two years of mine production and 2,000 t/d for the subsequent 5 years and returning to 1,500 t/d until the end of the mine life. In order to accommodate the maximum mine production in the peak years the mill feed from Stratmat has been estimated to be 2,000 t/d.

The combined mill feed from the two properties is expected to peak in the range of 4,000 t/d, therefore this is assumed as the proper capacity of the processing facility.

### ***Mill Location***

Wardrop conducted a trade-off study for the mill location. The options considered were to build the mill either at Halfmile Lake or at the previously operated HSM site. For both cases, a new mill complex is considered. In addition, the trade-off study considered the cost effect of including Stratmat.

The initial comparison between the two options shows \$13.6 million difference in favour of building the mill at Heath Steele. There is some additional potential savings in terms of infrastructure capital costs if the mill is built at Heath Steele, which may increase that difference even further. Furthermore, installing and maintaining a 22 km pumping and piping system to pump the Halfmile Lake mill tailings to the Heath Steele tailings dam will affect the mill water balance and would increase the project risk significantly, particularly from an environmental aspect.

Based on these Trade-Off Study results, Wardrop recommends that the optimum location to build the mill is at the Heath Steele site, close to the tailings dam and to the Stratmat property. The Heath Steele location would require hauling the Halfmile Lake ore 22 km and the Stratmat ore 5 km via the existing Otter Brook Road. Safety issues also support using the Heath Steele Mill site, as the daily travel time for operations personnel would be substantially reduced.

Further studies are warranted to review other milling and tailings management facilities options. Other options include locating both the milling and tailings management facilities at the Halfmile Lake site or utilizing other existing milling and tailings management facilities on a toll basis. For the scope of this Preliminary Economic Assessment report the direction taken was to utilize the historical processing and tailings option by locating a metallurgical process facility on the Heath Steele Mines site.

### ***Process Flow Sheet***

The process flow sheet is based on the Noranda Feasibility Study, 1998. At the time, it was developed with the idea of processing the Halfmile Lake ore either at HSM or at Brunswick Mines, therefore it is very similar to the flow sheets employed Brunswick Mines.

The flow sheet uses a standard crushing process with a rock breaker provided to support the crushing process. The crushed ore is fed to the grinding circuit, which consists of a SAG mill, followed by a Ball mill. The calculated grinding time is 30 to 32 minutes, with a primary grind target of 70-80% passing 400-mesh. This is derived by applying the power input used in standard tests at the Brunswick Mines.



The flotation area consists of a copper-lead (rougher flotation followed by two cleaners and a scavenger flotation) and subsequent zinc circuit (rougher zinc flotation, followed by three cleaners and a scavenger flotation).

The copper separation circuit includes conditioning, followed by rougher and cleaner stages. The cleaner concentrate is the final copper concentrate and the rougher tailings returns to bulk rougher and cleaner stages. The bulk rougher tailings are the final lead concentrate and the bulk cleaner concentrate.

Further work is warranted to investigate if there is a possibility of eliminating the bulk concentrate and obtaining only 3 concentrate streams as this would simplify the mill flow sheet.

Based on the metallurgical tests performed at the SGS Lakefield Laboratory, the process will use the following reagent types: sulphur oxide (SO<sub>2</sub>) and soda ash in the grinding circuit; xanthate, frother and soda ash for the copper-lead conditioning; soda ash for the copper-lead regrind; xanthate, frother, lime and copper sulphate (CuSO<sub>4</sub>) for the zinc conditioning; starch, SO<sub>2</sub> and collector for the copper separation conditioning; xanthate, frother, lime and CuSO<sub>4</sub> for the bulk conditioning.

### ***Markets and Contracts***

The following assumptions regarding concentrate marketing have been made:

- Concentrates will be transported to the port of Bathurst, New Brunswick and from there shipped to a smelter in Asia.
- Bulk concentrates experience a re-handling loss of 0.3%; whereas it is assumed that the gravity concentrates will be bagged, a lesser loss of 0.10% is assumed.
- Concentrates to Asia will be shipped in 10,000 t lots.
- It is assumed that the moisture content of the concentrates will be 8% and below the Transportable Moisture Limit (TML). In some cases, this TML may be below the trigger point for a smelter moisture penalty.

Based on these assumptions, Wardrop has generated assumptions for “world smelter terms” with respect to treatment charges, penalties, accountability, and other areas. These were reviewed in light of the current market, as well as historic and future expected trends. In addition, there were discussions with smelters in order to determine current trends and the long-term outlook on capacity availability, and the minor element impact. Elements within the concentrate may also add a positive cash flow, as recoverable by-products have not been included in this preliminary study.

It must be recognized that smelters in different market areas may use different formulas with respect to metal accountability and charges and this is not reflected in the presented terms. Under the option agreement between Xstrata and Kria for Halfmile Lake, Xstrata has the first right of refusal for the concentrates. At the time of issuing this report there was no smelting agreement in place between Xstrata and Kria. For purposes of this PEA study, smelting terms have been assumed to be overseas in Asia.

It is also expected that, on final negotiations for concentrate contracts, the terms could be expected to vary due to shifts in the world market conditions.

Once a full suite of assays is established and the freight rates are more definitive, the detailed estimate of the NSR can be refined. All NSR and freight calculations are in \$/dmt since all the smelter contracts will be written in \$/dmt and are estimated to be \$665.94 for the zinc concentrate; \$1,135.80 for the copper concentrate; and \$426.24 for the lead concentrate.

### ***Environmental***

The environmental setting for the Halfmile Lake property was previously described and assessed by BEAK Consultants Ltd. (BEAK) for similar project proposed by a previous owner of the property. A biological study was

initiated by Kria in 2010 to update the environmental information for the property. The existing environment at Heath Steele was also previously described and assessed by BEAK for the Heath Steele Mine closure plan (BEAK 1997). Since then, mine closure activities have been undertaken including the removal of surface infrastructure, however the TMF remains licensed and is currently under care and maintenance.

The environmental assessment and permitting process for a development in New Brunswick is managed by the Environmental Assessment Branch of the Department of Environment (DENV). The proponent of a mining project is required to register details of their proposed project with the Minister of DENV. Registration involves a one-time fee of \$5,000 and the submission of an environmental impact assessment (EIA) registration document which describes the project, the existing environment potentially affected by the project, the anticipated environmental impacts and any proposed mitigative measures that, if implemented, would lessen, eliminate, or avoid such impacts. Updated environmental information for both sites must be collected for project approval. This type of data gathering is typically conducted over the course of a year (four seasons – i.e., April to April).

Throughout the registration process the proponent is also required to conduct community and Aboriginal engagement to ensure that the potentially affected stakeholders are aware of the project and are able provide input for consideration in project planning. A report summarizing the outcome of any public engagement must be submitted to DENV within 60 days of registration submission. Aboriginal consultation on part of the Province is handled by the Aboriginal Affairs Secretariat (AAS).

During the registration review, federal agencies will determine if a federal environmental assessment is necessary. A federal environmental assessment is typically triggered when a federal authority determines it must provide a license, permit or an approval that enables a project to be carried out (such as an authorization under the *Fisheries Act*). If a federal agency determines that it must issue a permit or approval for the project, the federal authority would then determine the level of environmental assessment to be applied to the project.

After reviewing the registration document, the Minister of DENV will make a decision regarding approval of the project including the issuance of a Certificate of Determination (project approval); requirement for further study or the project may be denied. If the Minister approves the project to proceed, certificates for Approval to Construct and Approval to Operate will be issued and other permits necessary for operation can be applied for through the appropriate licensing agency. If further study is required an environmental impact statement must be prepared and undergo regulatory and public review.

### ***Geochemistry***

Historic waste rock and tailings properties from nearby mines together with the high sulphide content of the ore at Halfmile Lake and Stratmat strongly suggests that waste rock and tailings produced from the latter deposit will likely be a potential source of acid mine drainage (AMD) as well as potential metal leaching (ML).

Assessment of AMD/ML potential includes both static and kinetic testing.

### ***Water Quality***

Site-specific water quality modeling (WQM) may be necessary to evaluate the implications of any discharge to natural surface waters on quality and quantity and identify appropriate management and control measures to prevent degradation of water quality or disruption of aquatic habitat. Effluents discharged to surface water from mining activities must at minimum meet MMER regulations. Discharge from the project site should not cause a parameter increase in a receiving water body, outside the mixing zone, that would cause a receiving water guideline to be exceeded. Site specific approvals of effluent quality may be assigned after application to the New Brunswick Ministry of the Environment if simple compliance with the MMER regulations will not provide adequate protection of receiving water quality.

### ***Hydro Geology***

Site specific or local hydrogeological data for the Halfmile Lake and Stratmat properties are not available. Groundwater will infiltrate mine workings at both deposits. Based on the hydrogeology reported for the HSM area,

and the anticipated relatively similar geology of the Halfmile Lake and Stratmat property, water volumes should be manageable, and may contain high concentrations of heavy metals due to the nature of the deposit. Standard dyke, grouting, and/or pumping practices would likely be required.

At Halfmile Lake, groundwater will be directed to a surface storage pond where the water will be held and treated, if necessary, before discharge to the Moody Brook watershed. No water treatment will occur at the Stratmat site. Collected water at the Stratmat site will be transported via a buried pipeline approximately 5km to the Heath Steele tailings management facility. Surface water will be captured from the run off of all hard surface areas via a ditching system. The surface ditches will be lined with a synthetic liner due to the lack of known available natural clay material.

### ***Mine Closure***

The intention of mine site reclamation after closure is to return land to a use at least equal to its previous value and to ensure that the long term ecological and environmental stability of the land and watershed is sustained. Mine closure is considered by the Province to be complete once any requirement for environmental monitoring and/or water treatment has ceased. The Halfmile Lake/Stratmat Mining and Reclamation Plans must include an estimate for mine closure and reclamation costs and an anticipated schedule for these activities to occur. Reclamation security will be required from the proponent and held by the Province to cover the cost of performing site reclamation if the proponent is unable to fulfill its obligation. The reclamation security may be released once reclamation is complete. A site is deemed in a walk-away condition when no further environmental monitoring and water treatment is necessary, and the site does not contain public safety hazards.

### ***Financial Analysis***

Using NSR values of US\$665.94/dmt for zinc, US\$1,135.80/dmt for copper, and US\$655.83/dmt for lead, an exchange rate of \$1.042 Cdn\$/US\$, and an operating cost of \$57.62/t of ore, the pre-tax Internal Rate of Return (IRR) for the project has been calculated at 20.86%.

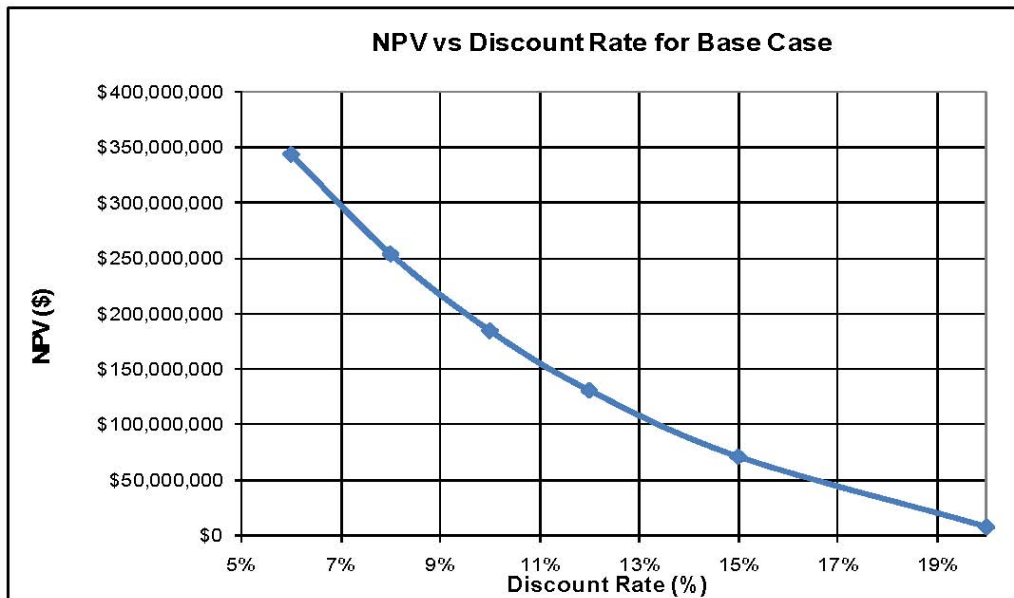
Overall, the total capital and operating expenditures will be \$471.1 million and \$1.052 billion, respectively. Additionally, the total cash flow before taxes from metal sales will be \$824.7 million during a LOM of 20 years.

**Table 1.6 Net Present Value and Internal Rate of Return**

<b>Item</b>	<b>Amount</b>
Pre-tax & Pre-finance NPV @ 6%	\$343,050,357
Pre-tax & Pre-finance NPV @ 8%	\$253,403,020
Pre-tax & Pre-finance NPV @ 10%	\$184,310,634
Pre-tax & Pre-finance NPV @ 12%	130,584,175
Pre-tax & Pre-finance NPV @ 15%	\$70,883,749
Pre-tax & Pre-finance NPV @ 20%	\$7,754,985
Project IRR	20.86%

The graph below (Figure 1.3) shows the Net Present Value (NPV) in Canadian dollars for the various discount rates for the base case scenario, as defined by the above metal prices, NSR and currency exchange.

**Figure 1.3 NPV vs. Discount Rate**



### ***Capital and Operating Costs***

The capital costs are divided into direct capital costs and indirect capital costs. The direct capital cost breakdown consists of the following major category descriptions:

- site development
- utilities
- mining underground
- infrastructure, non-process
- process
- mobile equipment
- tailings management facility
- closure and reclamation.

The indirect capital cost breakdown consists of the following major category descriptions:

- owner's cost
- indirect cost
- contingency
- salvage.

Table 1.7 is a summary table, which details the capital costs for this project.

**Table 1.7 Capital Cost Summary**

<b>Direct Capital Costs (million\$)</b>	
Site Development	\$25.8
Utilities	\$12.6
Mine Underground HML	\$130.7
Mine Underground Stratmat	\$130.2
Mobile Equipment HML	\$41.7
Mobile Equipment Stratmat	\$37.7
Infrastructure Non Process	\$12.3
Process	\$54.8
Tailings Management Facility	\$20.1
Closure/Reclamation	\$4.0
<b>Sub Total</b>	<b>\$470</b>
<b>Indirect Capital Costs</b>	
Owner's Costs	\$14.1
Indirect	\$13.1
Salvage	\$(26.0)
<b>Sub Total</b>	<b>\$1.2</b>
<b>Total Capital Costs</b>	<b>\$480</b>

### ***Risk and Opportunities***

#### *Underground Mining*

The underground mining methods require further detailed engineering to more accurately define the level of effort necessary to mine the ore bodies.

Potential mining risks exist at both deposits regarding dilution and mining recoveries, the prevalence of remote mucking resulting in additional access drifts, the requirements for backfill raises at Halfmile Lake rather than backhauling from surface with ore trucks and the utilization of shotcrete for ground stabilization at both Halfmile Lake and Stratmat.

Potential mining opportunities exist at Halfmile Lake through optimizing the mining method resulting in a higher percentage of LH mining and the potential justification of a shaft for recovery of ore to surface. As well the North Zone is a potential open pit deposit that has yet to be adequately defined or investigated in terms of financial viability.

The defined resource at Stratmat is classified as 100% inferred. There is both a risk and opportunity that requires further drilling and assaying to ascertain what risk or opportunity exists for mining Stratmat.

#### *Metallurgy*

Metallurgy has the potential for opportunities primarily resulting from the completion of a new metallurgical test program. Significant improvements to the process flow sheet for a green field mill will result in improved metallurgical recoveries, elimination of the bulk concentrate presented in the Halfmile Lake PEA and reduced capital and operating costs. Another opportunity is presented through a proposed detailed evaluation of the mill location and through-put design with consideration to include ore from the Halfmile Lake North Zone and/or Kria's Stratmat deposit.

### *Environmental*

There are no uncommon environmental risks associated with the project. A walk-away closure plan to satisfy the jurisdiction of New Brunswick must be developed and implemented. The Halfmile Lake and Stratmat waste rock dumps are potentially acid generating and will require planning, operation, and closure to effectively control acid generation and metal leaching.

The Heath Steele Mines requires a more detailed assessment of the site, including the current operation of the TMF. This should be conducted to identify and avoid any existing environmental liabilities.

### *Recommendations*

Wardrop recommends the following activities with approximate scheduled start and stop dates.

Phase	Description	Estimated Start	Estimate End
1	Preparation for Halfmile Early Works	Jan. 2010	Jan. 2011
2	Halfmile Early Works Development and Production	Oct. 2010	Nov. 2012
3	Exploration and Definition Drilling c/w Resource Updates	March 2011	Oct. 2012
4	Economic Evaluation Update	Jul. 2012	Dec. 2013
5	Environmental Studies	Oct. 2012	Sept. 2014
6	EPCM	May 2014	June 2017

### *Conclusions*

The PEA is favourable with a pre-tax IRR of 20.86% and a NPV of CDN\$253.4 million at an 8% discount rate. The IRR will drop following tax considerations. Achieving this return will require a capital investment of CDN\$471.1 million. The capital expended prior to achieving commercial production would occur in Years -2 and -1, and would total \$187 million.

Positive cash flows are shown in Year 2 following commercial production. Payback will take approximately six years after start of mine production.

**The Halfmile-Stratmat PEA is based only on inferred mineral resources and not mineral reserves and does not have demonstrated economic viability. Inferred mineral resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is therefore no certainty that the conclusions of the Halfmile-Stratmat PEA Report will be realized.**

## **RISK FACTORS**

The Company is subject to various financial and operational risks that could materially impact on, among other things, operating results, profitability and levels of operating cash flow, as described below. Any one of such risk factors could cause actual events to differ materially from those described in forward-looking statements relating to the Company.

### **Substantial Sums Owing to Glencore in relation to the Company's Santander Operations**

In connection with the acquisition and development of the Santander Property, the Company has substantial indebtedness owing to Glencore and/or its Peruvian subsidiary, Los Quenuales. Such indebtedness includes amounts (including debt service obligations) owing by Trevali to Glencore in respect to (i) the US\$20 million Glencore Working Capital Facility first made by Glencore to Trevali in October, 2012 and bearing interest at LIBOR plus 5%; and (ii) the cost US\$44,224 including refundable Peruvian IGV of US\$6,746 calculated at 18% of

the Trevali Plant constructed on the Santander Property under the supervision and direction of Glencore. The Trevali Plant price above referred, which bears no interest, and the Glencore Working Capital Facility, together with any default interest, as applicable, is to be paid by Trevali to Glencore on a monthly basis over a five year repayment term based on a fee schedule per ton of mineralized feed treated at the plant. Glencore and Los Quenuales hold real and personal property security over the indebtedness owed by Trevali to it. Accordingly, should Trevali fail to meet any of its obligations to Glencore and/or to Los Quenuales, such default could result in Glencore and/or Los Quenuales decision to realize on their security.

### **Indebtedness Owing Under Senior Secured Notes**

As stated above in this AIF, on May 30, 2014, the Company completed the \$52.5 million Note Offering. In connection with same, the Company provided security in respect its obligation to pay all principal and interest owing under the Notes - in the form of a charge over substantially all of the Company's Canadian assets. The Notes bear annual compounded interest at a rate of 12.5% and must be repaid in installments between the second and fourth anniversaries of the closing date. Should Trevali fail to meet its obligations to the holders of the Notes, such default could result in the Note holders' decision to realize on their security.

### **No Proven Reserves**

Neither the Santander nor Caribou Property, nor any of the Company's other Canadian properties, have been shown to contain proven or probable reserves and expenditures made in the exploration of the Company's properties may not result in discoveries of commercially recoverable quantities of ore. Most exploration projects do not result in the discovery of commercially mineable deposits of ore and there is no assurance that any mineral deposit identified will qualify as an ore body that can be economically exploited or that any particular level of recovery of silver, lead, zinc, copper or gold from discovered mineralization will in fact be realized.

SRK Consulting has completed a technical report on the Caribou Property, which indicates the presence of "mineralized material." Mineralization figures based on estimates made by geologists are inherently imprecise and depend on geological interpretation and statistical inferences drawn from drilling and sampling that may prove to be unreliable. There is no assurance that these estimates will be accurate or that proven and probable reserves will be identified at the Caribou Property, or any of the Company's other properties. Even if the presence of reserves at a project are established, the economic viability of the project may not justify further exploitation.

### **Production Decision Risk/Decision to Proceed with Development Without First Completing a Feasibility Study Demonstrating Mineral Reserves**

The Company has not based its production decisions at Santander or Caribou (which is slated to commence production by the end of June 30, 2015) on a feasibility study of mineral reserves demonstrating economic and technical viability and, as a result, the Company may be faced with increased uncertainty of achieving any particular level of recovery of minerals or the cost of such recovery, including risks associated with developing a commercially mineable deposit. Historically, such projects have a much higher risk of economic and technical failure. Also, there is no guarantee that production at the Company's Caribou mine site will begin as anticipated (by the end of June 30, 2015) or at all or that anticipated production costs will be achieved. Failure to commence production at the Company's Caribou Property would have a material adverse impact on the Company's ability to generate revenue and cash flow to fund its operations. In addition, failure to achieve the anticipated production costs would have a material adverse impact on the Company's cash flow and future profitability.

### **Exploration and Development of Mineral Deposits Involves Significant Risks**

The Caribou Property, which remains on budget and on schedule for commissioning in the second quarter of 2015, is still in the exploration and development stage and the Company cannot foresee whether its current activities will generate positive results. The exploration and development of mineral deposits involves significant financial risks over a significant period of time, which even a combination of careful evaluation, experience and knowledge may not eliminate. It is impossible to ensure that the current or proposed technical programs on the Caribou Property will ultimately result in a profitable commercial mining operation.

Estimates of reserves, mineral deposits and production costs can also be affected by such factors as governmental regulations and requirements, fluctuations in metals prices or costs of essential materials or supplies, weather, environmental factors, unforeseen technical difficulties, unusual or unexpected geological formations and work interruptions. In addition, the grade of ore ultimately mined may differ from that indicated by drilling results, sampling, feasibility studies or technical reports. Short term factors relating to reserves, 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. Silver or other minerals recovered in small scale laboratory tests may not be duplicated in large scale tests under on-site production conditions.

### **Liquidity risk**

Liquidity risk is the risk that the Company will encounter difficulty in satisfying financial obligations as they fall due. The Company manages its liquidity risk by forecasting cash flows required by its operations and anticipated investing and financing activities. As at December 31, 2014, the Company had an unrestricted cash balance of approximately \$24,681,000 and working capital of approximately \$32,471,000. Based on the anticipated positive cash flows from Santander, the subsequent financing of approximately \$5.1 million in February 2015, and refinancing of the RMB Bridge Facility during 2014, the Company is expected to have sufficient resources to meet its committed expenditures for the next twelve months. However, additional funds may be required to complete the development, testing and commissioning, start-up and ramp-up of the Company's Caribou mine project and the Company may need to seek additional funding to finance such activities.

There are a number of risks which may have a direct impact on the Company's potential revenue stream, including: (i) potential for delays in development activities; (ii) risks related to the inherent uncertainty of production and cost estimates, and the potential for unexpected costs and expenses; (iii) risks related to commodity price, smelting and refining charges and foreign exchange rate fluctuations. In the future, the Company's ability to continue its development activities depends primarily on the Company's ability to commence and continue operations to generate revenues or to obtain financing through joint ventures, debt financing, equity financing, production sharing arrangements, sale of assets or some combination of these or other means. There can be no assurance that any such arrangements will be concluded and the associated funding obtained. There can be no assurance that the Company will generate sufficient revenues to meet its obligations as they become due or will obtain necessary financing on acceptable terms, if at all. The failure of the Company to meet its on-going obligations on a timely basis will likely result in the loss or substantial dilution of the Company's interests (as existing or as proposed to be acquired) in its Properties. The Company's current priority is to develop and operate the Santander Property, the Caribou Property and to advance the Halfmile-Stratmat Properties to a production decision. In addition, should the Company incur significant losses in future periods, it may be unable to continue as a going concern, and realization of assets and settlement of liabilities in other than the normal course of business may be at amounts significantly different from those reflected in its current financial statements.

### **Reliability of Historical Information**

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

### **Substantial Capital Expenditures Required**

Substantial expenditures have been invested to date and are required to commence contemplated mining activities in New Brunswick. Although substantial benefits may be derived from the mineralized deposits, the Company has not completed formal feasibility studies and no assurance can be given that minerals defined to date will justify commercial operations or that the funds required for development can be obtained on a timely basis. The commercial viability of the mineral deposits are dependent upon a number of factors, some of which relate to particular attributes of the deposit, such as size, grade and proximity to infrastructure, and some of which are more general factors such as metal prices and government regulations, including environmental protection. Most of these factors are beyond the control of the Company.



## **Permits and Licenses**

The operations of the Company require licenses and permits from various governmental authorities. There can be no assurance that the Company will be able to obtain all necessary licenses and permits that may be required to carry out exploration, development and mining operations at its projects, on reasonable terms or at all. Delays or a failure to obtain such licenses and permits, or a failure to comply with the terms of any such licenses and permits that the Company does obtain, could have a material adverse effect on the Company. To the best knowledge of the Company, the permit conditions and timelines to acquire permits in the various jurisdictions where it operates are consistent with other similar companies.

## **Key Production and Cost Estimates**

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.

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

## **Title Matters**

Although the Company has taken steps to verify the title to its Properties in accordance with industry standards for the current stage of development and exploration of such Properties, these procedures do not guarantee title (whether of the Company or of any underlying vendor(s) from whom the Company may be acquiring its interest). Title to mineral properties may be subject to unregistered prior agreements or transfers, and may also be affected by undetected defects or the rights of indigenous peoples. The Company has investigated title to all of its Properties and, to the best of its knowledge, title to all of the Properties for which titles have been issued are in good standing.

## **Operating Hazards and Risks**

Mineral exploration and development involves risks, which even a combination of experience, knowledge and careful evaluation may not be able to overcome. Operations in which the Company has a direct or indirect interest will be subject to hazards and risks normally incidental to exploration, development and production of minerals, any of which could result in work stoppages, damage to or destruction of property, loss of life and environmental damage. Fires, power outages, labour disruptions, flooding, explosions, cave-ins, land-slides and the inability to obtain suitable or adequate machinery, equipment or labour are other risks involved in the operation of mines and the conduct of exploration programs. Substantial expenditures are required to establish reserves through drilling, to develop metallurgical processes, to develop the mining and processing facilities and infrastructure at any site chosen for mining. Although substantial benefits may be derived from the discovery of a major mineralized deposit, no assurance can be given that minerals will be discovered in sufficient quantities to justify commercial operations or that funds required for development can be obtained on a timely basis. The economics of developing mineral properties is affected by many factors including the cost of operations, variations of the grade of ore mined, fluctuations in the price of minerals produced, costs of processing equipment and such other factors as government regulations, including regulations relating to royalties, allowable production, importing and exporting of minerals

and environmental protection. In addition, the grade of mineralization ultimately mined may differ from that indicated by drilling results and such differences could be material. Short term factors, such as the need for orderly development of mineralized bodies or the processing of new or different grades, may have an adverse effect on mining operations and on the results of operations. There can be no assurance that minerals recovered in small scale laboratory tests will be duplicated in large scale tests under on-site conditions or in production scale operations. Material changes in geological resources, grades, stripping ratios or recovery rates may affect the economic viability of projects. The Company does not currently carry any liability insurance for such risks, electing instead to ensure its contractors have adequate insurance coverage. As the Companies advanced projects commence commercial production the Company anticipates putting business interruption insurance in place. 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.

### **Fluctuating Metal Prices**

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. Factors beyond the control of the Company may affect the marketability of any substances discovered. The prices of various metals and subsequent treatment charges have experienced significant movement over short periods of time, and are affected by numerous factors beyond the control of the Company, including international economic and political trends, expectations of inflation, currency exchange fluctuations, interest rates and global or regional consumption patterns, speculative activities and increased production due to improved mining and production methods. The supply of and demand for metals are affected by various factors, including political events, economic conditions and production costs in major producing regions. There can be no assurance that the price of any commodities will be such that any of the Properties in which the Company has, or has the right to acquire, an interest may be mined at a profit.

### **Commodity Prices**

The Company is dependent on various commodities (such as diesel fuel, electricity, steel and concrete) and equipment to conduct its mining operations and development projects. The shortage of such commodities, equipment and parts 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. Market prices of 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. If the costs of certain 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 the Company's operations or the development of some or all of the Company's current projects, which could have an adverse impact on the Company's financial performance and results of operations.

### **Development and Exploration**

Resource exploration and development is a speculative business and involves a high degree of risk, including, among other things, unprofitable efforts resulting not only from the failure to discover mineral deposits but also from finding mineral deposits which, though present, are insufficient in size to return a profit from production. The marketability of natural resources that may be acquired or discovered by the Company will be affected by numerous factors beyond the control of the Company. These factors include market fluctuations, the proximity and capacity of natural resource markets, government regulations, including regulations relating to prices, taxes, royalties, land use, importing and exporting of minerals and environmental protection. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in the Company not receiving an adequate return on invested capital. The vast majority of exploration projects do not result in the discovery of commercially mineable deposits of ore. Substantial expenditures are required to establish ore reserves through drilling and metallurgical and other testing techniques, determine metal content and metallurgical recovery processes to extract metal from the ore, and construct, renovate or expand mining and processing facilities. No assurance can be given that any level of recovery of ore reserves will be realized or that any identified mineral deposit, even if it is established

to contain an estimated resource, will ever qualify as a commercial mineable ore body which can be legally and economically exploited.

### **Acquisition of Mineral Concessions under Agreements**

The agreements pursuant to which the Company has the right to acquire a number of its Properties provide that the Company must make a series of cash payments and/or share issuances over certain time periods, expend certain minimum amounts on the exploration of the Properties or contribute its share of ongoing expenditures. The Company does not presently have the financial resources required to make all payments and complete all expenditure obligations under its all of its various property acquisition agreements over their full term. Failure by the Company to make such payments, issue such shares or make such expenditures in a timely fashion may result in the Company losing its interest in such Properties. There can be no assurance that the Company will have, or be able to obtain, the necessary financial resources to be able to maintain all of its property agreements in good standing, or to be able to comply with all of its obligations thereunder, with the result that the Company could forfeit its interest in one or more of its mineral Properties.

### **Future Acquisitions**

As part of the Company's business strategy, it may seek to grow by acquiring companies, assets or establishing joint ventures that it believes will complement its current or future business. The Company may not effectively select acquisition candidates or negotiate or finance acquisitions or integrate the acquired businesses and their personnel or acquire assets for its business. The Company cannot guarantee that it can complete any acquisition it pursues on favourable terms, or that any acquisitions completed will ultimately benefit its business.

### **Competition**

The Company's business of the acquisition, exploration and development of mineral properties is intensely competitive. The Company may be at a competitive disadvantage in acquiring additional mining properties because it must compete with other individuals and companies, many of which have greater financial resources, operational experience and technical capabilities than the Company. The Company may also encounter increasing competition from other mining companies in efforts to hire experienced mining professionals. Increased competition could adversely affect the Company's ability to attract necessary capital funding or acquire suitable producing properties or prospects for mineral exploration in the future.

### **Surface Rights and Access**

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

### **Environmental Restrictions**

The activities of the Company are subject to environmental regulations promulgated by government agencies in different countries from time to time. Environmental legislation generally provides for restrictions and prohibitions on spills, releases or emissions into the air, ability to use water, discharges of water, management of waste,

management of hazardous substances, protection of natural resources, antiquities and endangered species and reclamation of lands disturbed by mining operations. Certain types of operations require the submission and approval of environmental impact assessments. Environmental legislation is evolving in a manner which means stricter standards, and enforcement, fines and penalties for non-compliance are more stringent. Environmental assessments of proposed projects carry a heightened degree of responsibility for companies and directors, officers and employees. The cost of compliance with changes in governmental regulations has a potential to reduce the profitability of operations. In the event that a significant mineralized zone is identified, detailed environmental impact studies will need to be completed prior to initiation of any advanced exploration or mining activities. There is no guarantee that areas for potential mine waste disposal or areas for processing plants will be available within the Properties.

### **Regulatory Requirements**

The current or future operations of the Company, including exploration or development activities and commencement of production on the Properties require permits from various federal and local governmental authorities, and such operations are and will be governed by laws and regulations governing prospecting, development, mining, production, taxes, labour standards, occupational health, waste disposal, toxic substances, land use, environmental protection, mine safety and other matters. Companies engaged in the development and operation of mines and related facilities generally experience increased costs and delays in production and other schedules as a result of the need to comply with the applicable laws, regulations and permits. There can be no assurance that all permits which the Company may require for the construction of mining facilities and conduct of mining operations will be obtainable on reasonable terms or that such laws and regulations would not have an adverse effect on any mining project which the Company might undertake.

Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed upon them for violation of applicable laws or regulations.

Amendments to current laws, regulations and permits governing operations and activities of mining companies, or more stringent implementation thereof, could have a material impact on the Company and cause increases in capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in the development of new mining properties.

There can be no assurances that the Company may not be negatively affected by potential changes in Peruvian or Canadian federal, provincial or other legislation, or by any decisions or orders of any governmental or administrative body or applicable regulatory authority.

### **Uninsured or Uninsurable Risks**

The Company may become subject to liability for cave-ins, pollution or other hazards against which it cannot insure or against which it may elect not to insure because of high premium costs or for other reasons. The payment of any such liabilities would reduce the funds available for exploration and mining activities. Payments of liabilities for which the Company does not carry insurance may have a material adverse effect on the financial position of the Company.

### **Volatility of Share Price**

Factors such as Company announcements of quarterly variations in operating results, exploration results, as well as market conditions in the mining industry may have a significant impact on the market price of the Common Shares. Global stock markets have, from time to time, experienced extreme price and volume fluctuations, which have often been unrelated to the operations of particular companies. Share prices for many companies in the mineral exploration and mining industries have experienced wide fluctuations that have been often unrelated to the

operations of the companies themselves. In addition, there can be no assurance that an active trading or liquid market will develop or be sustained for the Common Shares.

### **Conflicts of Interest**

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 which 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.

### **Prospect of Dividends**

The Company does not anticipate that any dividends will be paid on its Common Shares in the foreseeable future.

### **Operations in Peru**

The Company currently has two property interests in Peru: the Santander Property and the Huampar Property. As in any jurisdiction, mineral exploration and mining activities may be affected in varying degrees by government regulations relating to the mining industry and/or political instability. Any changes in regulations or shifts in political conditions are beyond the control of the Company and may adversely affect its business. The Company does not maintain and does not intend to purchase political risk insurance. Operations may be affected in varying degrees by government regulations with respect to restrictions on production, price controls, export controls, income taxes, expropriation of property, environmental legislation and mine safety. The effect of all of these factors cannot be accurately predicted.

Peru's recent political and fiscal regimes were generally favourable to the mining industry and have been relatively stable over the past ten years or so. Since 2006, Peru has signed trade deals with the United States, Canada, Singapore, China, Korea, and Japan, in addition to concluding negotiations with the European Free Trade Association (EFTA) and Chile. A presidential run-off election took place on June 5, 2011 and President Ollanta Humala formally assumed office on July 28, 2011. To date, President Humala has shown support to foreign investment in mining and energy.

The Company's interests and operations may be affected by government regulations with respect to restrictions on property access, permitting, price controls, export controls, foreign exchange controls, income taxes, foreign investment, expropriation of property, environmental legislation and mine safety. There is also a risk of other adverse developments, such as labour unrest, and civil unrest, which may adversely affect the Company.

The Company's activities and results of operations may also be adversely affected by economic uncertainty. Peru has experienced fluctuating rates of inflation for many years. As of February 2015, the inflation rate in Peru was recorded at 2.77%. 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.

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

There is the risk of political violence and increased social tension in Peru as a result of increased civil unrest, crime and labour unrest. Roadblocks by members of the local communities, unemployed people and unions can occur on most national and provincial routes without notice. As of the date of this AIF, no such activities have occurred in the communities surrounding the Santander Property and the Company enjoys good relationships with its neighbours and surrounding communities.

## **Challenge of Bankruptcy Authority**

In spite of the Company's best efforts to locate all former workers at the Santander Property, a number of individuals who were workers at the Santander Property prior to the filing for the Peruvian equivalent of Chapter 11 bankruptcy protection have initiated a judicial procedure against the decision of the bankruptcy authority by which these individuals were excluded from the bankruptcy proceeding. The Company cannot predict with any accuracy of the outcome of the judicial procedures, however the Company has been advised by its Peruvian legal counsel that if the workers obtain a favourable ruling and are included in the bankruptcy proceedings, the Santander net liabilities could potentially increase by approximately \$1,000,000.

## **Foreign Exchange Risk**

The Company presently maintains its accounts in Canadian dollars. Due to the nature of its operations in such countries, the Company also maintains accounts in U.S. dollars and Peruvian nuevo soles. The Company's operations in Peru and its proposed exploration expenditures in such countries are denominated in either local currencies or U.S. dollars, making it subject to foreign currency fluctuations. Such fluctuations are out of its control and may materially adversely affect the Company's financial position and results.

## **Significant Capital Requirements Associated with Expanded Operations**

The Company must generate sufficient internal cash flow or be able to utilize available financing sources to finance its growth and sustain capital requirements. If the Company does not realize satisfactory prices for zinc, lead and silver and other metals that it will produce, it could be required to raise significant additional capital through equity financings in the capital markets, selling of metal streams or to incur significant borrowings through debt financings to meet its capital requirements. If these financings are required, the Company's cost of raising capital in the future may be adversely affected. In addition, if the Company is required to make significant interest and principal payments resulting from debt financings, the Company's financial condition and ability to raise additional funds may be adversely impacted. Any significant delay in completing its development projects or in achieving commercial production from them on a consistent basis or the incurring of capital costs that are significantly higher than estimated, could have a significant adverse effect on the Company's results of operations, cash flow from operations and financial condition.

## **Infrastructure**

Mining, processing, development and exploration activities depend, to one degree or another on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants, which affect capital and operating costs. Unusual or infrequent weather phenomena, sabotage, community, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's business, financial condition and results of operations.

A key operational risk is the availability of sufficient power and water supplies to support mining operations. Large amounts of power and 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 for power and water and access to sufficient supplies will need to be negotiated by the Company. Power and water are integral requirements for exploration, development and production facilities on mineral properties.

The Company's ability to obtain a secure supply of power and water at a reasonable cost depends on many factors, including:

- global and regional supply and demand;
- political and economic conditions;
- problems that can affect local supplies;
- delivery; and
- relevant regulatory regimes.

Even a temporary interruption of power or 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 infrastructure for the Company's development projects will, in any event, require significant resources, identification of adequate sources of raw materials and supplies and necessary cooperation from national and regional governments, none of which can be assured. There is no guarantee that the Company will secure the power, water and access rights going forward or on reasonable terms. Nevertheless, the Company has all water rights in place for its Santander operation and its advanced Caribou project and its contemplated Halfmile project. Trevali Peru has a long-term power purchase agreement in place with a SN Power, a significant Peruvian power distributor, for its Santander Property. The Caribou Property is connected to the New Brunswick grid where excess capacity is available.

### **Reserve and Resource Figures**

Unless otherwise indicated, mineralization figures presented in the Company's filings with securities regulatory authorities, press releases and other public statements that may be made from time to time are based upon estimates made by Company personnel and independent geologists. These estimates are imprecise and depend upon geological interpretation and statistical inferences drawn from drilling and sampling analysis, which may prove to be unreliable. There can be no assurance that:

- these estimates will be accurate;
- reserves, resource or other mineralization figures will be accurate; or
- this mineralization could be mined or processed profitably.

The Company has not defined or delineated any proven or probable reserves on any of the Properties, mineralization estimates for the Properties may require adjustments or downward revisions based upon further exploration or development work or actual production experience. In addition, the grade of mineral ultimately mined, if any, may differ from that indicated by drilling results. There can be no assurance that minerals recovered in small-scale tests will be duplicated in large-scale tests under on-site conditions or in production scale. The resource estimates contained in the Company's filings with securities regulatory authorities, press releases and other public statements that may be made from time to time have been determined and valued based on assumed future prices, cut-off grades, recoveries and operating costs that may prove to be inaccurate. Extended declines in market prices for zinc, lead, silver, copper, gold or other metals may render portions of the Company's mineralization uneconomic and result in reduced reported mineralization. Any material reductions in estimates of mineralization, or of the Company's ability to extract this mineralization, could have a material adverse effect on the Company's results of operations or financial condition. The Company has not established the presence of any proven or probable reserves at any of its mineral Properties. There can be no assurance that subsequent testing or future studies will establish any proven or probable reserves at the Company's Properties. The failure to establish proven or probable reserves could restrict the Company's ability to successfully implement its strategies for long-term growth.

### **Human Resources**

In order to operate successfully, the Company must find and retain qualified employees. The Company and other companies in the mining industry compete for skilled or experienced 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.

In addition, the Company has a relatively small executive management team and in the event that the services of a number of these executives were no longer available, the Company and its business could be adversely affected.

### **Global Financial Conditions**

Market events and conditions, including disruptions in the Canadian, United States and international credit markets and other financial systems and the deterioration of the Canadian, United States and global economic conditions, could, among other things, impede access to capital or increase the cost of capital, which would have an adverse effect on the Company's ability to fund its working capital and other capital requirements. These unprecedented

disruptions in the current credit and financial markets have had a significant material adverse impact on a number of financial institutions and have limited access to capital and credit for many companies, particularly junior resource exploration companies such as the Company. These disruptions could, among other things, make it more difficult for the Company to obtain, or increase its cost of obtaining, capital and financing for its operations. The Company's access to additional capital may not be available on terms acceptable to the Company or at all.

Worldwide securities markets, particularly those in the United States and Canada, have continued to experienced a high level of price and volume volatility, and the market price of securities of many companies, particularly those considered exploration or development stage companies, have experienced unprecedented declines in price which have not necessarily been related to the operating performance, underlying asset values or prospects of such companies. Most significantly, the share prices of junior natural resource companies have experienced an unprecedented decline in value and there has been a significant decline in the number of buyers willing to purchase such securities. In addition, significantly higher redemptions by holders of mutual funds has forced many of such funds (including those holding the Company's securities) to sell such securities at any price. As a consequence, despite the Company's past success in securing significant equity financing, market forces may render it difficult or impossible for the Company to secure places to purchase new share issues at a price which will not lead to severe dilution to existing shareholders, or at all. Therefore, there can be no assurance that significant fluctuations in the trading price of the Company's common shares will not occur, or that such fluctuations will not materially adversely impact on the Company's ability to raise equity funding without significant dilution to its existing shareholders, or at all.

### **Indigenous Peoples**

Various international and national laws, codes, resolutions, conventions, guidelines, and other materials relate to the rights of indigenous peoples. The Company operates in some areas presently or previously inhabited or used by indigenous peoples. Many of these materials impose obligations on government to respect the rights of indigenous people. Some mandate that government consult with indigenous people regarding government actions which may affect indigenous people, including actions to approve or grant mining rights or permits. The obligations of government and private parties under the various international and national materials pertaining to indigenous people continue to evolve and be defined. While the Company strives to develop excellent relationships with local stakeholders, including indigenous peoples, there can be no assurance that such relations 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 Company's Properties or may require the Company to enter into agreements with indigenous people with respect to the Company's Properties.

### **DIVIDENDS**

The Company has not paid any dividends on its Common Shares since its incorporation, nor has it any present intention of doing so. The Company anticipates that all available funds will be used to undertake exploration and development programs on its mineral properties as well as for the acquisition of additional mineral properties. 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 Company's board of directors. 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 foreseeable future. Other than lack of available funds, there are no restrictions on the Company's ability to pay dividends.

### **DESCRIPTION OF CAPITAL STRUCTURE**

The Company is authorized to issue an unlimited number of Common Shares. As of the date of this AIF, there are 285,927,437 Common Shares issued and outstanding. In addition: (i) 7,006,341 Common Shares are reserved for issuance pursuant to the exercise of stock options granted to directors, officers, employees and consultants of the



Company; and (ii) 9,468,000 Common Shares are reserved for issuance pursuant to the exercise of common share purchase warrants.

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

### Trading Price and Volume

The Common Shares are listed on the TSX and trade under the stock symbol “TV”. The following table sets forth, for the periods indicated during the most recently completed financial year, the reported high and low prices and the trading volume of the Common Shares on the TSX:

Month	High (C\$)	Low (C\$)	Volume
January 2014	\$1.10	\$0.91	20,994,306
February 2014	\$1.19	\$0.95	28,886,173
March 2014	\$1.20	\$0.91	15,929,172
April 2014	\$1.14	\$0.97	9,599,447
May 2014	\$1.12	\$0.91	4,909,936
June 2014	\$1.13	\$0.94	10,050,018
July 2014	\$1.39	\$1.07	29,297,346
August 2014	\$1.41	\$1.21	21,979,751
September 2014	\$1.36	\$1.11	16,303,702
October 2014	\$1.21	\$1.02	12,916,131
November 2014	\$1.15	\$0.93	10,480,113
December 2014	\$1.15	\$0.96	21,480,547

The Common Shares also trade on the Bolsa de Valores de Lima (Lima Stock Exchange) under the symbol “TV”, under the symbol “OTCQX” in the United States under the symbol “TREV” and on the Frankfurt Stock Exchange under the symbol “4TT”.

### Prior Sales

The following table sets forth the securities of the Company that were issued during the most recently completed financial year but not listed or quoted on a market place:

Issue/Grant Date	Type of Securities	Number of Securities	Exercise Price	Expiry Date
May 30, 2015	\$52.5 million of 12.5% Senior Secured Notes due May 30, 2019	52,500 Units (sold at \$980 per Unit)	Warrants attached to Units have an exercise price of \$1.26	Warrants attached to Units expire on May 30, 2019
June 24, 2014	Options	1,339,200	\$1.01	June 24, 2019
August 15, 2014	Options	334,000	\$1.29	August 15, 2019
June 24, 2014	Bonus Shares	785,900	n/a	n/a

Issue/Grant Date	Type of Securities	Number of Securities	Exercise Price	Expiry Date
August 15, 2014	Bonus Shares	16,200	n/a	n/a
June 24, 2015	RSU	1,413,300	n/a	n/a
August 15, 2014	RSU	33,100	n/a	n/a
January 14, 2014	DSU	58,500	n/a	n/a
June 24, 2014	DSU	179,900	n/a	n/a

### **ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTIONS ON TRANSFER**

In connection with the acquisition of the Caribou Property on November 2, 2012, the majority shareholder of Maple, MMC Holding (“MMC”), a private limited company incorporated under the laws of the Grand Duchy of Luxembourg, entered into voting support and standstill agreement. MMC also agreed, pursuant to a guarantee agreement executed November 2, 2012, to guarantee the representations and warranties given by Maple to the Company under the Combination Agreement. To this end, pursuant to an escrow agreement made as November 2, 2012 between the Company, MMC, Trevali Mining New Brunswick and Norton Rose Canada LLP (now known as “Norton Rose Fulbright Canada LLP”), as amended by agreement of the parties dated October 14, 2014, MMC continues to have held in escrow 2,000,000 Common Shares of the 3,999,986 Common Shares it received at closing on November 2, 2012, in support of its guarantee. The escrowed shares will remain in escrow pending the final disposition of an action (Court File No. FC-146-12 (herein, the “**New Brunswick Action**”)) commenced in New Brunswick by two plaintiffs against the Company, Trevali New Brunswick and certain other parties.

On April 9, 2015, the parties to the New Brunswick Action completed (pursuant to minutes of settlement dated March 27, 2015) the final settlement of the New Brunswick Action. See the header “Legal Proceedings and Regulatory Actions” for additional information.

### **DIRECTORS AND OFFICERS**

The table presented below provides the names, place of residence, position held with the Company, principal occupation and number of Common Shares beneficially owned, or controlled or directed, directly or indirectly, by each of the Company’s directors and executive officers as of the date of this AIF. The statement as to the Common Shares beneficially owned, controlled or directed, directly or indirectly, by the directors and executive officers below, is in each instance based upon information furnished by the person concerned and is as at the date hereof:

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years	Director Since
MARK CRUISE British Columbia, Canada	President, Chief Executive Officer and Director	President (February 2008 to present) and Chief Executive Officer (May 2009 to present) of the Company; Vice President Business Development of Cardero Resource Corp. (March 2007 to September 2011).	March 18, 2008
ANTON DRESCHER <sup>(1),(2),(3)</sup> British Columbia, Canada	Director	President and director of Harbour Pacific Capital Corp. (1998 to present); President and director of WestPoint Management Consultants Ltd. (1979 to present).	May 23, 2007

<b>Name and Place of Residence</b>	<b>Position(s) Held</b>	<b>Principal Occupation During the Last Five Years</b>	<b>Director Since</b>
MICHAEL HOFFMAN <sup>(3),(4)</sup> Ontario, Canada	Director	Managing Partner of Great Lakes Capital (since September 2013), President & CEO of Kria Resources Ltd. (July 2009 to April 2011); Vice President Engineering Belo Sun Mining Ltd, President/CEO and Vice President of a number of mining issuers (March 2002 to present); director of Kombat Copper (since October 2013).	April 6, 2011
CHRIS ESKDALE Unterageri, Switzerland	Director	Asset Manager for Glencore (1997 to present).	March 2, 2012
CATHERINE GIGNAC <sup>(1),(2),(4)</sup> Ontario, Canada	Director	Managing Director/Mining Equity Research Analyst with Northland Capital Partners (formerly Sandfire Securities) (February 2009 to September 2011); Managing Director/Mining Equity Research Analyst with Wellington West Capital Markets (February 2005 to February 2009). Director Cameco (January 2014 to present). Director (August 2013 to present) and Chairman (October 2014 to present) of Corvus Gold Inc.	March 2, 2012
VALENTIN PANIAGUA <sup>(2)</sup> Lima, Peru	Director	Lawyer and partner with the law firm of Estudio Echecopar in Peru (1994 to present).	September 19, 2012
DAVID HUBERMAN <sup>(2)(3)</sup> British Columbia, Canada	Chairman of the Board	President of Coda Consulting Corp. (1996 to present); Lead Director of Ivanhoe Mines Ltd. (recently renamed Turquoise Hill Resources) (2003 to 2012) and Chairman (2011 to 2012); Executive Vice President and General Counsel of Lions Gate Entertainment Corp. (1997 to 1999); Practiced business law (1972 to 1996).	September 27, 2012
PETER MEREDITH <sup>(1)</sup> British Columbia, Canada	Director	Chartered Accountant, member of the Canadian Institute of Chartered Accountants and the Institute of Corporate Directors. Director of Turquoise Hill Resources Ltd. (previously Ivanhoe Mines Ltd.) until 2012. He served as its Deputy Chairman from May 2006 until April 2012. Additionally he was CEO of SouthGobi Resources Ltd. from June 2007 until October 2009 and then served as its Chairman from October 2009 until September 2012.	May 6, 2013
ANNA LADD Ontario, Canada	Chief Financial Officer	CFO of the Company (May 2011 to present); CFO of Kria Resources Ltd., Crowflight Minerals (2008 to 2011); CFO of a number of other junior mining companies (2008 to 2011).	n/a
PAUL KELLER Ontario, Canada	Chief Operating Officer	Chief Operating Officer of the Company (July 4, 2012 to present); Vice President Operations of the Company (May 31, 2011 to July 4, 2012); VP Operations of Kria Resources Inc. (November 2010 to April 2011); formerly, Manager of Technical Services of DMC Mining Services, Vice President of Operations of Century Mining Ltd. and Chief Operating Officer of Crowflight Minerals Inc.	n/a

Name and Place of Residence	Position(s) Held	Principal Occupation During the Last Five Years	Director Since
DANIEL MARINOV British Columbia, Canada	Vice President, Exploration	Vice President of Exploration of the Company (April 1, 2013 to present); Chief Geologist of the Company (March 1, 2011 to March 31, 2013), former Senior Geologist with Anglo American and Rio Tinto (1994 to 2011).	n/a
STEVE STAKIW British Columbia, Canada	Vice President, IR/Corporate Communications	Vice President IR/Corporate Communications of the Company since November 27, 2012; Manager – Corporate Communications of the Company (April 2008 to November 2012).	n/a

**Notes:**

- (1) Member of the Audit Committee.
- (2) Member of the Nominating and Governance Committee.
- (3) Member of the Compensation Committee.
- (4) Member of the Sustainability 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.

### Common Share Ownership

As of the date of this AIF, the directors and officers of the Company, as a group, beneficially own, directly or indirectly, or exercise control or direction over an aggregate of 2,096,297 Common Shares, which together represent approximately 0.7% of the Company's issued and outstanding Common Shares before giving effect to the exercise of options or warrants to purchase Common Shares held by such directors and officers. The statement as to the number of Common Shares beneficially owned, directly or indirectly, or over which control or direction is exercised by the directors and officers of the Company as a group is based upon information furnished by the directors and officers.

A description of the business experience and present position of each director and executive officer of the Company is provided below:

#### **Dr. Mark Cruise, CEO, President and Director**

Dr. Cruise founded the Company and has been President since February 25, 2008 and Chief Executive Officer since May 28, 2009. Dr. Cruise was Vice-President, Business Development of Cardero Resources Corp., a public company listed on the TSX and American Stock Exchange, from March 2007 to September 2011, and from November 2004 to March 2007 was the Vice-President, Exploration. From 1996 to 2004, Dr. Cruise was Senior Geologist with Anglo American plc. Dr. Cruise is also a director of Ethos Capital Corp., a public company listed on the TSXV and Black Sea Copper and Gold Inc., a private company.

Dr. Cruise received a Bachelor of Geology from the University of Dublin, Trinity College 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.

#### **Anton Drescher, Director**

Mr. Drescher has been a Certified Management Accountant since 1981. He has been Chief Financial Officer and a director of Oculus VisionTech Inc. ("OVTI"), a public company listed for trading on the TSXV and the OTC Bulletin Board, since December 1994, which company is involved in streaming video and video-on-demand. He has also been a director of International Tower Hill Mines Ltd. ("ITH"), a public mineral exploration and development company listed on the TSX and NYSE MKT, since 1991, a director of Xiana Mining Inc., a public mineral exploration company listed on the TSXV, since 1996; president of Westpoint Management Consultants Limited, a private company engaged in tax and accounting consulting for business reorganizations since 1979; President of Harbour Pacific Capital Corp., a private British Columbia company involved in regulatory filings for businesses in

Canada, since 1998; a director of Corvus Gold Inc., a public natural resource company listed on the TSX, since 2010, and the president and a director of Ravencrest Resources Inc. since 2007.

Mr. Drescher has been a Certified Management Accountant since 1981.

**Michael Hoffman, Director**

Mr. Hoffman is a professional mining engineer with over 30 years of experience in mine operations, projects, engineering and corporate development. Mr. Hoffman is currently President of M Hoffman Consulting Ltd providing strategic and consulting services to the mining industry. He has also served in senior executive positions at Great Lakes Capital (2013-present), Belo Sun Mining (2012-2014), Crocodile Gold (from July 2009 to June 17, 2011), Crowflight Minerals Inc. (from September 2007 to July 2009), Goldcorp Inc. (from April 2003 to June 2006), Desert Sun Mining Corp. (from September 2006 to April 2007) and Yamana Gold Inc. (from April 2006 to June 2007). He also served as President and Chief Executive Officer of Kria Resources Ltd. (“Kria”), prior to Kria’s plan of arrangement with the Company. He is also currently a director of Kombat Copper Inc.

Mr. Hoffman received a Bachelor of Applied Science (Mining Engineering) from Queen’s University and is a Professional Engineer.

**Chris Eskdale, Director**

Mr. Eskdale joined Glencore International A.G. in January 1997 as Asset Manager. 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 Perubar SA, a Peru-based company primarily engaged in the provision of storage services and loading of mineral concentrates (since 2003), Empresa Minera Los Quenuales SA, a Peru-based mining company engaged in the extraction and production of zinc, lead and bulk concentrates (since 2003) and Compania Minera Volcan SAA, a Peruvian listed mining company engaged in the extraction and production of zinc, lead and copper concentrates (since 2012) and the Noranda Income Fund (since 2013).

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.

**Catherine Gignac, Director**

Ms. Gignac is an independent consultant, and served as a mining research analyst for nearly 25 years, including most recently, NCP Northland Capital Partners and Wellington West Capital Markets. Her early years were spent as an exploration geologist with Barrick Gold Corporation. She is a member and has served as President of the Mineral Resources Analyst Group, is a member of the CFA Institute, the Canadian Institute of Mining and Metallurgy and the Prospectors and Developers Association of Canada. Ms. Gignac is a director of Cameco Corporation, St. Andrew Goldfields Ltd. and Chairman and director of Corvus Gold Inc., public companies listed on the TSX. Ms. Gignac was a director of copper explorer Azul Ventures Inc. a public company listed on the TSXV from February 2012 to October 2013, and will step down as director of St. Andrew Goldfields May 13, 2015. Ms. Gignac received a Bachelor of Science Degree (Honours Geology) from McMaster University and received the ICD.D designation from the Institute of Corporate Directors in April 2014.

**Valentin Paniagua, Director**

Mr. Paniagua is currently partner at the Peruvian law firm Estudio Echeopar and head of its Natural Resources Department where he advises Peruvian and international mining companies on mining, environmental, mergers and acquisitions, corporate law, project finance, option, joint venture and royalty agreements, ore sales and marketing arrangements, and tenure and permitting issues.

Mr. Paniagua holds a Bachelor of Law Degree from Pontificia Universidad Catolica del Peru.

**David Huberman, *Chairman of the Board***

Mr. Huberman is currently President of Coda Consulting Corp., a business consulting firm, and practised business law from 1972 until 1996 as a senior partner of a Canadian business law firm, specializing in corporate, commercial, banking, securities, regulatory and mining law. He also served as a director of Ivanhoe Mines Ltd. (recently renamed Turquoise Hill Resources) from 2003 to 2012 and as its Chairman from 2011 to 2012. From 1997 to 1999, Mr. Huberman served as Executive Vice-President and General Counsel of Lions Gate Entertainment Corp. Mr. Huberman was appointed Chairman of Board of the Company on February 17, 2013.

Mr. Huberman holds a Bachelor of Arts degree and a Bachelor of Laws degree from University of British Columbia, and a Master of Laws from Harvard University.

**Peter Meredith, *Director***

Mr. Meredith was a Director of Turquoise Hill Resources Ltd. (previously Ivanhoe Mines Ltd.) until 2012. He served as its Deputy Chairman from May 2006 until April 2012. Additionally he was CEO of SouthGobi Resources Ltd. from June 2007 until October 2009 and then served as its Chairman from October 2009 until September 2012. He has served on the Board of Directors of many companies, including but not limited to, Turquoise Hill Resources Ltd., Great Canadian Gaming Corp., China Gold International Resources Corp Ltd., SouthGobi Resources Ltd., Ivanhoe Energy Inc., Entree Gold Inc., Ivanhoe Australia Ltd., Asia Gold Corp., Besra Gold Inc. (formerly Olympus Pacific Minerals Inc.), Jinshan Gold Mines Inc. and Peregrine Diamonds.

Mr. Meredith is a Chartered Accountant, a member of the Canadian Institute of Chartered Accountants and the Institute of Corporate Directors. Professionally he spent 31 years with Deloitte & Touche LLP, Chartered Accountants and has extensive experience in regulatory compliance and corporate finance, with an emphasis on public resource companies.

**Anna Ladd, *Chief Financial Officer***

Ms. Ladd has over 17 years of experience in financing and financial controls in relation to the mining industry from mine controller up to and including responsibility for multiple large scale open pit and underground base and precious metal production units. Ms. Ladd has served as Vice President Finance and Chief Financial Officer for a number of TSX listed junior mining and development companies in addition to several mid-size to senior gold and base metal producers including Grande Cache Coal's operations, Kinross Gold Corporation's Fort Knox, Round Mountain and Kettle River operations and Vale Inco's Thompson and Sudbury base metal operations. Ms. Ladd has served as Chief Financial Officer of the Company since May 2011.

Ms. Ladd holds a Bachelor of Commerce degree from the University of British Columbia, and a Master of Arts in Economics from Queens University, and is a Certified Public Accountant.

**Paul Keller, *Chief Operating Officer***

Mr. Keller brings extensive mine operations experience in Canada with 28 years of experience most recently as Manager of Technical Services for a major Canadian mining contractor where he led a team of engineers and designers on various mining contracts for major mining companies. Mr. Keller began his career with Rio Algom Limited and has also worked in various management roles with Barrick Gold's Hemlo mine in operations, engineering and maintenance. Mr. Keller initially joined the Company in May 2012 as Vice President of Operations. On July 4, 2012, he was appointed as Chief Operating Officer of the Company.

Mr. Keller holds a Bachelor of Engineering/Mining from Laurentian University and is a Professional Engineer.

**Daniel Marinov, *Vice President Exploration***

A professional geologist, Mr. Marinov has over 23 years of international experience in exploration and underground mining for precious, base metals and industrial minerals throughout Eastern Europe, Asia, Australia, as well as Central and South America in senior management roles for Rio Tinto and Anglo American. Mr. Marinov acted as

Chief Geologist of the Company from April 1, 2011 to March 2013 and from April 1, 2013 has served as the Company's Vice President of Exploration.

Mr. Marinov holds a Master of Science degree in mineral exploration from the University of Mining and Geology of Sofia, Bulgaria.

**Steve Stakiw, Vice President IR/Corporate Communications**

Mr. Stakiw is a geologist with over 21 years of mineral exploration, research and finance/equity market experience, and has held senior management roles with a leading mining research and investment publication and has consulted to resource-focused investment funds. Mr. Stakiw joined the Company in April 2008, initially as Manager – Corporate Communications and from November 27, 2012 as the Company's Vice President IR/Corporate Communications, and has been instrumental in expanding the Company's institutional and retail investor base in North America, Europe and South America, in addition to being a key member of the team that has raised in excess of \$140 million to successfully acquire, explore and develop the Properties to date.

Mr. Stakiw holds a B.Sc. (Geology) degree from Lakehead University, Ontario and has completed the Canadian Securities Course.

**CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES OR SANCTIONS**

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

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

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

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

- (a) is, as at the date of this AIF, or has been within the last ten years, a director or executive officer of any company (including the Company) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets;
- (b) has, within the last ten years, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or become subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold his assets;
- (c) has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority; or

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

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

Peter Meredith served as a director of Ivanhoe Energy Inc. (“Ivanhoe Energy”) from December 2007 to December 2014. On February 20, 2015 Ivanhoe Energy filed a Notice of Intention to Make a Proposal under subsection 50.4(1) of the Bankruptcy and Insolvency Act (Canada). Further proceedings are pending.

### **CONFLICTS OF INTEREST**

Most of the Company’s directors and/or officers are also directors, officers, employees or consultants of other companies which 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, a director of the Company, is a member of the senior management team at Glencore. Glencore is a shareholder of the Company, is a lender to the Company including, without limitation, providing the Company with the Glencore Working Capital Facility. In addition through off-take agreements, Glencore has agreed to purchase all the concentrates from the Company’s Santander and future Caribou operations.

Valentin Paniagua, a director of the Company, is a partner at the Peruvian law firm Estudio Echeopar and General Manager of Trevali Peru. Estudio Echeopar is legal counsel to the Company and its subsidiaries in Peru.

The directors and 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 officers.

### **LEGAL PROCEEDINGS AND REGULATORY ACTIONS**

Except as disclosed below, to the knowledge of the directors and officers of the Company, the Company and its properties or holdings are not subject to, and during the financial year ended December 31, 2014 were not subject to, any legal or other actions, current, pending or contemplated, which may materially affect the Company’s operating results, financial position or property ownership other than in respect to the New Brunswick Action as described under the heading “Escrowed Securities and Securities Subject to Contractual Restrictions on Transfer”.

On March 27, 2015, the Company entered into minutes of settlement in respect to the settlement (the “Settlement”) of the New Brunswick Action. On April 9, 2015, the settlement was completed (as described below) and mutual releases of the parties involved were entered into. As described elsewhere in this AIF, the New Brunswick Action was commenced in New Brunswick in May 2012 by two plaintiffs against Maple and certain other parties. In the



New Brunswick Action, the plaintiffs claimed a 24.5% interest in Maple and/or its underlying assets (namely the Caribou mine and mill). Pursuant to the Settlement, Trevali:

- issued 1,000,000 Common Shares (such Common Shares having a four month resale restriction from the date of issuance (April 9, 2015));
- issued 500,000 two year warrants having an exercise price of \$1.04 per Common Share;
- paid legal fees of \$60,000 to plaintiff's legal counsel.

Another named party in the New Brunswick Action (unrelated to the Company), contributed 300,000 Common Shares held by such party in escrow in order to settle the New Brunswick Action. See also "Escrowed Securities and Securities Subject to Contractual Restrictions on Transfer".

### **Regulatory Actions**

To the knowledge of the directors and officers of the Company, the Company has not:

- (a) had any penalties or sanctions imposed against it by a court relating to securities legislation or by a securities regulatory authority during the financial year ended December 31, 2014;
- (b) had any other penalties or sanctions imposed against it by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision; or
- (c) entered into any settlement agreements with a court relating to securities legislation or with a securities regulatory authority during the financial year ended December 31, 2014.

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

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, 2012, which has materially affected or is reasonably expected to materially affect the Company.

### **TRANSFER AGENTS AND REGISTRARS**

The transfer agent and registrar of the Company's Common Shares is Computershare at its offices in Vancouver, BC, at 3rd Floor, 510 Burrard Street, Vancouver, British Columbia V6C 3B9. In connection with the Note Offering completed in May 2014, Computershare has also been appointed as "trustee and collateral agent" pursuant to a note indenture dated May 30, 2014 and is the appointed "warrant agent" in connection with the Notes, pursuant to a warrant indenture dated May 30, 2014.

### **MATERIAL CONTRACTS**

The following are contracts that are material to the Company that were entered into either (i) during the year ended December 31, 2014; or (ii) prior to January 1, 2014 that are still in effect, other than contracts entered into in the ordinary course of business:

- (a) Combination Agreement dated May 14, 2012 between Maple, Trevali Mining (New Brunswick) Ltd. and the Company, as amended August 7, 2012 and September 14, 2012;
- (b) escrow agreement made as of November 2, 2012 between Trevali, Trevali Mining (New Brunswick) Ltd., MMC Holding and Norton Rose Canada LLP, as amended by agreement dated October 14, 2014;
- (c) note indenture dated as of May 30, 2014 between the Company, Computershare, as trustee and collateral agent, providing for the issuance of the Notes; and

- (d) warrant indenture dated as of May 30, 2014 between the Company and Computershare in respect to the warrants issued in connection with the Note Offering.

See “General Development of the Business – Three Year History”. See also “Escrowed Securities and Securities Subject to Contractual Restrictions on Transfer”.

## **INTERESTS OF EXPERTS**

### **Names of Experts**

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

The Company’s consolidated financial statements as of December 31, 2014, and for the year then ended have been filed under NI 51-102 in reliance on the report of PricewaterhouseCoopers LLP, given their authority as experts in auditing and accounting. The Company have been advised that, as of the date hereof, PricewaterhouseCoopers LLP is independent in accordance with the rules of professional conduct which govern its professional activities in the Province of British Columbia.

The authors of the Santander Report, the Caribou Report, the Halfmile-Stratmat PEA and the Ruttan Report are listed under “Mineral Properties” above. As a group, such authors beneficially own, directly or indirectly, less than 1% of any class of the Company’s outstanding securities.

### **Interest of Experts**

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

## **AUDIT COMMITTEE**

### **Audit Committee’s Charter**

The charter of the Company’s Audit Committee is reproduced as Exhibit “A”.

### **Composition of Audit Committee**

The Audit Committee is comprised of Anton Drescher, Catherine Gignac and Peter Meredith, all of whom are independent directors of the Company within the meaning of National Instrument 52-110 – *Audit Committees* (“NI 52-110”). The Chairman of the Audit Committee is Mr. Drescher. All members of the Audit Committee are financially literate. The members of the Audit Committee are elected by the Board of Directors 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:

*Anton Drescher* – Mr. Drescher, of Vancouver, BC, has been a Certified Management Accountant since 1981. He is also the President of Westpoint Management Consultants Limited, a private company engaged in tax and accounting

consulting for business reorganizations since 1979 and the President of Harbour Pacific Capital Corp., a private British Columbia company involved in regulatory filings for businesses in Canada since 1998.

*Catherine Gignac* – Ms. Gignac serves on the Audit Committees of Cameco Corporation and St. Andrew Goldfields Ltd., she has served as a mining equity research analyst where she had covered the mining and minerals sector, including large-cap to small-cap precious and base metal mining companies, for approximately 25 years at several global brokerage firms (UBS Securities, RBC Capital Markets, Merrill Lynch Canada) as well as independent boutique firms (Wellington West Capital Markets, Loewen Ondaatje McCutcheon and Dundee Securities), and was most recently with Northland Capital Partners. She is a member and has served as President of the Mineral Resources Analyst Group, is a member of the CFA Institute, the Canadian Institute of Mining and Metallurgy and the Prospectors and Developers Association of Canada. Ms. Gignac received a Bachelor of Science (Honours Geology) from McMaster University and received the ICD.D designation from the Institute of Corporate Directors in April 2014.

*Peter Meredith* – Mr. Meredith is a Chartered Professional Accountant, a member of the Canadian Institute of Chartered Accountants and the Institute of Corporate Directors. Professionally he spent 31 years with Deloitte & Touche LLP, Chartered Accountants and has extensive experience in regulatory compliance and corporate finance, with an emphasis on public resource companies. He was a Director of Turquoise Hill Resources Ltd. (previously Ivanhoe Mines Ltd.) from 2005 until 2012 and served as its Deputy Chairman from May 2006 until April 2012. He also served as Ivanhoe's Chief Financial Officer from June 1999 to November 2001 and from May 2004 to May 2006. Additionally he was CEO of SouthGobi Resources Ltd. from June 2007 until October 2009 and then served as its Chairman from October 2009 until September 2012. He has served on the Board of Directors of many companies, including but not limited to, Turquoise Hill Resources Ltd., Great Canadian Gaming Corp., China Gold International Resources Corp Ltd., SouthGobi Resources Ltd., Ivanhoe Energy Inc., Entree Gold Inc., Ivanhoe Australia Ltd., Asia Gold Corp., Besra Gold Inc. (formerly Olympus Pacific Minerals Inc.), Jinshan Gold Mines Inc. and Peregrine Diamonds.

### **Reliance on Certain Exemptions**

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 recent completed financial year was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the Board of Directors.

### **Pre-Approval Policies and Procedures**

The Committee has adopted specific policies and procedures for the engagement of non-audit services as described above under the heading "External Auditors".

### **External Auditor Service Fees (By Category)**

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

<b>Financial Year Ending</b>	<b>Audit Fees</b>	<b>Audit-Related Fees<sup>1</sup></b>	<b>Tax Fees<sup>2</sup></b>	<b>All Other Fees<sup>3</sup></b>
2014	\$202,000	\$56,700	\$29,000	\$23,500
2013	\$185,000	\$60,000	\$51,748	\$30,300

#### **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 advice and tax planning services.

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

### **ADDITIONAL INFORMATION**

Information relating to the Company may be found under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com). The information available at [www.sedar.com](http://www.sedar.com) includes copies of the full text of the technical reports prepared for the Company in respect of the Properties and drill results of the work programs carried out subsequent to the date of each technical report in respect of the Properties as contained in news releases and material change reports.

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, where applicable, can be found in the Company's management information circular for its most recent annual meeting of shareholders.

Additional financial information can also be found in the Company's audited consolidated financial statements and management discussion and analysis for the financial year ended December 31, 2014.

**EXHIBIT “A”  
AUDIT COMMITTEE CHARTER**

**1. MISSION**

Senior management, as overseen by the board of directors, has primary responsibility for the Company’s financial reporting, accounting systems and internal controls. The audit committee is a standing committee of the board of directors established to assist the board of directors in fulfilling its responsibilities in this regard.

**2. RESPONSIBILITIES**

The audit committee shall:

**(a) Financial Information**

- (i) Review the annual financial statements and related matters and recommend their approval to the board of directors, after discussing matters such as the selection of accounting policies, major accounting judgements, accruals and estimates with management;
- (ii) the annual information form, if applicable;
- (iii) be responsible for reviewing the results of the external audit, 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 internal audit;
  - D. the post-audit management letter together with management’s response;
  - E. the form of the audit report;
  - F. any other related audit engagements (e.g. audit of the company pension plan);
  - G. non-audit services performed by the auditor;
  - H. assessing the auditor’s performance;
  - I. recommending the auditor for appointment by the board of directors; and
  - J. meeting with the auditors to discuss pertinent matters, including the quality of accounting personnel;
- (iv) ensure that adequate procedures are in place for the review of the Company’s public disclosure of financial information extracted or derived from the Company’s financial statements (except for disclosure required to be reviewed by the audit committee), and must periodically assess the adequacy of those procedures;
- (v) 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 or auditing matters;

- (vi) review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former external auditor of the Company;
- (b) **Interim Financial Statements**
  - (i) obtain reasonable assurance on the process for preparing reliable quarterly interim financial statements from discussions with management and, where appropriate, reports from the external and internal auditors;
  - (ii) review, or engage the external auditors to review, the quarterly interim financial statements if not reviewed by the board of directors;
  - (iii) obtain reasonable assurance from management about the process for ensuring the reliability of other public disclosure documents that contain audited and unaudited financial information;
- (c) **Accounting System and Internal Controls**
  - (i) obtain reasonable assurance from discussions with and(or) reports from management, and reports from external and internal auditors that the Company's accounting systems are reliable and that the prescribed internal controls are operating effectively;
  - (ii) direct the auditors' examinations to particular areas;
  - (iii) request the auditors to undertake special examinations (e.g., review compliance with conflict of interest policies);
  - (iv) review control weaknesses identified by the external and internal auditors, together with management's response;
  - (v) review the appointments of the chief financial officer and key financial executives;
  - (vi) review accounting and financial human resources and succession planning within the corporation.
- (d) **Reporting**
  - (i) report to the board of directors following each meeting on the major discussions and decisions made by the audit committee; and
  - (ii) review the audit committee's terms of reference periodically and propose recommended changes to the board of directors.

### **3. COMPOSITION AND REGULATIONS**

- (a) The audit committee shall be composed of at least three directors, a majority of whom must be independent directors. The members and the chairperson of the audit committee shall be appointed by the board of directors for a one year term and may serve any number of consecutive terms.
- (b) The chairperson of the audit committee shall, in consultation with management and the auditors, establish the agenda for the meetings and ensure that properly prepared agenda materials are circulated to members with sufficient time for study prior to the meeting.
- (c) The audit committee shall have the power, authority and discretion delegated to it by the board of directors which shall not include the power to change the membership of or fill vacancies in the audit committee.

- (d) The audit committee shall conform to the regulations which may from time to time be imposed upon it by the board of directors. The board of directors shall have the power at any time to revoke or override the authority given to or acts done by the audit committee except as to acts done before such revocation or act of overriding and to terminate the appointment or change the membership of the audit committee or fill vacancies in it as it shall see fit.
- (e) The audit committee may meet and adjourn, as they think proper. A majority of the members of the audit committee shall constitute a quorum thereof. Questions arising shall be determined by a majority of votes of the members of the audit committee present, and in the case of an equality of votes, the chairman shall not have a second or casting vote.
- (f) A resolution approved in writing by all of the members of the audit 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 audit committee and shall be effective on the date stated thereon or on the latest date stated in any counterpart.
- (g) The audit 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 and shall distribute such minutes to the board of directors.

The audit committee shall have unrestricted and unfettered access to all Company personnel and documents and shall be provided with the resources necessary to carry out its responsibilities.

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