



**ANNUAL INFORMATION FORM**

**of**

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**For the Year Ended December 31, 2017**

**Dated: March 28, 2018**

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## PRELIMINARY NOTES

### Date of Information

In this Annual Information Form (“AIF”), Ero Copper Corp., together with its subsidiaries, as the context requires, is referred to as “Ero” or the “Company”. All information contained herein is presented as at December 31, 2017, unless otherwise stated.

### Currency

All dollar amounts in this AIF are expressed in Canadian dollars, except as otherwise indicated. References to “\$” or “dollars” are to Canadian dollars, references to “US\$” are to US dollars and references to “R\$” are to Brazilian Reals.

### Cautionary Note Regarding Forward Looking Information

This AIF contains “forward-looking information” within the meaning of applicable Canadian securities laws. Forward-looking information includes statements that use forward-looking terminology such as “may”, “could”, “would”, “will”, “should”, “intend”, “target”, “plan”, “expect”, “budget”, “estimate”, “forecast”, “schedule”, “anticipate”, “believe”, “continue”, “potential”, “view” or the negative or grammatical variation thereof or other variations thereof or comparable terminology. Such forward-looking information includes, without limitation, statements with respect to Mineral Reserve and Mineral Resource (as defined below) estimates; targeting additional Mineral Resources and expansion of deposits; the capital and operating cost estimates and the economic analyses (including cash flow projections) from the Vale do Curaçá Technical Report (as defined below) and the Boa Esperança Technical Report (as defined below); the Company’s expectations, strategies and plans for the Vale do Curaçá Property (as defined below) and the Boa Esperança Property (as defined below), including the Company’s planned exploration, development and production activities and the expected performance of the Pilar mine; the results of future exploration and drilling, estimated completion dates for certain milestones and the Company’s plans with respect to the Vermelhos mine; successfully adding or upgrading Mineral Resources and successfully developing new deposits; the costs and timing of future exploration and development; the timing and amount of future production at the Vale do Curaçá Property, the Boa Esperança Property and the NX Gold Property (as defined below); the timing, receipt and maintenance of necessary approvals, licenses and permits from applicable governments, regulators or third parties; the Company’s plans regarding the sale of NX Gold; expectations regarding consumption, demand and future price of copper; future financial or operating performance and condition of the Company and its business, operations and properties, including expectations regarding liquidity, capital structure, competitive position and payment of dividends; the possibility of entering judgments outside of Canada; expectations regarding future currency exchange rates; and any other statement that may predict, forecast, indicate or imply future plans, intentions, levels of activity, results, performance or achievements.

Forward-looking information is not a guarantee of future performance and is based upon a number of estimates and assumptions of management in light of management’s experience and perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances, as of the date of this AIF including, without limitation, assumptions about: favourable equity and debt capital markets; the ability to raise any necessary additional capital on reasonable terms to advance the production, development and exploration of the Company’s properties and assets; future prices of copper and other metal prices; the timing and results of exploration and drilling programs; the accuracy of any Mineral Reserve and Mineral Resource estimates; the geology of the Vale do Curaçá Property and the Boa Esperança Property being as described in the Vale do Curaçá Technical Report and the Boa Esperança Technical Report, respectively; production costs; the accuracy of budgeted exploration and development costs and expenditures; the price of other commodities such as fuel; future currency exchange rates and interest rates; operating conditions being favourable such that the Company is able to operate in a safe, efficient and effective manner; political and regulatory stability; the receipt of governmental, regulatory and third party approvals, licenses and permits on favourable terms; obtaining required renewals for existing approvals, licenses and permits on favourable terms; requirements under applicable laws; sustained labour stability; stability in financial and capital goods markets; availability of equipment; positive relations with local groups and the Company’s ability to meet its obligations under its agreements with such groups; and satisfying the terms and conditions of the Company’s current loan arrangements. While the Company considers these assumptions to be reasonable, the assumptions are inherently subject to significant business, social, economic, political, regulatory, competitive and other risks and uncertainties, contingencies and other factors that could cause actual actions, events, conditions, results, performance or achievements to be materially different from those projected in the forward-looking information. Many assumptions are based on factors and events that are not within the control of the Company and there is no assurance they will prove to be correct.

Furthermore, such forward-looking information involves a variety of known and unknown risks, uncertainties and other factors which may cause the actual plans, intentions, activities, results, performance or achievements of the Company to be materially different from any future plans, intentions, activities, results, performance or achievements expressed or implied by such forward-looking information. Such risks include, without limitation:

- copper prices are volatile and may be lower than expected;
- mining operations are risky;
- mining operations require geologic, metallurgic, engineering, title, environmental, economic and financial assessments that may be materially incorrect and thus the Company may not produce as expected;
- geological, hydrological and climatic events could suspend mining operations or increase costs;
- actual production, capital and operating costs may be different than those anticipated;
- the construction and start-up of new mines is subject to a number of factors and the Company may not be able to successfully complete new construction projects;
- currency fluctuations can result in unanticipated losses;
- the successful operation of the Vale do Curaçá Property and the successful development and operation of the Boa Esperança Property depend on the skills of the Company's management and teams;
- operations during mining cycle peaks are more expensive;
- title to the Vale do Curaçá Property and/or the Boa Esperança Property may be disputed;
- the Company may fail to comply with the law or may fail to obtain or renew necessary permits and licenses;
- compliance with environmental regulations can be costly;
- social and environmental activism can negatively impact exploration, development and mining activities;
- the mining industry is intensely competitive;
- inadequate infrastructure may constrain mining operations;
- operating cash flow may be insufficient for future needs;
- fluctuations in the market prices and availability of commodities and equipment affect the Company's business;
- a failure to maintain satisfactory labour relations can adversely impact the Company;
- the Company's insurance coverage may be inadequate to cover potential losses;
- it may be difficult to enforce judgments and effect service of process on directors, officers and experts named herein;
- the directors and officers may have conflicts of interest with the Company;
- the Acquisitions and future acquisitions may require significant expenditures and may result in inadequate returns;
- failures of information systems or information security threats can be costly;
- the Company may be subject to costly legal proceedings;
- the Boa Esperança Property is located in an underdeveloped rural area;
- product alternatives may reduce demand for the Company's products;
- changes in climate conditions may affect the Company's operations;
- the Company is subject to restrictive covenants that limit its ability to operate its business;
- the Company's Brazilian operations are subject to political and other risks associated with operating in a foreign jurisdiction;
- the Company may be negatively impacted by changes to mining laws and regulations;
- corruption and fraud in Brazil relating to ownership of real property may adversely affect the Company's business;
- the Company is exposed to the possibility that applicable taxing authorities could take actions that result in increased tax or other costs that might reduce the Company's cash flow;
- inflation in Brazil, along with Brazilian governmental measures to combat inflation, may have a significant negative effect on the Brazilian economy and also on the Company's financial condition and results of operations;
- exchange rate instability may have a material adverse effect on the Brazilian economy;
- the Company's operations may be impaired as a result of restrictions to the acquisition or use of rural properties by foreigner investors or Brazilian companies under foreign control;
- recent disruptions in international and domestic capital markets may lead to reduced liquidity and credit availability for the Company;
- the Company may be responsible for corruption and anti-bribery law violations;
- investors may lose their entire investment;
- dilution from equity financing could negatively impact holders of the common shares of the Company (the "**Common Shares**");
- equity securities are subject to trading and volatility risks;
- sales by existing shareholders can reduce share prices;
- the Company does not intend to pay dividends;

- public companies are subject to securities class action litigation risk;
- if securities or industry analysts do not publish research or publish inaccurate or unfavourable research about the Company's business, the price and trading volume of the Common Shares could decline; and
- global financial conditions can reduce the price of the Common Shares.

Although the Company has attempted to identify important factors that could cause actual actions, events, conditions, results, performance or achievements to differ materially from those described in forward-looking information, there may be risks, uncertainties and other factors that cause actions, events, conditions, results, performance or achievements to differ from those anticipated, estimated or intended, including, without limitation, those referred to in this AIF under the heading "*Risk Factors*".

The Company cautions that the foregoing lists of important assumptions and factors are not exhaustive. Other events or circumstances could cause actual results to differ materially from those estimated or projected and expressed in, or implied by, the forward-looking information contained herein. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information.

Forward-looking information contained herein is made as of the date of this AIF and the Company disclaims any obligation to update or revise any forward-looking information, whether as a result of new information, future events or results or otherwise, except as and to the extent required by applicable securities laws.

### **Scientific and Technical Information**

Except as set out below, scientific and technical information contained in this AIF relating to the Vale do Curaçá property, which is located within the Curaçá Valley, northeastern Bahia State, Brazil, and consists of 65 exploration licenses currently held or under application to renew, five mining concessions and three mining concessions currently under application covering a total area of 110,143 ha (the "**Vale do Curaçá Property**"), is derived from, and in some instances is a direct extract from, and based on the assumptions, qualifications and procedures set out in, the report prepared in accordance with National Instrument 43-101, *Standards of Disclosure for Mineral Projects* ("**NI 43-101**") and entitled "2017 Updated Mineral Resources and Mineral Reserves Statements of Mineração Caraíba's Vale do Curaçá Mineral Assets, Curaçá Valley", dated September 7, 2017 with an effective date of June 1, 2017, prepared by Rubens Mendonça, MAusIMM, of SRK Consultores do Brasil Ltda. ("**SRK**" or "**SRK Brazil**") as at the date of the report (now of Planminas – Projectos e Consultoria em Mineração Ltd. ("**Planminas**")), and Porfirio Cabaleiro Rodrigues, MAIG, Mário Conrado Reinhardt, MAIG, Fábio Valério Xavier, MAIG, and Bernardo H.C. Viana, MAIG, all of GE21 Consultoria Mineral ("**GE21**") (the "**Vale do Curaçá Technical Report**"). Each of Rubens Mendonça, MAusIMM, Porfirio Cabaleiro Rodrigues, MAIG, Mário Conrado Reinhardt, MAIG, Fábio Valério Xavier, MAIG, and Bernardo H.C. Viana, MAIG, reviewed and approved the scientific and technical information relating to the Vale do Curaçá Property contained in this AIF and is a "qualified person" and "independent" of the Company within the meanings of NI 43-101. In addition, information of a scientific or technical nature in respect of the Vale do Curaçá Property set out in the AIF under the heading "*Vale do Curaçá Property – Update Information with respect to the Vale do Curaçá Property*", has been reviewed and approved by Rubens Mendonça, MAusIMM, of Planminas (formerly of SRK Brazil) who is a "qualified person" and "independent" of the Company within the meanings of NI 43-101.

Scientific and technical information contained in this AIF relating to the Boa Esperança property, which is located within southeastern Pará State, Brazil, and consists of a single mineral concession covering an area of approximately 4,034 ha (the "**Boa Esperança Property**"), is derived from, and in some instances is a direct extract from, and based on the assumptions, qualifications and procedures set out in, the report prepared in accordance with NI 43-101 and entitled "Feasibility Study, Technical Report for the Boa Esperança Copper Project, Pará State Brazil", dated September 7, 2017 with an effective date of June 1, 2017, prepared by Rubens Mendonça, MAusIMM of SRK Brazil as at the date of the report (now of Planminas) and Carlos Barbosa, MAIG and Girogio di Tomi, MAusIMM, both of SRK Brazil (the "**Boa Esperança Technical Report**"). Each of Carlos Barbosa, MAIG, Rubens Mendonça, MAusIMM, and Girogio di Tomi, MAusIMM, reviewed and approved the scientific and technical information relating to the Boa Esperança Property contained in this AIF and is a "qualified person" and "independent" of the Company within the meanings of NI 43-101.

Reference should be made to the full text of the Vale do Curaçá Technical Report and the Boa Esperança Technical Report, each of which is available for review under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

## CIM Definition Standards

The Mineral Reserves and Mineral Resources for the Vale do Curaçá Property (including as used in the Vale do Curaçá Technical Report) and the Boa Esperança Property (including as used in the Boa Esperança Technical Report) have been estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves adopted by the CIM Council on May 10, 2014 (the “**CIM Definition Standards**”), which are incorporated by reference in NI 43-101. The following definitions are reproduced from the CIM Definition Standards:

“**Feasibility Study**” means a comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of applicable Modifying Factors together with any other relevant operational factors and detailed financial analysis that are necessary to demonstrate, at the time of reporting, that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a Pre-Feasibility Study.

“**Indicated Mineral Resource**” means that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors as described below in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.

“**Inferred Mineral Resource**” means that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

“**Measured Mineral Resource**” means that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.

“**Mineral Reserve**” means the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at pre-feasibility or feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. The reference point at which Mineral Reserves are defined, usually the point where the ore is delivered to the processing plant, must be stated. It is important that, in all situations where the reference point is different, such as for a saleable product, a clarifying statement is included to ensure that the reader is fully informed as to what is being reported. The public disclosure of a Mineral Reserve must be demonstrated by a Pre-Feasibility Study or Feasibility Study.

“**Mineral Resource**” means a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

“**Pre-Feasibility Study**” means a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the Modifying Factors and the evaluation of any other relevant factors which are sufficient for a qualified person, acting reasonably, to determine if all or part of the Mineral Resource may be converted to a Mineral Reserve at the time of reporting. A Pre-Feasibility Study is at a lower confidence level than a Feasibility Study.

“**Probable Mineral Reserve**” means the economically mineable part of an Indicated, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Mineral Reserve is lower than that applying to a Proven Mineral Reserve.

“**Proven Mineral Reserve**” means the economically mineable part of a Measured Mineral Resource. A Proven Mineral Reserve implies a high degree of confidence in the Modifying Factors.

For the purposes of the CIM Definition Standards, “**Modifying Factors**” are considerations used to convert Mineral Resources to Mineral Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors.

## LIST OF ABBREVIATIONS

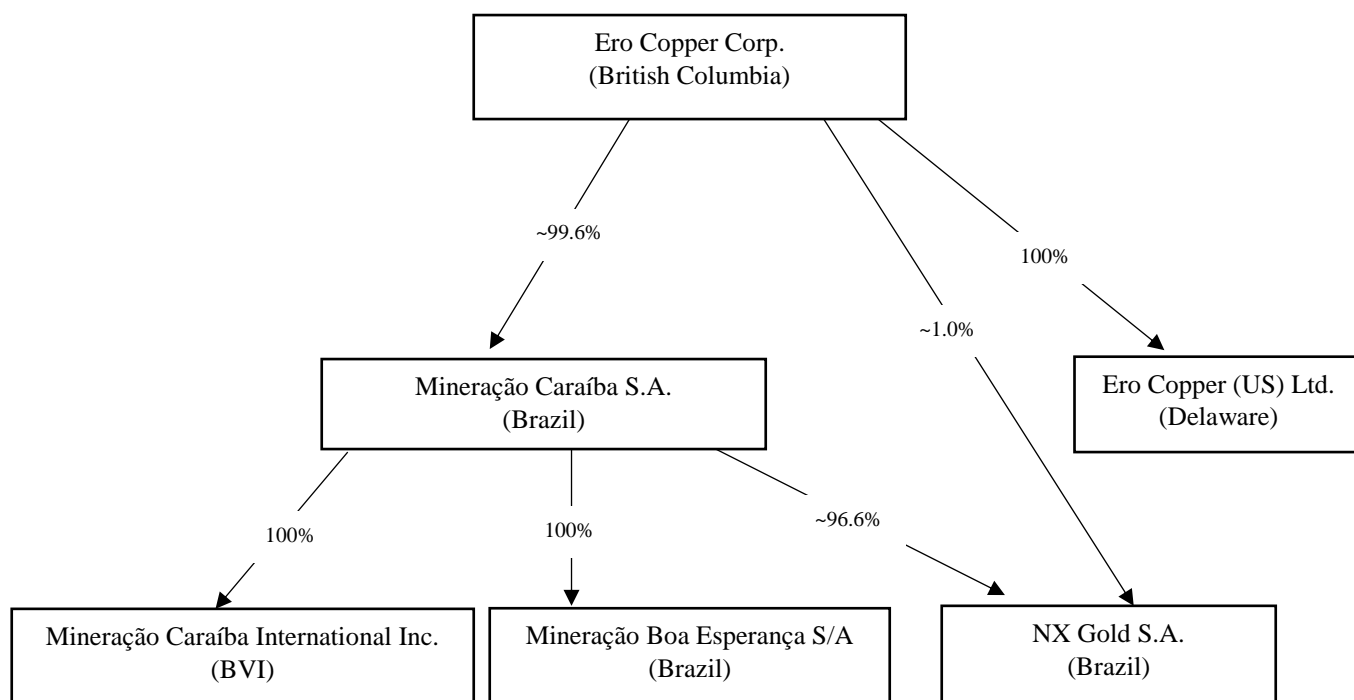
In this AIF, the following abbreviations have the meanings set forth below:

Cu	copper	Mt	megatonne
Ni	nickel	kt	kilotonne
Co	cobalt	t	metric tonne
Ag	silver	kg	kilogram
Au	gold	g	gram
Fe	iron	lb	pound
Mn	manganese	ml	millilitre
Zn	zinc	MW	megawatt
Cr	chromium	kW	kilowatt
Al	aluminium	MVA	megavolt amperes
Ca	calcium	kV	kilovolt
Mo	molybdenum	kWh	kilowatt hour
W	tungsten	Hz	hertz
Bi	bismuth	d	day
S	sulfur	h	hour
F	fluorine	s	second
Cl	chlorine	Ga	billion years
U	uranium	Ma	million years
As	arsenic	masl	metres above mean sea level
P	phosphorus	m <sup>3</sup>	cubic metre
Pb	lead	Mm <sup>3</sup>	cubic megametre
km	kilometre	mmWC	millimeter of water column
m	metre	Pa	pascal
cm	centimetre	mbar	atmospheric air pressure (bar)
mm	millimetre	°	degree
ft	foot	C	Celcius
ha	hectare	µm	micrometre
m <sup>3</sup>	cubic metre		

## CORPORATE STRUCTURE

Ero Copper Corp. was incorporated under the *Business Corporations Act* (British Columbia) (“**BCABC**”) on May 16, 2016. Ero’s head office is located at Suite 1050, 625 Howe Street, Vancouver, British Columbia, Canada, V6C 2T6 and its registered office is located at Suite 2600, 595 Burrard Street, Vancouver, British Columbia, Canada, V7X 1L3.

The Company directly holds approximately 99.6% of the voting shares of Mineração Caraíba S.A. (“**MCSA**”) and directly and indirectly holds approximately 97.6% of the voting shares of NX Gold S.A. (“**NX Gold**”), each such company being formed under the laws of Brazil. The remaining voting shares of MCSA are held by a minority group of shareholders, including former employees of MCSA. The remaining voting shares of NX Gold are held by Tugalla B.V. (“**Tugalla**”), a company formed under the laws of The Netherlands, Branford RJ Participações S/A (“**Branford**”), a company formed under the laws of Brazil, and others, including former employees of NX Gold. The Company’s current organization chart is as follows:



## GENERAL DEVELOPMENT AND BUSINESS OF THE COMPANY

### General

Ero is a base metals mining company focused on the production and sale of copper from the Vale do Curaçá Property in Brazil, with gold and silver produced and sold as by-products from the Vale do Curaçá Property. On October 19, 2017, the Company completed an initial public offering and secondary offering (together, the “**Offering**”) and its Common Shares commenced trading on the Toronto Stock Exchange (the “**TSX**”) under the symbol “**ERO**”.

As at December 31, 2017, the Company’s principal asset is its approximately 99.6% direct interest in MCSA, which holds a 100% interest in the Vale do Curaçá Property. For further details concerning the Vale do Curaçá Property, see “*Vale do Curaçá Property*”. In addition, MCSA holds a 100% interest in the Boa Esperança Property. For further details concerning the Boa Esperança Property, see “*Boa Esperança Property*”.

The Vale do Curaçá Property and the Boa Esperança Property are the mineral projects material to Ero for the purposes of NI 43-101.

As at December 31, 2017, the Company also holds a direct and indirect approximately 97.6% interest in NX Gold, which holds a 100% interest in the approximately 31,705 ha property located within the southeastern Mato Grosso State, Brazil, consisting



of a single mining concession covering an area of 620 ha, where all gold mining and processing activities occur, six mining exploration licenses covering an area of approximately 17,796 ha and two mining exploration licenses under application covering an area of approximately 13,909 ha (the “**NX Gold Property**”). Gold and, as a by-product, silver are produced and sold from the NX Gold Property. The Company does not consider NX Gold to be a material part of its ongoing business and currently intends to dispose of its interest in NX Gold.

### **Three Year History**

Immediately prior to their acquisition by Ero, MCSA and NX Gold were engaged in court supervised judicial reorganization proceedings before the Lower Consumer and Corporate Court in Jaguarari, Bahia State, Brazil initiated on February 3, 2016 (the “**Judicial Reorganization**”). Aside from the Company, MCSA and NX Gold, the principal groups of parties to the Judicial Reorganization proceedings were tax creditors of MCSA, labour creditors of MCSA, suppliers of MCSA and certain other secured and unsecured creditors, including Itaú Unibanco S.A, Santander Bank, Banco ABC Brasil and Banco Votorantim (collectively, the “**Club Deal Banks**”) and other institutional lenders (the “**Other Institutional Lenders**”), namely Banco Fibra S.A., Banco Pine S.A., Banco Safra S.A., Banco do Nordeste do Brasil S.A. and Banco do Brasil. A series of events and circumstances led up to the Judicial Reorganization, beginning with the drop in London Metal Exchange benchmark copper prices in 2015 at a time when MCSA owed a considerable amount of debt to the above-mentioned groups of creditors. In addition, the Club Deal Banks expressed no intention to renegotiate MCSA’s debt without capital injection by the then controlling shareholders of MCSA. With the term of payment of relevant installments on the debt owing to the Club Deal Banks approaching, MCSA filed for judicial reorganization protection in 2015. NX Gold was involved in such judicial reorganization proceedings on the basis of it being a guarantor of the debt owed by MCSA to the Club Deal Banks. The initiation of judicial reorganization proceedings prompted the Club Deal Banks to engage in negotiations with MCSA and, as a result, the parties entered into a mutually acceptable resolution in October 2015 and terminated the judicial reorganization proceedings. However, the flooding of MCSA’s Pilar Mine on January 22, 2016 led MCSA as well as NX Gold (as the guarantor of MCSA’s outstanding debt to the Club Deal Banks) to commence the new Judicial Reorganization process on February 3, 2016.

The flooding event was an anomalous occurrence caused by a series of unique and unusual events and circumstances, stemming from MCSA’s ongoing construction of a ventilation raise to surface at the Pilar Mine in late 2015. During this period, and as part of the above-mentioned resolution negotiated by MCSA and the Club Deal Banks, MCSA was required to obtain the Club Deal Banks’ consent before removing cash from its bank accounts to fund capital expenditures at the Vale do Curaçá Property. While MCSA awaited approval for the release of such cash to fund the completion of civil works to cap the unfinished ventilation raise at surface, an unseasonably high amount of rainfall was experienced in the region over a 24-hour period resulting in a flash flood which broke through the protective berm surrounding the uncapped ventilation raise and resulting in water flowing into the ventilation raise and flooding certain parts of the underground Pilar Mine, including the main work areas, underground crushers and equipment. Had the civic works been completed at surface and a cap been placed on the opening of the ventilation raise, flood waters would not have entered the underground of the Pilar Mine during the flash flood. As at the date of this AIF, the civic works at surface have been completed and a cap has been installed on the ventilation raise.

On December 12, 2016, the Company acquired a total of 60,678,219 common shares of MCSA, representing approximately 85% of the then total issued share capital of MCSA, for an aggregate purchase price of US\$3.00, pursuant to a share purchase agreement among Tugalla, Branford and the Company, and a share purchase agreement between Zinia Participações S/A (“**Zinia**”), a company formed under the laws of Brazil, and the Company (the “**MCSA Acquisition**”). In addition, on December 12, 2016, the Company acquired a total of 18,759,720 common shares of NX Gold, representing approximately 28% of the then total issued share capital of NX Gold, for an aggregate purchase price of US\$1.00, pursuant to a share purchase agreement between Zinia and the Company (the “**NX Acquisition**”), and together with the MCSA Acquisition, the “**Acquisitions**”). The cash consideration paid in connection with the Acquisitions was nominal and the Company agreed to assume all of the loans and borrowing and other obligations of MCSA and NX Gold in connection therewith.

In connection with the Acquisitions, the Company also entered into an investment agreement dated December 12, 2016, with Tugalla, Branford and, as intervening parties, Finges Investment B.V. and Aiolia Investments (the “**NX Gold Investment Agreement**”), pursuant to which the Company, through MCSA, later acquired an additional 69.56% interest in NX Gold by way of a capital increase transaction completed on August 18, 2017, further described below. In addition, so as to enable the Company to assume the control of the management of NX Gold prior to its acquisition of an additional interest in NX Gold pursuant to the NX Gold Investment Agreement, Tugalla, Branford and the Company entered into a shareholders’ agreement dated December 12, 2016, with respect to NX Gold.

As part of the transactions related to the Acquisitions, the above-mentioned groups of creditors of MCSA, including the Club Deal Banks and Other Institutional Lenders provided no objection to the withdrawal of MCSA and NX Gold (as the guarantor

of MCSA's outstanding debt to the Club Deal Banks) from the Judicial Reorganization proceedings (which approval was ratified by the judge of the Lower Consumer and Corporate Court in Jaguarari, Bahia State, Brazil, on December 6, 2016). In exchange for the foregoing, Ero (through MCSA and NX Gold) agreed to pay, over a payment schedule, the full amounts due and outstanding to suppliers and labour creditors of MCSA, and to pay the amounts under the restructured loan agreements with the Club Deal Banks, as negotiated by the respective parties. Neither Ero nor MCSA entered into agreements with tax creditors of MCSA at the time of withdrawal of MCSA and NX Gold from the Judicial Reorganization proceedings. Subsequent to such withdrawal from Judicial Reorganization proceedings, the Company and MCSA renegotiated a payment schedule for the outstanding taxes owed by MCSA to its tax creditors, pursuant to various amnesty programs available to all Brazilian companies.

Pursuant to the restructuring agreements, the Club Deal Banks agreed to split their loans into Class A and Class B notes. The principal amount of the Class A notes totaled US\$127.9 million and such notes are repayable over an eight-year period commencing at the later of June 2018 or the date of commercial production of copper concentrate from the Vermelhos Mine (defined as the payment of government royalties associated with the sale of copper concentrate), but in all cases no later than 29 months following the date of signing of the restructured loan agreements (May 29, 2019). Interest payments associated with the Club Deal Banks restructured loans are not payable before June 2018. The principal amount of the Class B notes totals US\$83.9 million or 40% of the original outstanding debt. The Class B notes accrue no interest and are repayable only if, among other things, the Class A notes are not repaid in accordance with the restructured loan agreements. Following the repayment of the Class A notes, the Class B notes expire with no rights or obligations.

In addition to the restructuring of the loan agreements with the Club Deal Banks, the Other Institutional Lenders also agreed to restructure certain loan terms, including grace periods with respect to principal repayments and interest, changes in the life of the loans and changes in the actual interest rates. Following withdrawal from Judicial Reorganization, NX Gold continues to guarantee the debt owed by MCSA to the Club Deal Banks.

In anticipation of the Acquisitions (including the related arrangements with the Club Deal Banks and the Other Institutional Lenders), the Company completed the following private placement offerings:

- a private placement offering of 10,000,000 units (the "**Founder Units**") of the Company on September 2, 2016, at US\$0.01 per Founder Unit for aggregate gross proceeds of US\$100,000. Each one Founder Unit was comprised of one Common Share and one-third of a Common Share purchase warrant (the "**Founder Warrants**"), with each one Founder Warrant entitling the holder thereof to acquire one Common Share at a price of US\$1.20 until December 12, 2021, in accordance with the terms thereof and the Amended and Restated Warrant Indenture between the Company and Computershare Trust Company of Canada, as warrant agent, originally entered into on September 2, 2016 and amended and restated on December 12, 2016 and on September 12, 2017 (the "**Warrant Indenture**"). As at the date of this AIF, a total of 3,333,328 Founder Warrants are issued and outstanding.
- a private placement offering of 18,400,000 subscription receipts of the Company (the "**Subscription Receipts**") on September 8, 2016, at US\$1.00 per Subscription Receipt for aggregate gross proceeds of US\$18,400,000. Each one Subscription Receipt entitled the holder thereof to receive, upon conversion in accordance with its terms and the terms of the subscription receipt agreement dated September 8, 2016, between the Company and Computershare Trust Company of Canada, one unit comprised of one Common Share and one-third of a Common Share purchase warrant (the "**General Warrant**"), with each one General Warrant entitling the holder thereof to acquire one Common Share at a price of US\$1.20 until December 12, 2021, subject to certain acceleration rights of the Company and in accordance with the terms thereof and the Warrant Indenture. As at December 27, 2017, each of the 6,133,309 General Warrants had been exercised by the holders thereof.
- the private placement offering of 500,000 Common Shares and 8,949,089 units of the Company to Brasil Plural Special Situations Fundo de Investimento em Participações Multiestratégia Investimento no Exterior ("**Brasil Plural**"), Spectra II – Fundo de Investimento em Participações ("**Spectra II**"), Spectra III Fundo de Investimento em Participações Multiestratégia IE ("**Spectra III**") on December 28, 2016, for aggregate gross proceeds of approximately US\$8,949,089. Each unit was comprised of one Common Share and one-third of a General Warrant. As at December 27, 2017, each of the 2,983,029 General Warrants had been exercised by the holders thereof.

Following the Acquisition, Ero contributed sufficient capital resources to enable MCSA to start-up and resume production of copper concentrate at the Vale do Curaca Property in February 2017.

On January 18, 2017, the Company completed a private placement offering of an aggregate principal amount of US\$2,750,000 unsecured convertible debentures bearing simple interest at an annual rate of 10%, payable on the maturity date of January 18, 2019 (the “**General Debentures**”). Pursuant to the subscription agreements between the Company and each subscriber of the General Debentures, the outstanding principal and accrued and unpaid interest on the General Debentures could be converted, subject to certain limitations and conditions, at the option of the holders thereof and until the maturity date of the General Debentures into units of the Company (the “**General Debenture Units**”) at a price of US\$0.75 per General Debenture Unit (subject to adjustment pursuant to the terms of the certificates representing the General Debentures). Each General Debenture Unit is comprised of one Common Share and one-quarter of a General Warrant. In January 2018, each holder of the General Debentures exercised their option to convert the outstanding principal and accrued and unpaid interest on their General Debentures into General Debenture Units and concurrently exercised their underlying General Warrants, such that an aggregate of 5,074,311 Common Shares were issued by the Company to the foregoing holders of General Debentures, of which, an aggregate of 1,014,861 Common Shares were issued upon exercise of the underlying General Warrants.

On June 14, 2017, the Company increased its ownership interest in MCSA to approximately 99.5% by purchasing shares issued from treasury for US\$34.3 million in connection with multiple capital call transactions. Thereafter, on December 14, 2017, the Company further increased its ownership in MCSA to approximately 99.6% by purchasing shares issued from treasury for US\$22.6 million.

On August 18, 2017, the Company, MCSA and NX Gold effected a capital increase transaction of NX Gold pursuant to the NX Gold Investment Agreement. Such capital increase transaction involved MCSA, through Tugalla’s and Branford’s subscription rights assigned to it under the NX Gold Investment Agreement, subscribing for R\$19.4 million of common shares of NX Gold in exchange for partial repayment and forgiveness of an intercompany loan provided to NX Gold by MCSA. As a result of such transaction, Ero’s direct interest in NX Gold was diluted to approximately 1% and its indirect interest in NX Gold, through MCSA, was increased to approximately 96.6%.

On October 19, 2017, the Company completed the Offering of an aggregate of 23,282,116 Common Shares at a price of C\$4.75 per Common Share for total gross proceeds of C\$110,591,051, with Ero and the Selling Shareholders (as defined below) receiving gross proceeds of C\$47,500,000 and C\$63,090,051, respectively. The Common Shares commenced trading on the TSX on October 19, 2017 under the symbol “ERO”. Pursuant to the Offering, Ero issued 10,000,000 Common Shares from treasury. In addition, 13,282,116 common shares were sold pursuant to a secondary offering by Brasil Plural, Spectra II, Spectra III, Ross Beaty, Taylor International Fund Ltd., Heritage Investments Trust, Randal Cowell, 1045373 BC Ltd., 1040350 BC Ltd., and Geoff Burns (collectively, the “**Selling Securityholders**”). The Offering was managed by a syndicate of underwriters, including BMO Capital Markets and Scotiabank as lead joint bookrunners and Canaccord Genuity Corp., GMP Securities L.P., Numis Securities Limited, PI Financial Corp. and Raymond James Ltd. (collectively, the “**Underwriters**”) pursuant to the underwriting agreement dated October 11, 2017 among the Company, the Underwriters and the Selling Securityholders (the “**Underwriting Agreement**”). Subsequent to the Offering, and pursuant to the Underwriting Agreement, the Underwriters purchased an additional 3,492,317 Common Shares on November 1, 2017, pursuant to their exercise in full of the over-allotment option granted by Ero, for additional aggregate gross proceeds of C\$16,588,505.75.

On December 21, 2017, the Company replaced US\$75.6 million in senior secured notes of MCSA held by Itau Unibanco S.A. and Banco Votorantim, two of the Club Deals Banks, with a new US\$50,000,000 senior secured non-revolving credit facility with The Bank of Nova Scotia pursuant to the credit agreement dated December 21, 2017 among the Company and The Bank of Nova Scotia (the “**Credit Agreement**”) and the participation agreement dated December 21, 2017 between the Company and The Bank of Nova Scotia (the “**Participation Agreement**”). This new facility matures five years from closing and features a 12-month principal payment holiday with equal quarterly principal installments thereafter. The facility bears an interest rate of LIBOR + 7.0% for the first 12 months, and subject to the completion of construction of the Vermelhos Mine, will bear a reduced interest rate of between LIBOR + 4.5% and LIBOR + 5.5% depending on the Company’s leverage ratio at that time.

## **Business of the Company**

### ***Principal Products and Operations***

The Company’s principal product is copper produced and sold from the Vale do Curaçá Property, with gold and silver produced and sold as by-products from the Vale do Curaçá Property. Gold and, as a by-product, silver are also produced and sold from the NX Gold Property. During the financial year ended December 31, 2017, the operations of the Vale do Curaçá Property processed 1,771,209 tonnes of material, producing 20,133 tonnes of copper. The following table summarizes MCSA’s production for the years ended December 31, 2017 and 2016 from the Vale do Curaçá Property:

	Year Ended December 31, 2017	Year Ended December 31, 2016
Operating Information		
<b>Copper (MCSA Operations)</b>		
Ore Processed (tonnes)	1,771,209	826,759
Grade (% Cu)	1.317%	0.7%
Cu Production (tonnes)	20,133	4,895
Cu Production (lbs)	44,384,986	10,791,615
Concentrate Grade (% Cu)	35.2%	34.1%
Recovery (%)	86.8%	83.5%
Concentrate Sales (tonnes)	56,341	14,355
Cu Sold in Concentrate (tonnes)	19,719	4,895

During the year ended December 31, 2017, MCSA generated net operating revenue of US\$115.4 million (based on the average annual exchange rate for Brazilian Real into US dollars of R\$1.00 = US\$0.3217). Such amount was significantly more than in previous years, as MCSA's operations were halted in 2016 due to an anomalous flood event and the Judicial Reorganization proceedings. The following table summarizes the gross revenue of the Company for the financial year ended December 31, 2017 and of MCSA for the years ended December 31, 2016. Tabular amounts are in thousands of US dollars:

	Year Ended December 31, 2017 <sup>(1)</sup> (US\$000s)	Year Ended December 31, 2016 <sup>(2)</sup> (US\$000s)
Gross Revenues:		
Copper concentrate	130,199	26,010
Copper cathode	-	-
Copper forwards	-	3,210
Gold and silver	-	-
	130,199	29,220
Less: Tax on Sales	(14,754)	(2,086)
<b>Net Operating Revenue</b>	<b>115,445</b>	<b>27,134</b>

**Notes:**

- (1) Based on the average annual exchange rate for Brazilian Real to US dollars for 2017 of R\$1.00 = US\$0.3217.  
(2) Based on the average annual exchange rate for Brazilian Real to US dollars for 2016 of R\$1.00 = US\$0.2888.

MCSA currently sells all of its final copper concentrate to the Paranapanema Company. The Paranapanema Company smelts this copper concentrate for sale at its smelter located in Dias D'Ávila, Bahia State, Brazil. As an alternative, MCSA may ship its final copper concentrate for sale to international markets via Salvador's port located in Salvador, Bahia State, Brazil. All concentrate is transported by road using standard highway trucks, which are weighed and sampled for final assay prior to shipping.

**Competitive Conditions**

The Company's primary business is to produce and sell copper. Prices are determined by world markets over which the Company has no influence or control. Ero's competitive position is primarily determined by its costs compared to other producers throughout the world and its ability to maintain its financial integrity through metal price cycles. Costs are governed to a large extent by the grade, nature and location of the Company's Mineral Reserves as well as by input costs and the level of operating and management skill employed in the production process. In contrast with diversified mining companies, the Company primarily focuses on copper production, development and exploration, and is therefore subject to unique competitive advantages and disadvantages related to the price of copper and, to a lesser extent, the price of its metal by-products. If copper prices increase, the Company will be in a relatively stronger competitive position than diversified mining companies that produce, develop and explore for other minerals in addition to copper. Conversely, if copper prices decrease, the Company will be at a competitive disadvantage to diversified mining companies.

The mining industry is competitive, particularly in the acquisition of additional Mineral Reserves and Mineral Resources in all phases of operation, and the Company competes with many companies possessing similar or greater financial and technical resources. The Company also competes with other mining companies and other third parties over sourcing raw materials, equipment and supplies in connection with its production, development and exploration operations, as well as for skilled and experienced personnel and transportation capacity.

### ***Specialized Skills and Knowledge***

The nature of the Company's business requires specialized skills, knowledge and technical expertise in the areas of geology, engineering, mine planning, mine operations, metallurgical processing, and environmental compliance. In addition to the specialized skills listed above, the Company also relies on staff members, contractors and consultants with specialized knowledge of logistics and operations in Brazil and local community relations. In order to attract and retain personnel with the specialized skills and knowledge required for the Company's operations, the Company maintains competitive remuneration and compensation packages. To date, the Company has been able to meet its staffing requirements.

### ***Business Cycles***

The mining business is subject to global economic cycles which affect the marketability of products derived from mining.

### ***Employees***

As at December 31, 2017, Ero and its subsidiaries employed a total of 1,661 employees (consisting of 10 employees of Ero, 1,423 employees of MCSA, 223 employees of NX Gold and 5 employees of Mineração Boa Esperança S/A) and 1,044 contractors (consisting of 1 contractor of the Company, 918 contractors of MCSA and 125 contractors of NX Gold).

### ***Foreign Operations***

Ero's material properties are the Vale do Curaçá Property and the Boa Esperança Property, both located in Brazil. The NX Gold Property is also located in Brazil. Foreign operations accounted for approximately 100% of the Company's revenue and represented approximately 86.1% of its assets as at December 31, 2017. Accordingly, the Company is entirely dependent on its foreign operations for the exploration and development of copper properties and for production of copper.

### ***Environmental Protection***

The Company's exploration, development and mining activities are subject to various levels of federal, state and local laws and regulations relating to the protection of the environment, including requirements for closure and reclamation of mining properties. Specific statutory and regulatory requirements and standards must be met throughout the exploration, development and mining stage of a property with regard to air quality, water quality, fisheries, wildlife and forestry management and protection, solid and hazardous waste management and disposal, noise, land use and reclamation. Details and qualification of the Company's mine closure and restoration obligations are set out in Note 12 of the Company's audited consolidated financial statements for the year ended December 31, 2017.

The financial and operating effect of environmental protection requirements on the capital expenditures and earnings of each mineral property are not significantly different than those of similar sized mines and therefore do not and will not impact the Company's competitive position in the current or future financial years.

### ***Social and Environmental Policies***

The Company places great emphasis on providing a safe and secure working environment for all of its employees, contractors and consultants, and recognizes the importance of operating in a sustainable manner. The board of directors of the Company (the "**Board**") has adopted a Code of Business Conduct and Ethics of the Company (the "**Code**"), which sets out the standards which guide the conduct of the Company's business and the behavior of its directors, officers, employees and consultants. All new employees must read, and acknowledge that they will abide by, the Code when hired. The Code, among other things, sets out standards in areas relating to the Company's commitment to health and safety in its business operations and the identification, elimination or control of workplace hazards; promotion and provision of a work environment in which individuals are treated with respect, provided with equal opportunity and is free of all forms of discrimination and abusive and harassing conduct; and ethical business conduct and legal compliance.

The Board has also adopted a Whistleblowing Policy for individuals to report complaints and concerns regarding, among other things, accounting, internal accounting controls and auditing matters. As well, the Company has an Anti-Corruption Policy which requires that directors, officers, employees and consultants of the Company conduct business in a manner that does not contravene local and international anti-bribery and anti-corruption laws that apply to the Company, including the *Criminal Code* (Canada) and *Corruption of Foreign Public Officials Act* (Canada). The Lead Director and the Audit Committee of the Company (the “**Audit Committee**”), or a designated member thereof, are responsible for monitoring compliance with this policy and investigating any reported violations, although employees may approach the Company’s external legal counsel if preferred for concerns under the Anti-Corruption Policy.

The Board has also established an Environmental, Health, Safety and Sustainability Committee to assist it in fulfilling its oversight responsibilities in respect of development, implementation and monitoring of the Company’s health, safety, environment and sustainability policies. In particular, the Environmental, Health, Safety and Sustainability Committee is responsible for, among other things: developing policies and maintaining standards of performance that meet or exceed legal and regulatory requirements and industry standards in the areas of health, safety, and environmental stewardship; identifying risks related to the environment, health and safety and recommending the adoption of appropriate programs and procedures to reduce such risks; and requiring management to take steps to ensure that employees receive necessary training to meet health, safety and environmental standards.

## VALE DO CURAÇÁ PROPERTY

The scientific and technical information in this section relating to the Vale do Curaçá Property, other than the scientific and technical information under the heading “*Vale do Curaçá Property – Updated Information with respect to the Vale do Curaçá Property*”, is a direct extract of the Executive Summary section contained in the Vale do Curaçá Technical Report, which has been conformed to be consistent with the formatting and other defined terms within this AIF. The entire Vale do Curaçá Technical Report, a copy of which is available for review under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com), is incorporated by reference into this AIF and should be consulted for details beyond those incorporated herein.

The scientific or technical information set out in this AIF under the heading “*Vale do Curaçá Property - Updated Information with respect to the Vale do Curaçá Property*”, has been reviewed and approved by Rubens Mendonça, MAusIMM, of Planminas (formerly of SRK Brazil) who is a “qualified person” and “independent” of the Company within the meanings of NI 43-101 and an author of the Vale do Curaçá Technical Report.

### Executive Summary

#### Introduction

Ero Copper Corp. is a Vancouver-based copper mining company whose primary asset is a 99.5% (now a 99.6%) interest in Mineração Caraíba S.A. (in this section, “**Mineração Caraíba**” or “**MCSA**”), a Brazilian mining company operating in the Curaçá Valley, northeastern Bahia State, Brazil. The regional MCSA operations includes fully integrated processing operations, three active (including one under construction) and three past producing mining locations within the Curaçá Valley. The active operations include the Caraíba Mine (comprised of the underground Pilar Mine (“**Pilar UG Mine**”), integrated Caraíba Mill and the inactive solvent extraction electrowinning plant “**SX/EW Plant**”), the open pit Surubim Mine (“**Surubim OP Mine**”) and the underground Vermelhos Mine (“**Vermelhos UG Mine**”), currently under construction. The past producing operations include the historic open pit mines of R22W (“**R22W Mine**”), Angicos (“**Angicos Mine**”) and Suçuarana (“**Suçuarana Mine**”). Collectively the active and past-producing mines comprise the “**MCSA Mining Complex**”. The Caraíba and R22W Mines are located approximately 385km north-northwest of Salvador and 90 km southeast of Petrolina, in the State of Pernambuco, Brazil. The Suçuarana Mine is located 16 km south of the Caraíba Mine. The Surubim OP Mine is located approximately 33km north of the Caraíba Mine while the Vermelhos UG Mine is located another 31km north-northwest of the Surubim OP Mine. The past producing Angicos Mine is located 10km north north-east of the Surubim OP Mine. In aggregate, mining and development activities occur over approximately 100km in strike length across the Curaçá Valley.

The MCSA Mining Complex has an extensive operating history in the region. Open pit and processing operations started in 1979, while underground mining operations commenced in 1986. MCSA owns a 100% interest in the MCSA Mining Complex including the above-mentioned mines, integrated processing facilities and all supporting infrastructure. The Caraíba Mine currently produces a nominal 3,000 tonnes per day (“t/d”) from underground operations that, combined with the nominal 3,000 to 5,000 t/d from open pit mining operations within the MCSA Mining Complex, serves as feed for the Caraíba Mill. The Caraíba Mill is currently producing approximately 170-250 t/d of high quality, low impurity copper concentrate grading 35%

copper. The concentrate typically contains minor amounts of precious metals. Historical average grades of precious metals in concentrate are approximately 2 grams per tonne (“g/t”) gold and 43 g/t silver in concentrate.

The purpose of the Vale do Curaçá Technical Report is to set out and to provide background and supporting information on the Mineral Resources and Mineral Reserves for the MCSA Mining Complex. This report was prepared by SRK with contributions from GE21, and the MCSA technical team. This report and estimates herein have been prepared following the guidelines of NI 43-101 and Form 43-101F1 – *Technical Report* (“Form 43-101F1”).

This report provides a summary of the work completed by Ero, MCSA and its independent consultants as of June 1, 2017 (the “**Effective Date**”), in support of the Mineral Resources and Mineral Reserves estimates. The opinions contained herein are based on information collected by SRK and various consultants throughout the course of MCSA’s operations.

## **1.1 Property Description and Ownership**

The MCSA Mining Complex is located in northeastern Bahia State, Brazil, about 385 km north-northwest of the capital city of Salvador. The center of the MCSA Mining Complex is located at 9° 52’ South, 39° 52’ West. As of the Effective Date, MCSA and its wholly owned subsidiaries hold or have applications in process for a north-trending set of 65 mineral exploration rights, 5 mining concessions and an additional 3 mining concessions currently under application. The property, including mining and permits under application covers a total area of 110,143 ha. The exploration rights held or with applications in process cover an area of 101,843 ha and consist of areas up for renewal under normal course of business. MCSA holds 100% legal and beneficial ownership of exploration rights for a period varying up to three years with three year extensions provided annual reporting requirements are performed on the property. Within the exploration rights, MCSA’s interests include the right to access the property, to engage in exploration, development, processing, and construction activities in support of mineral exploration and development. Where applicable, compensation is provided to the holder of surface rights for occupation or loss caused by the work.

Mining and development activities are contained within five mining concessions covering 2,376.1ha and three applications for mining covering a total area of 5,923.6 ha including the exploration and development permit of the Vermelhos UG Mine, currently under construction (totaling 923.5ha). Within the mining concessions, MCSA holds 100% legal and beneficial ownership. There are no time constraints provisioned with the mining concessions; however, operating permits and licenses are extended and renewed in normal course of business according to the nature of each permit and requirements therein.

## **1.2 Geology and Mineralization**

The Curaçá Valley’s mafic-ultramafic complex is located within the Curaçá high-grade metamorphic gneissic terrain - part of the Salvador-Curaçá orogen, a northern extension of the Atlantic Coast Granulite Belt in the São Francisco Craton. The mining and development projects located within the MCSA Mining Complex lie within a Trans-Amazonian age belt bordered on the west by volcano-sedimentary rocks of the Jacobina Group and on the east by the Itiúba intrusive syenite rocks.

Known copper deposits are hosted within the Rio Curaçá and Tanque Novo sequences, differentiated by metamorphic facies. The two sequences are located across the base of the MCSA Mining Complex and include the mafic-ultramafic rocks as well as granite, granodiorite and syenite. Pyroxenite has been described within the mafic-ultramafic lenses at the Caraíba Mine, R22W Mine, Angicos Mine, Suçuarana Mine, Surubim OP Mine and the Vermelhos UG Mine.

The Cu-rich deposits are hosted by irregular-shaped intrusive bodies of pyroxenite (hypersthene) and minor gabbro-norite that have been intruded into granulite facies gneiss and migmatite at the northern margin of the São Francisco Craton. The intrusions have been interpreted as either deformed sill-like bodies or irregular shaped intrusion into an anastomosing ductile shear zone.

## **1.3 Exploration**

Once open pit operations began in 1979, limited exploration work was performed regionally outside of the main Caraíba Mine area. Where it did occur, such exploration work focused primarily on annual replacement of mined reserves. The Caraíba Mine was privatized in 1994 and further exploration work was limited until the formation of the Codelco Joint Venture, formed in 2004 (the “**Codelco JV**”) which existed until 2008. Under the Codelco JV, work was conducted on several prospects outside of the Caraíba Mine area including an airborne Versatile Time Domain Electromagnetic (“**VTEM**”) survey over the Vermelhos District. Ground moving-loop Electromagnetic and Bore-hole Electromagnetic test surveys were also conducted.

Near-surface copper mineralization in the Curaçá Valley has historically been well-defined by geochemical sampling methods. Mineralized ultramafic-mafic intrusions show anomalous copper, nickel, cobalt and silver. Several soil geochemical surveys have been conducted regionally throughout the Curaçá Valley. Recent leveling efforts to normalize multiple surveys into a central database have been successful and have defined areas of near-surface exploration potential.

Historic regional exploration activities also included geophysical surveys performed locally on specific targets. These included ground magnetic, gravity and induced polarization (“IP”) surveys. Regional airborne geophysical surveys consist of a magnetic and radiometric survey flown by the Brazil National Department of Mineral Production (“DNPM”). Based on known deposits, mineralized mafic-ultramafic intrusions respond well to both gravity and IP surveys, and where semi-massive to massive sulphides, to electromagnetic surveys.

Since the acquisition of MCSA in late 2016, Ero has worked with MCSA to compile, organize, validate, analyze and interpret the various historical data sets. A list of prioritized exploration targets using district-wide dataset compilation and validation has been created for the first time for the MCSA exploration permits throughout the Curaçá Valley. Priority targets occur in three main areas or “Districts”: the Pilar District, the Vermelhos District and the Surubim District.

#### 1.4 Drilling, Sample Preparation, Analyses, and Security

Several drill programs have been conducted throughout the years across the Curaçá Valley. The bulk of the drilling is associated with the historic open pit of the Caraíba Mine and subsequent Pilar UG Mine where the global database includes over 500,000m in over 3,000 drill holes. Outside of the Caraíba Mine, a total of 143,000m have been drilled in 704 holes, most of which lies within the Vermelhos District and immediate Vermelhos UG Mine area. Drilling conducted outside the Caraíba Mine and Vermelhos UG Mine was primarily focused on defining open pit mineralization to feed the plant following closure of the Caraíba Mine open pit in 1998. Historic drill holes that could not be sufficiently verified through quality-assurance and quality-control (“QA/QC”) procedures were removed from the database for the purposes of the current Mineral Resources and Mineral Reserves estimate.

In support of the current Mineral Resources and Mineral Reserves estimate, a total of 414,231m of diamond core drilling, 450m of reverse circulation (“RC”) and 24,099m of rotopercussive drilling had been performed through the end of 2016, prior to the acquisition of MCSA by Ero.

**Table 1: MCSA Drilling in support of Mineral Resources and Mineral Reserves Statement**

Mine Area	Diamond Drilling		Reverse circulation		Rotopercussive Drilling	
	Qty	Meters	Qty	Meters	Qty	Meters
Vermelhos	130	38,543	15	450		
Surubim	286	26,422				
Caraíba	2,081	333,360				
R22W	95	15,906			1,330	24,099

MCSA’s logging, core photography, sampling, sample preparation, security, and analytical procedures are carried out in accordance with industry best practice. The database is considered suitable for mineral resource estimation. All drill samples have been analyzed by MCSA’s on-site laboratory since 2000.

GE21 considered MCSA’s QA/QC procedures to be in accordance with mining industry best practice. Based on thorough analysis, GE21 concluded that the results obtained under the current QA/QC procedures were acceptable under NI 43-101 policy guidelines, and additionally considered the samples that pre-dated the implementation of the current QA/QC program at MCSA to be acceptable for use in the Mineral Resources and Mineral Reserves estimate after performing a post-mortem QA/QC analysis.

#### 1.5 Mineral Resources and Mineral Reserves Estimate

Block model tonnage and grade estimates for the Caraíba Mine were classified according to the Canadian Institute of Mining (“CIM”) Definition Standards for Mineral Resources and Mineral Reserves (May 2014) by Sr. Porfírio Rodriguez with contributions by Mário Reinhardt and Bernardo Viana. All are Qualified Persons as such term is defined in NI 43-101.



A 0.68% copper grade cut-off was considered for underground resources and a 0.18% copper grade cut-off for open pit resources, based on operating costs from 2015 performance of the operating mines (last full year of operation). Only blocks within the pit shell or defined stope volumes were considered as Mineral Resource.

Mineral Resources are shown inclusive of Mineral Reserves.

**Table 2: Mineral Resources - Pilar UG Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	10,777.9	1.52	163.4
Indicated	6,451.7	2.67	172.5
<b>Measured+Indicated</b>	<b>17,229.7</b>	<b>1.95</b>	<b>335.9</b>
Inferred	1,513.9	2.45	37.2

1. Effective date of March 31, 2017.
2. Presented Mineral Resources inclusive of Mineral Reserves. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.68% copper for underground resources based on 2015 operating costs (last full year of operation).
4. Inclusive of all deposits within the Pilar UG Mine including: Aprofundamento, MSBW, MSBS, P1P2NE, P1P2W.
5. Mineral Resources estimated by ordinary kriging inside a 5m by 10m by 20m block for the Aprofundamento, MSBW and MSBS Deposits, 10m by 20m by 20m blocks for the P1P2NE deposit and 2.5 by 2.5 by 20m blocks for the P1P2W deposit.

**Table 3: Mineral Resources - Vermelhos UG Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	1,340.8	6.91	92.7
Indicated	1,200.6	2.40	28.8
<b>Measured+Indicated</b>	<b>2,541.4</b>	<b>4.78</b>	<b>121.5</b>
Inferred	2,189.4	1.52	33.3

1. Effective date of March 31, 2017.
2. Presented Mineral Resources inclusive of Mineral Reserves. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.68% copper for underground resources based on 2015 operating costs (last full year of operation).
4. Mineral Resources estimated by ordinary kriging inside 5m by 10m by 10m blocks.

**Table 4: Mineral Resources - Surubim OP Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
<b>Oxides</b>			
Measured	0.0	0.00	0.0
Indicated	5.9	0.35	0.02
<b>Measured+Indicated</b>	<b>5.9</b>	<b>0.35</b>	<b>0.02</b>
Inferred	0.8	0.34	0.003
<b>Sulphides</b>			
Measured	17.6	0.53	0.1
Indicated	393.6	0.89	3.5
<b>Measured+Indicated</b>	<b>411.2</b>	<b>0.88</b>	<b>3.6</b>
Inferred	78.6	1.02	0.8
<b>Total, Surubim OP Mine</b>			
Measured	17.6	0.53	0.1
Indicated	399.5	0.89	3.5
<b>Measured+Indicated</b>	<b>417.1</b>	<b>0.87</b>	<b>3.6</b>
Inferred	79.4	1.01	0.8

1. Effective date of March 31, 2017.
2. Presented Mineral Resources inclusive of Mineral Reserves. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.18% copper for open pit resources based on 2015 operating costs (last full year of operation).
4. Mineral Resources estimated by ordinary kriging inside 5m by 5m by 5m blocks.

**Table 5: Mineral Resources - R22W Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	306.2	0.54	1.7
Indicated	2.0	0.79	0.0
<b>Measured+Indicated</b>	<b>308.3</b>	<b>0.54</b>	<b>1.7</b>
Inferred	0.0	0.00	0.0

1. Effective date of March 31, 2017.
2. There are no Mineral Reserves contained within the R22W Mine Mineral Resources. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.18% copper for open pit resources and 0.68% copper for underground resources based on 2015 operating costs (last full year of operation).
4. Mineral Resources estimated by ordinary kriging inside 5m by 10m by 10m blocks.

The Mineral Reserves for the Pilar UG Mine, Vermelhos UG Mine and Surubim OP Mine are derived from the Measured and Indicated Mineral Resources as defined within the resource block model and application of economic and other modifying factors described herein. Inferred Mineral Resources, where unavoidably included within a defined mining shape have been assigned zero grade.

The Mineral Reserves estimate is based on the following economic parameters:

**Table 6: Mineral Reserve Cut-off Calculation Parameters**

<b>Mining Costs (\$US/tonne ore mined)</b>	
Pilar UG Mine	\$32.22
Vermelhos UG Mine	\$26.52
Surubim OP Mine	\$3.71
<b>Transportation Costs to the Caraíba Mill (\$US/tonne ore)</b>	
Vermelhos UG Mine	\$6.63
Surubim OP Mine	\$5.98
<b>Processing Costs (\$US/tonne processed)</b>	<b>\$6.38</b>
<b>Metallurgical Recovery</b>	<b>87.5%</b>
<b>LME Copper Price (\$US per pound)</b>	<b>\$2.75</b>
<b>Net Smelter Return</b>	<b>87.5%</b>
<i>Foreign Exchange Rate (BRL:USD)</i>	<i>3.20</i>

Other modifying factors considered in the determination of the Mineral Reserves estimate include:

- Maximum mining panel height of 35m for underground mines, and benches of 10m for the Surubim OP Mine. Maximum underground stope dimensions (length and width) based on geotechnical assessments (induced stress) from previous studies compared to rock mass rating and past operating experience within each underground mine area.
- The Vertical Retreat Mining (“VRM”) method with cemented paste fill was selected for the Pilar UG Mine, where the method is currently in use. For the Vermelhos UG Mine, Sublevel Open Stopping method (“SOS”) was chosen as the mining method after consideration of the dip, plunge and thickness of the ore-bodies, the rock quality designation (“RQD”) and overall competence of the host rock. Variations of this method are planned for the central high grade area for the maximum possible recovery via cemented rockfill matrix filling (“CRF”).
- Practical mining shapes (stope wireframes) were designed using geological wireframes/Mineral Resource block models using the estimated cut-off value as a guide.
- Within designed stopes, all contained material was assumed to be mined with no selectivity. Inferred Mineral Resources, where unavoidably included within a defined mining shape have been included in the Mineral Reserves estimate at zero grade.
- In-situ quantities inside mining shapes were reported using mine planning software Datamine Studio 5DP for underground mines and Minesight® for the Surubim OP Mine.
- Pilar UG Mine operational dilution of 10%, mining recovery of 96%.
- Vermelhos UG Mine operational dilution of 20%, mining recoveries of 81% and 84% for horizontal and vertical stopes, respectively.

**Table 7: Mineral Reserve Estimate: MCSA's Vale do Curaçá Mineral Assets, Curaçá Valley, June 1, 2017**

Mine	Category	Tonnes (kt)	Cu (%)	Contained Cu (kt)
Pilar UG Mine	Proven	2,841	1.47	41.8
	Probable	3,350	2.28	76.3
	<b>Proven + Probable</b>	<b>6,191</b>	<b>1.91</b>	<b>118.1</b>
Vermelhos UG Mine	Proven	1,743	4.84	84.4
	Probable	676	2.37	16.0
	<b>Proven + Probable</b>	<b>2,418</b>	<b>4.15</b>	<b>100.4</b>
Surubim OP Mine	Proven	11	0.51	0.1
	Probable	248	0.80	2.0
	<b>Proven + Probable</b>	<b>259</b>	<b>0.79</b>	<b>2.1</b>
<b>TOTAL</b>	<b>Proven</b>	<b>4,595</b>	<b>2.75</b>	<b>126.3</b>
	<b>Probable</b>	<b>4,274</b>	<b>2.21</b>	<b>94.3</b>
	<b>Proven + Probable</b>	<b>8,868</b>	<b>2.49</b>	<b>220.5</b>

1. Effective Date of June 1, 2017.
2. Mineral Reserves included within stated Mineral Resources. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. The Mineral Reserve estimates are prepared in accordance with the CIM Definition Standards, and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate for the deposit. Mineral Reserves are based on a long-term copper price of US\$2.75 per lb, and a USD:BRL foreign exchange rate of 3.20. Mineral Reserves are the economic portion of the Measured and Indicated Mineral Resources. Mineral Reserve estimates include mining dilution at zero grade. Mining dilution and recovery factors vary for specific Mineral Reserve sources and are influenced by factors such as deposit type, deposit shape, stope orientation and selected mining method.

SRK presents the following accompanying comments to the Mineral Resources and Mineral Reserves estimates:

- The Mineral Resource dated March 31, 2017 informs the base of the Mineral Reserve estimate. The Mineral Resource contains an aggregate of 12.1 million tonnes grading 2.11% Cu in the Measured category and 8.1 million tonnes grading 2.28% Cu in the Indicated category for a Measured and Indicated total of 20.2 million tonnes grading 2.28% Cu in aggregate for the Pilar UG Mine, Vermelhos UG Mine and the Surubim OP Mine.
- Only the Measured and Indicated Mineral Resources have been considered as potentially economic and for inclusion in Mineral Reserves.
- Any sample with less than 0.45% Cu and 0.20% Cu grade for underground and open pit mines, respectively was logged as waste and was excluded from the ore lithology modelling.
- Due to the geometry of the ore body, a variation of the mining method used in Pilar UG Mine has been adopted for the underground mine under development (Vermelhos UG Mine).
- Conventional open pit mining methods and equipment has been proposed for mining activities at the Surubim OP Mine.
- The Mineral Reserves estimate considers long term copper prices of US\$2.75/lb.
- The Mineral Reserves of the Underground Units have been estimated to be 8.61 million tonnes grading an average of 2.54% Cu.
- The Mineral Reserves of the Open Pit Mines have been estimated to be 0.26 million tonnes grading an average of 0.79% Cu, within optimised and engineered open-pits designed using long term copper prices of US\$2.75/lb.
- The products are currently transported by truck to the Paranapanema Smelter in Brazil or the port of Salvador for sale into international markets.
- MCSA is the owner of the majority of the surface rights required to support the mine operations considered in the Mineral Reserves Estimate. Future development beyond the current Mineral Reserves of these areas may require additional acquisition of surface rights.

- Mineração Caraíba has successfully obtained, or, as in the case of the Vermelhos UG Mine, is in the advanced stages of obtaining, the requisite permits to enable mining operations.
- Overall, SRK considers that the various components of the Mineral Reserve Estimate (including but not limited to: geology, mine, processing, infrastructure, logistic, market, environmental and social considerations) have been carried out to feasibility study level and in accordance with NI 43-101 standards.

SRK has reported Mineral Reserves estimate for the Mineração Caraíba's mineral assets at Curaçá Valley, Bahia State, Brazil.

SRK has not identified any known mining, metallurgical, infrastructure, permitting, legal, political, environmental or other relevant factors that could materially affect the potential development of the stated Mineral Reserves.

SRK has carried out the appropriate review to satisfy that the Mineral Reserve can be technically and profitably extracted through to the production of copper concentrate. Consideration has been given to all technical areas of the operations, the associated capital and operating costs, and relevant factors including marketing, permitting, environmental, land use and social factors. SRK is satisfied that the technical and economic feasibility has been demonstrated.

## 1.6 Mining Methods

The Pilar UG Mine has previously employed or currently employs the following mining methods: Sublevel Stopping and VRM. Sublevel Stopping, no longer planned for future development, is a method whereby the ore is blasted by fan drilling or in a parallel array. Ore is removed from the stope after it is blasted at a reinforced draw-point leaving an open stope. VRM is a method whereby the mine is divided into vertical zones of approximately 50m consisting of two operational levels – one for drilling and one for extraction. In the Pilar UG Mine, mined stopes are filled with cemented paste, comprised of mill tailings and approximately 4% cement by weight, to improve mine recovery and geotechnical stability.

Stope size within the Pilar UG Mine varies according to the geotechnical conditions at depth due to magnitude of induced stress and rock mass classification, but, on average, stopes have the following dimensions:

- in non-faulted zones: 10m width x 20m length x 35m height; and
- in fault zones, the size of stopes is reduced to: 10m width x 15m length x 35m height.

The Vermelhos UG Mine, currently under development, will utilize the SOS method due to the dips, plunge and thicknesses of the ore-bodies and competence of the host rock. Variations of this method are planned for the high grade central portion of the deposit to maximize mining recoveries through the utilization of CRF.

The Vermelhos UG Mine design entails mining panels of up to 35m in vertical dimension without the need of rib pillars to support the open excavation. The high grade areas will be mined using subhorizontal stopes. In these areas panel size has been reduced to 25m and will be filled in using CRF to maximize mining recovery and limit in-situ stress. Panel size and thickness has been constrained by the geotechnical design parameters as determined by geotechnical core logging and numerical modeling.

In both the Pilar UG Mine and the Vermelhos UG Mine operations, ore from production stopes is hauled via 30 tonne capacity trucks loaded by Load-Haul-Dump vehicles (“LHDs”), while waste rock from underground is hauled by 25 tonne capacity trucks to underground temporary storage (remuck bays) or to surface waste stockpiles.

The Surubim OP Mine is a past producing open-pit mine that is currently being re-opened for new open pit mining activity. Ore will be hauled by 35 tonne capacity production trucks from the bottom of the pit where it will be stored in temporary surface piles.

Ore from the Surubim OP Mine and the Vermelhos UG Mine will be loaded by conventional loaders and hauled by 70 tonne highway trucks to the Caraíba Mill, as performed in past producing open pit mines forming part of the MCSA Mining Complex.

## 1.7 Recovery Methods

The Caraíba Mill is built to receive ore from both the Pilar UG Mine via a production shaft supported by two primary underground jaw crushers, and ore from other Curaçá Valley operations via a primary cone crusher located on surface. The concentrator is operated 24 hours per day, 7 days per week with monthly scheduled downtime to perform routine maintenance. In its current configuration, the plant is capable of processing a nominal 3.2 million tonnes of copper bearing ore per annum assuming 91% availability. The current production plan calls for peak throughput of approximately 1.8 million tonnes per year.

Through the end of 2016, the Caraíba Mill has produced approximately 3.0 million tonnes of copper concentrate containing approximately 1.0 million tonnes of copper. The Caraíba Mill operating results from 2011 to 2016, and from January to May of 2017 are provided below.

**Table 8: Caraíba Mill Production History – 2011 to 2016**

Year	Mill Feed (tonnes)	Head Grade (%Cu)	Copper Production (tonnes)	Recovery (%)
2011	2,749,812	1.09	25,096	83.7
2012	2,717,980	1.07	24,827	85.4
2013	2,940,566	0.91	22,494	84.3
2014	3,014,269	1.01	25,717	84.7
2015	2,836,528	1.11	27,046	86.0
2016	826,759	0.71	4,895	83.5

**Table 9: Recent Caraíba Mill Production History – January to May 31, 2017**

Period	Mill Feed (tonnes)	Head Grade (%Cu)	Copper Production (tonnes)	Recovery (%)
Jan – May 2017	620,552	1.32	7,109	86.6

Table 10, below, shows the current production plan for the Caraíba Mill. Production has been adjusted from mined totals, where appropriate for forecast stockpiles and in-process inventories. Forecast Metallurgical Recoveries are discussed in greater detail in Chapter 17 – Recovery Methods.

**Table 10: Caraíba Mill Production Plan**

The production plan shown includes no incremental production from the conversion of Mineral Resources outside of the Proven and Probable Mineral Reserves. Ore sources from the MCSA Mining Complex in years 2023 through 2025 consist only of sill pillar recovery from within the Pilar UG Mine.

Caraíba Mill	2017	2018	2019	2020	2021	2022	2023	2024	2025
Production Tonnage (Tonnes)	1,614,460	1,268,336	1,627,940	1,845,656	1,507,404	1,037,980	259,078	198,031	98,036
Grade (%Cu)	1.34	1.77	2.23	2.29	3.88	2.98	2.72	2.52	1.71
Metallurgical Recovery (%)	88.07	87.96	89.06	90.21	90.66	90.84	91.78	91.11	87.62
<b>Copper Production (Tonnes)</b>	<b>19,022</b>	<b>19,726</b>	<b>32,305</b>	<b>38,099</b>	<b>53,063</b>	<b>28,137</b>	<b>6,476</b>	<b>4,555</b>	<b>1,465</b>
Concentrate Grade (%Cu)	35.11	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
Dry Concentrate Production (Tonnes)	54,178	56,359	92,300	108,853	151,608	80,392	18,502	13,015	4,187

\*2017 production totals shown include actuals through May 31, 2017

## 1.8 Project Infrastructure

The MCSA Mining Complex infrastructure includes fully integrated mining and processing operations located within the Curaçá Valley. All supporting infrastructure required for mining operations are currently in place. Primary components include:

- Pilar UG Mine with installed capacity of 3,000 t/d;
- Surubim OP Mine, currently re-commencing operations, with design capacity of 3,000 t/d;

- Vermelhos UG Mine, currently under development, with design capacity of 1,500 t/d;
- Pilar processing plant with a nameplate capacity of 9,600 t/d;
- access to water via an MCSA owned, operated and maintained 86km permanent steel pipeline, 80 cm in diameter, from the São Francisco River;
- water treatment plant;
- metallurgical laboratory;
- main substation and transformers, each configured with 60 MVA / 230 kV / 13.8 kV;
- power lines supplied by Companhia Hidroelétrica do São Francisco (“CHESF”), the Brazilian State power company;
- ancillary surface buildings including maintenance, security and administration; and
- Inactive Solvent Extraction and Electrowinning (“SX/EW”) operations with installed production capacity of approximately 5,000 tonnes copper cathode per annum.

## 1.9 Environment

The current permitting status for the active operations of the MCSA Mining Complex:

- The Caraíba Mine and integrated processing operations were granted a renewed Operating License on April 5, 2017 – valid for three years at which point an additional renewal application will be submitted.
- Surubim OP Mine obtained its Operation License through Ordinance No. 13.741/2010, which was allowed to expire on November 18, 2015. On May 22, 2017, an amended and new Operation License was requested. The renewal is currently being processed at the Institute of Environment and Water Resources (“INEMA”), the environmental agency responsible for implementing the environmental legislation of the State of Bahia. The permit was re-issued in the second half of 2017, commensurate with the timeline for first production from the mine.
- The Vermelhos UG Mine obtained an Environmental License jointly with its Installation License, through the INEMA Ordinance No. 10.559/2015, valid until October 7, 2018. An Environmental Change License was formally submitted on April 27, 2017 to finalize the process and initiate the process of obtaining a full Operating License.

MCSA maintains an excellent relationship with the communities throughout the Curaçá Valley, having held regular meetings and consultation sessions with local stakeholders regularly over the last 40 years. In support of this relationship, MCSA undertakes several key initiatives annually focused on sustainable community development.

## 1.10 Capital and Operating Costs

Capital and operating costs are shown for the years 2017 through 2025. Mining activity in years 2023 through 2025 consists only of sill pillar recovery from the Pilar UG Mine. It is anticipated that a combination of resource conversion and delineation of new mineralization within the Curaçá Valley will serve to augment the production profile, subject to satisfactory exploration results, technical, economic, legal and environmental conditions.

Total capital costs are estimated at R\$588.0 million Brazilian Real and are summarized in Table 11. Due to the nature of the production plan beyond year 2022 no further capital investment is required for the forecast production plan. All costs are shown in Brazilian Reals, unless otherwise noted.

**Table 11: MCSA Mining Complex – Total Capital Expenditures**

Total Capital Expenditures	Unit	2017	2018	2019	2020	2021	2022	Total
Development	R\$M	37.0	68.7	86.1	39.3	11.7	0.5	243.2
Sustaining	R\$M	43.1	24.4	9.7	3.2	3.1	3.4	86.9
Equipment	R\$M	15.2	30.5	13.7	4.3	0.4	-	64.0
Exploration / Drilling	R\$M	27.9	12.6	12.6	12.6	10.6	10.2	86.6
Infrastructure	R\$M	15.1	18.6	10.7	1.0	-	-	45.5
Others	R\$M	9.8	5.2	4.8	1.2	-	-	21.0
Social, Health, & Environment	R\$M	1.6	0.8	0.5	0.9	0.1	0.6	4.6
Ventilation	R\$M	15.8	12.7	5.9	1.7	0.1	-	36.2
<b>Total</b>	<b>R\$M</b>	<b>165.5</b>	<b>173.4</b>	<b>144.0</b>	<b>64.3</b>	<b>26.0</b>	<b>14.7</b>	<b>588.0</b>

\*2017 capital expenditure totals shown include actuals through May 31, 2017

An operating cost forecast model was generated utilizing MCSA’s extensive historical cost data and consumption coefficients. Mine and plant activities are subdivided and adjusted selectively reflecting the impact of producing from different areas and changes in the infrastructure going forward. A fixed and variable component was included in all estimations, allowing the costs to reflect the production rate of each year. Operating costs are summarized in Table 12.

**Table 12: MCSA Mining Complex - Operating Costs per Tonne**

Operating Cost Summary	Unit	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Pilar UG Mine	R\$/t*	116.82	104.75	100.97	104.29	128.33	167.46	62.84	69.42	52.20	109.93
Vermelhos UG Mine	R\$/t*	-	22.54	84.71	100.97	105.27	95.26	-	-	-	89.94
Open Pit Mining***	R\$/t*	14.48	79.56	-	-	-	-	-	-	-	17.92
Carafba Mill	R\$/t**	28.06	33.71	28.12	26.67	30.30	39.39	140.38	179.28	57.95	36.71
G&A, Ops Support and Selling Costs	R\$/t**	33.12	37.56	31.59	29.09	38.48	49.59	126.39	141.41	49.55	40.32

\* Costs per tonne mined

\*\* Costs per tonne processed

\*\*\* 2017 operating cost totals shown include actuals through May 31, 2017

\*\*\*\* 2018 Open Pit Mining costs shown include retrenchment benefit payments

### 1.11 Economic Analysis

An economic analysis was prepared for the MCSA Mining Complex using the following primary assumptions:

- The economic analysis considers commencing on the Effective Date and does not include actual performance achieved through May 31, 2017
- The economic analysis of MCSA’s Vale do Curaçá Mineral Assets is based on solely on Mineral Reserves and includes no Measured and Indicated Mineral Resources which are not part of the Mineral Reserves estimate
- Total ore processed of 8.8 million tonnes at an average feed grade of 2.46% copper
- Total sales of 195,705 tonnes of contained copper in concentrate
- Metal prices of US\$2.75 per lb copper in 2017 and US\$3.00/lb in years 2018 through 2025
- USD:BRL exchange rate of 3.30 in 2017, 3.60 in 2018 and 3.80 in years 2019 through 2025

The Vale do Curaçá Mineral Assets comprising the MCSA Mining Complex produce an undiscounted after-tax cash flow of R\$1.9 billion, or US\$492.6 million. Simple payback occurs 2.0 years after the Effective Date.

The after-tax Net Present Value (“NPV”) at an 8% discount rate is US\$360.4 million and the after-tax Internal Rate of Return (“IRR”) is 185.6%. Average C1 cash costs over the production forecast period are estimated to be US\$0.81 per lb of copper produced.

After-tax sensitivity analyses were prepared considering changes in copper price, foreign exchange, capital costs and operating costs. The analysis shows that the MCSA Mining Complex is most sensitive to copper price and exchange rates.



## **1.12 Conclusions and Recommendations**

### Mineral Exploration and Geology

In general terms, the geological descriptions, sampling procedures and density tests that were evaluated were found to be of acceptable quality and in accordance with industry best practices.

It was noted that the data collection process was executed with the aim of maintaining data security. Data was stored in a standardized database, which was found to be secure and auditable.

Specifically regarding the Vermelhos UG Mine, GE21 recommends that intervals that were not previously sampled or analyzed within the principle high grade ore body be sampled and analyzed for trace elements such as nickel, gold, platinum, palladium and vanadium, among others.

The complexity of the mineralization controls and the quantity and phases of data in the Curaçá Valley merits the use of visualization and data integration tools that are more advanced than those which MCSA had at its disposal at the time of this report.

While GE21 believes that the current QA/QC program guarantees the quality of the exploration data used in the resource estimates; GE21 suggests that a chain of custody program be implemented for good measure.

GE21 supervised the process through which density was determined and concluded that it was in conformity with industry best practices.

### Geological Model

The procedure that was adopted to produce the 3D geological model (wireframes), consisting of generating triangulations between interpreted geological cross sections, was executed properly and in accordance with the opinions of GE21 staff. Due to the plunge of the mineralized zone at the Pilar UG Mine towards the north and the east-west geological cross sections, a pattern of sub-vertical discontinuous lenses was created locally within the regions of lower drill hole density. Verification of the mineralization interpretation was performed within regions of denser drill spacing.

GE21 noted that, with respect to the integration and interpretation of all available geological data, no lithostructural mapping (mine, surface and subsurface) was undertaken nor supporting petrographic data was used. GE21 staff noted that the field interpretation and 3D interpretation have been historically focused on interpreting only copper grade, therefore, few vertical and horizontal lithostructural geological sections were developed which could have provided greater understanding and control of aspects relating to the geology. It should be noted that in this respect Ero Copper Corp. and MCSA are currently assembling a new geological model based on GOCAD software, which will make it possible to integrate several sources of information including surface mapping, geophysics, geochemistry, and structural data.

### Grade Estimation

The variograms that were used in the estimation method are satisfactory and consistent with respect to the grade estimation that was calculated via Ordinary Kriging, making use of search anisotropy determined in the variographic study.

The Kriging estimation strategy that was chosen made it possible to classify the resource in accordance with the empirically calculated search radius and the requisite data density for resource classification.

GE21 considers the resource classification model and the analysis of criteria for the classification of those Mineral Resources, to be satisfactory although some items could be improved. Such recommended improvements did not impose limitations on the classification of Measured and Indicated Resources.

### Processing Operations of the Carafba Mill

The Carafba Mill staff is highly experienced. Accordingly, the developed mill processes and procedures are well managed as are the implemented operating practices. However, due to the age of the processing plant, precautions must be taken to ensure the consistent availability of the plant continues.

### Capital and Operating Costs

MCSA's costs are monitored by the Totvs Proteus ERP system.

The system is robust and makes it possible to manage costs by category with respect to administrative, operational and overhead expenditures as well as to perform KPI tracking on the operations. SRK has reviewed the capital and operating cost assumptions and found them to be sufficient for the determination of Mineral Reserves.

### Mineral Resources Estimate

GE21 has not identified any mining, metallurgical, infrastructure, permitting, legal, political, environmental, technical, or other relevant factors that could materially affect the potential development of Mineral Resources.

### Mineral Reserve Estimate

SRK has carried out the appropriate review work to satisfy itself that the Mineral Reserve can be technically and profitably extracted through to the production and sale of copper concentrate. Consideration has been given to all technical areas of study, the associated capital and operating costs, and relevant factors including marketing, permitting, environmental and social. SRK is satisfied that the technical and economic feasibility has been demonstrated.

The Mineral Reserve Estimate is compliant within the guidelines of NI 43-101.

### Recommendations

Regarding the Mineral Resources and Mineral Reserves estimation process, the authors recommend a work program to include the following:

- review the interpretation of the identified resource potential targets within the Vermelhos UG Mine;
- perform additional sampling of the Vermelhos UG Mine drill core;
- analyse and perform QA/QC across the full spectrum of trace metals (nickel, platinum, palladium, vanadium, and others);
- review the resources model considering both grade and structural behavior in conjunction with a more selective stope design, aimed at reducing dilution;
- review the influence of outlier intercepts on the resource estimation so that such intercepts may be further analyzed for use in the grade estimation method;
- perform a resource classification process based on Kriging variance and risk index;
- investigate re-commencing SXEW operations to process oxides (including oxidized tailings) to recover copper cathode;
- perform additional metallurgical test work for pre-sorting of the ore from Vermelhos UG Mine; and,
- analyse the potential for geophysical methods, such as airborne VTEM, and other EM methods, to assist in identifying priority drill targets.

A budget of US\$575,000 is proposed to conduct the recommended work program.

In addition, the authors recommend that the QA/QC program include mass controls during sample crushing and pulverization in order to evaluate the quality of the comminution procedures and ensure no sample loss during sample preparation. It was observed that the MCSA laboratory displays a tendency to underestimate the higher-grade copper values above 2% Cu. It is

recommended that the calibration of the equipment and standards for samples of grades greater than 2% Cu be discussed with the laboratory. These analyses can be performed by the MCSA laboratory at no additional cost.

**Table 13: Proposed Budget for Recommended Work**

<b>Program</b>	<b>Budget (US\$)</b>
Review the interpretation of targets within the Vermelhos UG Mine	\$30,000
Perform additional Vermelhos UG Mine drill core sampling	50,000
Analyse and perform QA/QC across trace metals	10,000
Review the resources model considering both grade and structural behavior	80,000
Review the influence of high grade outliers on the resource estimation	15,000
Perform a resource classification process based on Kriging variance and risk index	20,000
Metallurgical testing on oxides (including tailings) and Vermelhos ore pre-sorting	350,000
Investigate the use of geophysical methods including airborne methods	20,000
<b>Total</b>	<b>\$575,000</b>

#### **Updated Information with respect to the Vale do Curaçá Property**

The following update has been prepared by Ero personnel and reviewed and approved by Rubens Mendonça, MAusIMM, of Planminas (formerly of SRK Brazil) who is a “qualified person” and “independent” of the Company within the meanings of NI 43-101 and an author of the Vale do Curaçá Technical Report.

#### Mineral Resource and Mineral Reserve Estimates as at December 31, 2017

The Mineral Resource and Mineral Reserve estimates contained in the Vale do Curaçá Technical Report were prepared as at March 31, 2017 and June 1, 2017, respectively. As production at the Vale do Curaçá Property has continued since the preparation of these estimates, the Mineral Resources and Mineral Reserves at the Vale do Curaçá Property have decreased. Accordingly, set out below is an internal update of the Mineral Resource and Minerals Reserve estimates as at December 31, 2017, based on a 0.68% copper grade cut-off considered for underground resources and a 0.18% copper grade cut-off for open pit resources, and accounting for the material mined since the since the preparation of the Mineral Resource and Mineral Reserve estimates contained in the Vale do Curaçá Technical Report.

Mineral Resources are shown inclusive of Mineral Reserves.

**Table 14: Mineral Resources - Pilar UG Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	10,669	1.49	159.3
Indicated	6,402	2.66	170.2
<b>Measured+Indicated</b>	<b>17,071</b>	<b>1.93</b>	<b>329.5</b>
Inferred	1,514	2.46	37.2

1. Effective date of December 31, 2017.
2. Presented Mineral Resources inclusive of Mineral Reserves. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.68% copper for underground resources based on 2015 operating costs (last full year of operation).
4. Inclusive of all deposits within the Pilar UG Mine including: Aprofundamento, MSBW, MSBS, P1P2NE, P1P2W.
5. Mineral Resources estimated by ordinary kriging inside a 5m by 10m by 20m block for the Aprofundamento, MSBW and MSBS Deposits, 10m by 20m by 20m blocks for the P1P2NE deposit and 2.5 by 2.5 by 20m blocks for the P1P2W deposit.

**Table 15: Mineral Resources - Vermelhos UG Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	10,669	1.49	159.3
Indicated	6,402	2.66	170.2
<b>Measured+Indicated</b>	<b>17,071</b>	<b>1.93</b>	<b>329.5</b>
Inferred	1,514	2.46	37.2

1. Effective date of December 31, 2017.
2. Presented Mineral Resources inclusive of Mineral Reserves. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.68% copper for underground resources based on 2015 operating costs (last full year of operation).
4. Mineral Resources estimated by ordinary kriging inside 5m by 10m by 10m blocks.

**Table 16: Mineral Resources - Surubim OP Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	13	0.56	0.1
Indicated	289	0.94	2.7
<b>Measured+Indicated</b>	<b>302</b>	<b>0.92</b>	<b>2.8</b>
Inferred	79	1.02	0.8

1. Effective date of December 31, 2017.
2. Presented Mineral Resources inclusive of Mineral Reserves. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.18% copper for open pit resources based on 2015 operating costs (last full year of operation).
4. Mineral Resources estimated by ordinary kriging inside 5m by 5m by 5m blocks.

**Table 17: Mineral Resources - R22W Mine**

<b>Resource Classification</b>	<b>Tonnes (kt)</b>	<b>Cu (%)</b>	<b>Contained Cu (kt)</b>
Measured	306	0.54	1.7
Indicated	2	0.79	0.0
<b>Measured+Indicated</b>	<b>308</b>	<b>0.54</b>	<b>1.7</b>
Inferred	0	0.00	0.0

1. Effective date of December 31, 2017.
2. There are no Mineral Reserves contained within the R22W Mine Mineral Resources. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. Cut-off value of 0.18% copper for open pit resources and 0.68% copper for underground resources based on 2015 operating costs (last full year of operation).
4. Mineral Resources estimated by ordinary kriging inside 5m by 10m by 10m blocks.

**Table 18: Mineral Reserve Estimate: MCSA's Vale do Curaçá Mineral Assets, Curaçá Valley, December 31, 2017**

Mine	Category	Tonnes (kt)	Cu (%)	Contained Cu (kt)
Pilar UG Mine	Proven	2,661	1.42	37.7
	Probable	3,259	2.27	74.0
	<b>Proven + Probable</b>	<b>5,921</b>	<b>1.89</b>	<b>111.7</b>
Vermelhos UG Mine	Proven	1,743	4.84	84.4
	Probable	676	2.37	16.0
	<b>Proven + Probable</b>	<b>2,418</b>	<b>4.15</b>	<b>100.4</b>
Surubim OP Mine	Proven	8	0.54	0.0
	Probable	182	0.85	1.5
	<b>Proven + Probable</b>	<b>191</b>	<b>0.84</b>	<b>1.6</b>
<b>TOTAL</b>	<b>Proven</b>	<b>4,413</b>	<b>2.77</b>	<b>122.1</b>
	<b>Probable</b>	<b>4,117</b>	<b>2.22</b>	<b>91.6</b>
	<b>Proven + Probable</b>	<b>8,530</b>	<b>2.50</b>	<b>213.7</b>

1. Effective Date of December 31, 2017.
2. Mineral Reserves included within stated Mineral Resources. All figures have been rounded to reflect the relative accuracy of the estimates. Summed amounts may not add due to rounding.
3. The Mineral Reserve estimates are prepared in accordance with the CIM Definition Standards, and the CIM Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines, using geostatistical and/or classical methods, plus economic and mining parameters appropriate for the deposit. Mineral Reserves are based on a long-term copper price of US\$2.75 per lb, and a USD:BRL foreign exchange rate of 3.20. Mineral Reserves are the economic portion of the Measured and Indicated Mineral Resources. Mineral Reserve estimates include mining dilution at zero grade. Mining dilution and recovery factors vary for specific Mineral Reserve sources and are influenced by factors such as deposit type, deposit shape, stope orientation and selected mining method.

### 2018 Production and Cash Cost Guidance

Since the Vale do Curaçá Technical Report, the Company has continued to optimize its near-term production profile, including continued accelerated advancement of the Vermelhos Mine. Optimization efforts and above-forecast development rates at the Vermelhos Mine have led to an increase in the anticipated production for 2018.

Production in 2018 is heavily weighted towards the second half of the year due, in part, to the commissioning of the Vermelhos Mine, currently anticipated during the fourth quarter, as well as Pilar and Surubim Mine sequencing. Cash cost guidance for 2018 assumes a USD:BRL foreign exchange rate of 3.20, gold price of US\$1,250 per ounce and silver price of US\$17.50 per ounce. C1 Cash Cost guidance has been updated to include treatment and refining charges ("TC/RCS"), offsite transportation costs and certain tax benefits that are passed through to customers on invoicing. These adjustments were not included in prior C1 Cash Cost disclosure.

	<b>2018<sup>[1]</sup></b>
Tonnes Processed Sulphides	2,000,000
Copper Grade (% Cu)	1.50%
Copper Recovery (%)	86.0%
<b>Cu Production Guidance (tonnes)</b>	<b>25,500 – 27,500</b>
<b>C1 Cash Cost Guidance (US\$/lb)</b>	<b>\$1.30 – \$1.40</b>

**Note:**

1. Guidance is based on certain estimates and assumptions, including but not limited to, Mineral Reserve estimates, grade and continuity of interpreted geological formations and metallurgical performance.

The Company's capital expenditure guidance for 2018 reflect the acceleration of the Vermelhos Mine and a significant expansion of the Company's 2017 exploration programs. Additional investments in the Pilar UG Mine and supporting infrastructure are being made during 2018 in preparation for a longer mine life than previously envisioned.

<i>(\$US millions)</i>	<b>2018</b>
Pilar Mine	39.0
Vermelhos	36.0
Exploration & Drilling <sup>[1]</sup>	20.0
Boa Esperança	1.0
<b>Capital Expenditure Guidance</b>	<b>96.0</b>

**Note:**

1. Exploration & drilling capital expenditure guidance is dependent, in part, on future exploration success and subject to further review and revision

## **BOA ESPERANÇA PROPERTY**

The scientific and technical information in this section relating to the Boa Esperança Property is a direct extract of the Executive Summary section contained in the Boa Esperança Technical Report, which has been conformed to be consistent with other defined terms and formatting within this AIF. The entire Boa Esperança Technical Report, a copy of which is available for review under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com), is incorporated by reference into this AIF and should be consulted for details beyond those incorporated herein.

### **Executive Summary**

SRK was commissioned by Ero to prepare a NI 43-101 compliant Feasibility Study (“**FS**”) for the Boa Esperança Deposit (“**Boa Esperança**” or the “**Project**”) as part of the Boa Esperança Property located in Pará, Brazil. The Project was acquired by MCSA from Corporacion Nacional Del Cobre (Codelco) in 2007 and is now 100% owned by MCSA. In December 2016, Ero acquired approximately 85.0% interest in MCSA. In June 2017, Ero acquired an additional 14.5% by subscribing for shares from treasury for a total interest in MCSA of approximately 99.5%.

This Technical Report is an update of a prior 2015 report prepared by SRK. The original 2015 report has been updated based on work performed throughout various studies developed for the Project by third-party technical and engineering firms throughout the course of the Project’s ownership under MCSA. SRK has reviewed the contents and, where relevant, has accepted and/or modified the conclusions therein based on the judgment of the authors and the recommendations therein. There has been no new material scientific or technical information about the property since the publication of these reports. It is the opinion of the authors of this Technical Report that the information contained in such reports has been appropriately reviewed and are current for the purposes of NI 43-101. A full list of references relevant to the Project is listed in Chapter 27 – References.

### **1.1 Property Description and Location**

The Boa Esperança copper deposit is located in the municipality of Tucumã, Pará State, Brazil. The site is located approximately 40 km to the southwest of the town. Tucumã can be accessed by state highway PA-279, which connects the town of Xinguara to the town of São Felix do Xingu, a stretch of road that runs for approximately 160 km. The junction of PA-279 with federal highway BR-155 is in Xinguara. The latter is the main highway leading to the city of Marabá, situated around 220 km north of Xinguara.

### **1.2 Ownership**

MCSA acquired the Boa Esperança copper deposit concession from Corporación Nacional del Cobre (Codelco) in 2007 and became the legal owner of the mineral rights to the Boa Esperança copper deposit. In December 2016, Ero acquired approximately 85.0% interest in MCSA. In June 2017, Ero acquired an additional 14.5% by subscribing for shares from treasury for a total interest in MCSA of approximately 99.5%.

The legal status of MCSA’s mining rights is as follows:

- The Final Exploration Report was presented to the DNPM on April 10, 2008 and was approved by the DNPM on July 30, 2009;
- MCSA filed for the Mining Concession through the presentation of an Economic Exploitation Plan (Plano de Aproveitamento Econômico or PAE), which was filed with the DNPM on May 5, 2010; and

- The Preliminary License was filed with the DNPM on March 22, 2012.

All criteria to obtain the mining rights have been fulfilled and the Ero is awaiting final approval of the change status to a full Mining Concession after issuance of the Installation License, currently under review by the Pará State environmental agency.

The Mineral Resources and Mineral Reserves disclosed in this report are completely contained within the Exploration Licence held by MCSA. MCSA is either the beneficial owner or has the right to the required surface rights for the envisioned operations.

### **1.3 Geology and Mineralization**

The Carajás Mineral Province, where the Boa Esperança copper deposit is located, is on the east side of the Amazon Craton and is considered one of the most important mineral provinces in Brazil. It is a region of high economic importance, as it hosts the world's largest known high-grade Fe deposits, as well as world-class Cu-Au deposits, such as Salobo, Sossego, 118, Cristalino and Igarapé Bahia-Alemão. Deposits of Mn, Ni, Cr, Al and Zn have also been identified in the province. The existence of high-grade significant deposits elsewhere in the region provides no assurance regarding the size, extent, grade, or value of any deposits or prospective deposits at the Boa Esperança.

The Carajás Mineral Province encompasses two distinct tectonic domains, both of these Archean in age. The South Block, which is the older of the two (3.0 to 2.86 Ga) and is where the Boa Esperança deposit is located, is called the Rio Maria Block and contains a typical granite-greenstone belt terrain. The North Block, which is the younger domain (2.8 to 2.5 Ga), is called Carajás and is composed of volcano-sedimentary rocks and granitoids, which host the large Fe, Cu-Au, Mn, Ni and Zn deposits in the province. These two blocks are considered to be products of the juxtaposition of volcanic island arcs and plutonic-like Andes environments, associated with an intra-continental mantle plume.

The Boa Esperança copper deposit occurs within an isolated hill, which is elongated in a NNE direction and located 38 km SW following a straight line from the town of Tucumã. The topographic high is supported mainly by breccias composed of quartz and magnetite, which cut the Neoproterozoic biotite-granite (2.78 Ga), the host of the copper mineralization. The Neoproterozoic biotite granite intrudes into the Mesoproterozoic Rio Maria granodiorite (2.85 Ga).

Mineralization consists of a series of brecciated zones, which are aligned N60°-70°E and incline in a SE direction (60°-70°SE). However, another alignment of about N40°E was observed in the field and coincides with the elongation of the Boa Esperança hill.

### **1.4 Exploration Status**

Project exploration has consisted of ground geological mapping and sampling, geophysical surveys and exploration drilling. Ground geophysical surveys completed include magnetic and gravity surveys and induced polarization electrical surveys.

The geophysical surveys were completed by Codelco during the period from 2003 to 2006. The exploration work conducted by MCSA includes confirmation drilling conducted during the period from 2008 through 2013, and site-specific studies in support of this and prior feasibility studies.

The Project's first drillhole campaign began in 2003 under the supervision of Codelco. Codelco completed four drillhole campaigns in 2003-2004, 2005 and 2006. Codelco completed 62 core drillholes, totaling 21,956.12 m on a 200 m x 200 m drilling grid that was infill drilled to 100 m x 100 m.

MCSA completed additional drilling between 2008 and 2013, totaling 36,016.13 m, for a project total of 57,972.25 m in 165 core holes. Infill drilling was completed to approximately 50 and 25 m centers for the core of the deposit.

The deposit has been drilled sufficiently to allow for the definition of Mineral Resources as defined under NI 43-101.

### **1.5 Mineral Resource Estimate**

The Mineral Resource estimate was prepared by SRK Senior Geologist Rafael Russo Sposito and supervised by SRK Principal Resource Geologist Carlos César Barbosa; Mr. Barbosa is a Qualified Person and is independent of MCSA as defined by NI 43-101.

The Mineral Resource estimate was prepared using a three-dimensional percentage block model of 10 m x 10 m x 5 m. In addition, oxidation state and resource classification codes were assigned to each block. The resource estimation was conducted using Geovia GEMSTM (v6.6) software. Other graphs were created using GSLIB software.

The Mineral Resources are constrained to a pit optimization shell run with the following parameters:

- Copper price: US\$4.00 per pound;
- Mining cost: US\$2.25/t moved;
- Processing cost + G&A: US\$8.21/t processed;
- TC/RC: US\$0.32/lb copper; and
- Recovery: 91%.

The internal copper CoG (excluding mining costs) is 0.20 %.

The Measured, Indicated and Inferred Mineral Resources within the pit optimization shell are given in Table 1. The copper grades are undiluted grades within the grade shell wireframes.

**Table 1: Mineral Resource statement, Boa Esperança Copper Project, Pará State, Brazil, SRK Consultores do Brasil LTDA., June 1, 2017**

Domain	Category	Quantity (Mt)	Cu %	Contained Cu (tonnes)
Sulfide	Measured	41.00	0.81	332,100
	Indicated	26.17	0.62	162,254
	Measured + Indicated	67.17	0.73	490,341
	Inferred	1.35	0.56	7,560
Secondary Sulfide	Inferred	2.05	0.69	14,145
<b>Total</b>	<b>Measured</b>	<b>41.00</b>	<b>0.81</b>	<b>332,100</b>
	<b>Indicated</b>	<b>26.17</b>	<b>0.62</b>	<b>162,254</b>
	<b>Measured + Indicated</b>	<b>67.17</b>	<b>0.73</b>	<b>490,341</b>
	<b>Inferred</b>	<b>3.40</b>	<b>0.64</b>	<b>21,760</b>

Source: SRK

Effective Date: June 1, 2017

(1) Tonnes and grade are rounded to reflect approximation.

(2) Mineral Resources are stated at a cut-off grade of 0.2% Cu and are fully contained within an optimized pit shell.

(3) Stated Mineral Resources are inclusive of Mineral Reserves.

Mineral Resources are not Mineral Reserves and have not demonstrated economic viability. Mineral Resource estimates do not account for mineability, selectivity, mining loss and dilution. These Mineral Resource estimates include Inferred Mineral Resources that are normally considered too geologically speculative to allow for the application of economic considerations that would see them categorized as Mineral Reserves. There is also no certainty that these Inferred Mineral Resources will be converted to Measured and Indicated categories through further drilling or into Mineral Reserves once economic considerations have been applied.

## 1.6 Mineral Reserve Estimate

The conversion of Mineral Resources to Mineral Reserves requires accumulated knowledge achieved through pit optimization, pit design, economics and associated modifying parameters.

The Mineral Reserves were calculated based on a cut-off grade of 0.28% Cu and a life of mine (“LoM”) copper price of US\$ 7,000/t LME Cu.

In accordance with the CIM classification guidelines, only Measured and Indicated Mineral Resource categories are converted to Proven and Probable Mineral Reserves respectively (through inclusion within the open-pit mining limits). Inferred Mineral Resources, where unavoidably mined, have been treated as waste and assigned zero grade.



Table 2 shows the Boa Esperança mine open pit ore reserve statement.

**Table 2: Mineral Reserve Statement for the Boa Esperança copper deposit, State of Para, Brazil, SRK Consultores do Brasil Ltda. as of June 1, 2017**

<b>Mineral Reserve Classification</b>	<b>Volume</b>	<b>Density</b>	<b>Dry Tonnes</b>	<b>Cu</b>	<b>Contained Cu</b>
	<i>m<sup>3</sup> x 1,000</i>	<i>t/m<sup>3</sup></i>	<i>t x 1,000</i>	<i>%</i>	<i>t x 1,000</i>
Proven	5,744.50	3.225	18,528.1	0.96	178.05
Probable	315.6	3.089	975.0	0.72	7.02
<b>Total</b>	<b>6,060.10</b>	<b>3.218</b>	<b>19,503.1</b>	<b>0.95</b>	<b>185.07</b>

- (1) Effective Date: June 1, 2017
- (2) Open pit Mineral Reserves assume full mine recovery;
- (3) Open pit Mineral Reserves are diluted along lithological boundaries and assume selective mining unit of 2.5 m x 2.5 m x 5 m;
- (4) The strip ratio was calculated to be 1.93 (waste to ore);
- (5) Reserves are based on a price of US\$ 7,000/t LME Cu throughout the life of the mine;
- (6) Reserves are based on a cut-off grade of 0.28% Cu;
- (7) Mineral Resource tonnage and contained metal have been rounded to reflect the accuracy of the estimate. As a result of this rounding, the numbers may not add up;
- (8) Contained copper is reported as in-situ and does not include process recovery; and
- (9) The Mineral Reserve estimate was calculated by Rubens Mendonça, BSc, MBA, Chartered Professional Member of the AusIMM, Mining Manager of SRK Consultores do Brasil as at the date of the report (currently Director of Planminas), in accordance with the standards set out in CSA, NI 43-101 and generally accepted CIM “Estimation of Mineral Resource and Mineral Reserves Best Practices” guidelines.

## 1.7 Mining Methods

Boa Esperança is a copper deposit, averaging approximately 0.95% Cu diluted grade within the minable pit. The mineralization is close to the surface and the resource is appropriate for an open pit mining operation.

The final pit design in this feasibility phase of the Boa Esperança project totals 19.5 Mt of Proven and Probable Mineral Reserves with an average diluted grade of 0.95% Cu. From this total, 17.5 Mt is classified as high grade material with an average Cu content of 1.02% and the remaining 2.0 Mt as low grade material, with a grade of 0.34% Cu.

Waste materials amount to 37.7 Mt, which is comprised of 19.6 Mt of saprolite, 8.9 Mt of weathered rock and 9.2 Mt of fresh rocks. The LoM strip ratio of waste to ore is 1.93.

The operation of the Boa Esperança mine will utilize conventional open pit mining techniques and small size mining equipment to mine a total of 57.2 Mt of material over the life of the mine. This comprises 19.5 Mt of ore and 37.7 Mt of waste materials. A total of 5.1 Mt of ore will be moved from the stockpiles to the plant.

The main mine equipment selected for the Boa Esperança project consists of 4.0 m<sup>3</sup> hydraulic excavators, on-highway 35t trucks and drills.

It has been assumed that 100% of weathered and fresh rocks and 10% of saprolites will be drilled and blasted in 10-meter-high benches. Ore will be hauled to the primary crusher or to the run of mine (ROM) stockpiles close to the primary crusher. Waste materials will be hauled to different dumps and destinations. Grade control will be performed through drilling, sampling and assaying materials within the pit limits using the production drills.

The mine is scheduled to operate in three 8 hour shifts, 7 days per week, 365 days per year. Whenever mine production needs to be reduced or interrupted, the primary crusher will be fed from the regularization pile using a front-end loader.

### 1.7.1 Geotechnical

Three distinct layers of materials were identified: saprolite, weathered rocks and fresh rocks.

Based on the Planer Rupture models between berms performed in studies 8 and 9, steeper angles for the excavated slopes in the weathered and fresh rocks have been proposed. However, for the saprolite, a shallower angle is recommended, as this material forms a less cohesive soil and is more likely to fail at steep slope face or inter-ramp angles.

Table 3 shows the slope geometry proposed by SRK for each type of material.

**Table 3: Proposed angles for each type of material**

	<b>Saprolite</b>	<b>Weathered Rock</b>	<b>Fresh Rock</b>
<b>Bench Height</b>	10,0 m	10,0 m	10,0 m
<b>Berm Width</b>	7,0 m	5,0 m	5,0 m
<b>Slope Face Angle</b>	45°	70°	83°
<b>Inter-Ramp Angle</b>	31,5°	49°	58°

## 1.8 Mineral Processing and Metallurgical Testing

This section describes the experimental work performed with the samples of two different rock types from Boa Esperança deposit, Tucumã, PA, namely "breccia" and "granite".

In early test work, the Boa Esperança deposit was considered as a conventional disseminated copper deposit. However, it has two distinct geological features, a breccia and a granite rock type. The sulphide minerals have been concentrated in faults and open spaces within the granite body.

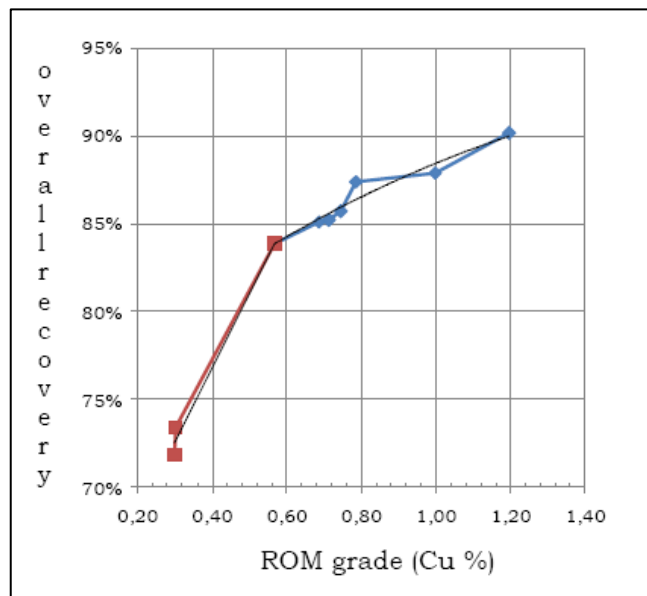
An experimental program was developed in two primary stages to characterize the ore and evaluate pre-concentration methods: bench scale testing performed on a trays jig, followed by continuous tests with a small-scale pilot plant.

Their results confirmed the previous experimental conclusions:

- 30% of the crushing product is under 3mm and shows copper enrichment factors between 1.55 and 2.0 as compared to the ROM copper grade. The coarse fraction which fed the jig had a copper grade enrichment factor between 0.75 and 0.8 of the ROM grade, implying copper is mostly contained in the minus 3mm fraction.
- 50% of the mass was rejected in jigging. The copper recovery varied from 86% to 96%. Adding to this recovery the recovery of the copper contained in the finer fraction (-3 mm) of the crushed product, the total recovery of the circuit increased to 90% to 96%.
- After the jigging continuous testing, the jig concentrate was crushed to minus 3.35 mm and recombined with the natural fines (minus 3 mm) from each rock type then ground to 106 µm. Locked cycle froth flotation locked tests were performed to concentrate the copper sulphide.
- The tailings of this initial flotation were refloatated to concentrate pyrite (sequential flotation).
- The tailings of this second stage flotation were submitted to magnetic separation and yielded an iron ore concentrate and the final fine tailing.
- The conclusion of this work is that pre-concentration is an effective method for rejecting a significant mass of ROM feed, with minimum copper losses. In practice, this will reduce the size of the crushing and concentrating plant and as a result - the capital and operating costs.
- It was also demonstrated that jigging using simple equipment as the AllMineral jig (a Baum-type pneumatic jig) is effective. More sophisticated equipment, such as dense media separators, or specialized jigs with artificial beds or for special use, are unnecessary.
- The pre-concentration study was followed by blending the jig concentrate with the minus 3 mm of the ROM, grinding and performing froth flotation and magnetic separation testing.

- The main deleterious contaminants like F, Cl, U, As, P, Pb and Zn are present in the concentrate in traces such that significant smelter penalties are not anticipated.
- Bond crushability indexes varied from 14.9 to 18.1 kWh/t, averaging 16.7 kWh/t indicating difficult crushing plant feed.
- Bond ball mill work indexes ranged from 13.9 to 17.0 kWh/t with an average of 15.7 kWh/t, indicating a medium/hard plant feed.

The result used to estimate the predicted recovery, as a function of feed grade is summarized in Figure 1. The blue line shows the recovery for ROM grades greater or equal to 0.57% Cu and the red shows expected recovery for grades bellow 0.57% Cu.



**Figure 1: Overall recovery (%) x ROM grade (% Cu)**

## 1.9 Recovery Methods

Open pit mining is planned for a production rate of 2.31 million tonnes (Mt) per year at an average ore grade of 1.14% Cu. Ore will be processed in a concentrator at a rate of 9,033.6 tonnes per day (t/d) (primary crushing) using conventional processes considered standard to the industry. The processing flowsheet, as well as the initial mass balance is based on work performed in 2011 by, “Consolidação do Desenvolvimento de Processo – Projeto Boa Esperança”, dated January 2011 (the “2011 Metallurgical Report”), the results of which were reviewed and verified by SRK.

Although not used specifically as the basis for process design criteria, confirmatory variability test work was undertaken by SGS-Geosol and reported in the following studies: “Final Report – Flotation Testwork on Copper Samples from the Boa Esperança Project”, dated May 10, 2012 (the “2012 Metallurgical Report”). Subsequent to that work, several additional confirmatory campaigns were conducted, producing the following reports:

- “VLC-Testes de sedimentação e filtração-15/12/14”;
- “Simulação de britagem Metso, novembro 2014”; and,
- “SGS Geosol – Testes de Wi-04/09/14”, “SGS Geosol – Final Report-Jigging, flotation and magnetic separation on a composite sample for the Boa Esperança Project – Final Report – SG0014-1403/rev02 – 10/04/2015”.

The final process design and mass balance was performed by incorporating a jigging pre-concentration stage prior to flotation, based on favorable metallurgical testwork results.

### **1.9.1 Final Process Flowsheet Design**

The process flowsheet includes three-stage crushing, screening, jigging, ball mill grinding, copper rougher flotation, two stages of copper cleaner flotation and pyrite flotation from the copper rougher and scavenger flotation tailing. The final copper concentrate is thickened prior to pressure filtration and the flotation tailing is cycloned, dewatered, thickened and filtered prior to discharge to the tailing storage facility. The pyrite concentrate from the pyrite flotation is sent to the high sulfur pond.

### **1.9.2 Final Process Material Balance**

Process plant material balances have been developed for the crushing circuit, screening circuits, jigging, grinding, copper flotation, regrind, pyrite flotation, concentrate / tailing thickeners and dewatering circuits.

### **1.9.3 Final Process Plant Water Balance**

The water balance includes the water requirements for both raw water and recycled process water. A fresh water requirement of 143 m<sup>3</sup>/hr is estimated and is based on an overall process plant water requirement of 560.8 m<sup>3</sup>/hr with 552.0 m<sup>3</sup>/hr being provided as recycled process water. Water losses of 156.3 m<sup>3</sup>/hr are estimated. It is assumed that the gland seal water for pumps, water for reagents preparation, potable water and make-up water will be provided by clean raw water. The rest of the water requirements within the process plant will be from recycled process water.

## **1.10 Tailings**

SRK reviewed and relied upon the work performed by VOGBR Recursos Hídricos & Geotecnia (Minas Gerais, Brazil) during 2014-2015 who developed the Basic Design of the B2 Dam and the Conceptual Design of the Water Pond that will be implemented at the Boa Esperança Mine. The dams will have distinct purposes as shown below.

### **1.10.1 Water Pond**

The reservoir of the water pond will have the purpose of storing clean water to meet the supply demands of the plant, considering a flow of 150 m<sup>3</sup>/hour during uninterrupted operations for a year. In December 2014, MCSA contracted VOGBR to develop the current work. The Water Pond will be built in the Jatobá Creek, within the limits of the MCSA properties.

### **1.10.2 B2 Dam**

The reservoir of the B2 Dam will have the purpose of containing the hazardous tailings resulting from the copper ore beneficiation and to recover water to rationalize the use of new water, minimizing the need to collect water in the waterbodies of the region. In December 2014, MCSA contracted VOGBR to develop the current work. At that time, the construction of a waterproof dam constituted by a compacted soil embankment to meet the new tailings volumes generated in the Boa Esperança Copper Mine project was assessed. The considered operational life of the mine was 11 years.

The tailings to be deposited in the B2 Dam will be classified according to the ABNT NBR 10.004/2006 Standard as Class I tailings (hazardous). Since the tailings are Class I, the B2 Dam shall be watertight observing a minimum layer of non-saturated soil of 1.50m, measured between the bottom of the deposit and the critical water level. In addition, the design shall include the definition of the leak detection system and waterproofing system.

### **1.10.3 Tailings Storage**

Studies for the Basic Design of saprolite and tailing dump aimed to define the geometry of its final arrangement and to size the proposed structures to internal and surface drainage systems.

The geometry proposed for the dump was adequate with regards to the geotechnical stability, showing security factors for normal and critical conditions equal to 1.5 and 1.3, respectively.

The final configuration of the dumps will consist of berms measuring 10 meters wide and benches with 10 meters' height, with final angle of 2H:1V, after compaction of the tailing and enveloping with compacted soil of the saprolite and tailings dump. The volumetric capacity for the disposal of tailing and waste in the final configuration is 15.4 Mm<sup>3</sup>.

The bottom drain system will be used to collect the contributions from the input of incident waters in the dump, avoiding its saturation. These drains should be protected by a saprolite layer, to prevent that the traffic or surface draining damages the granular material of the section.

The materials to be disposed will be transported by conveyor belts, in the case of the waste processing plant, and dump trucks from the pit, in the case of the saprolite.

#### **1.10.4 Hydrology**

Studies conducted in the period of January to November 2011, consisted of the following steps:

- Inventory of water sources and users;
- Flow measurements in major drainages;
- Preparation of hydrogeological conceptual model;
- Evaluation of impacts to water resources;
- Assessment of water availability; and
- Projection of the monitoring network.

During the months of February and September 2011 flow measurements related to the rainy and dry periods were conducted in the Project area in conjunction with environmental permit work. In each of these periods five different points located in the main drainages were established for the implementation of flow measurements. Also in the month of September a flow measurement was held in the Branco River, located approximately 15 km south of the Project.

The hydrogeological system in the region has the typical characteristics of formations located in crystalline basement aquifers. This is an aquifer consisting of a shallow weathered mantle with metric thickness (Porous Aquifer), superimposed over the crystalline basement (Fractured Aquifer), deformed and fractured.

The results indicate that the Project area has a low water potential, as many springs and surface water bodies have intermittent flow, becoming dried during the dry season. The underground reservoirs were also evaluated as an alternative to water capturing. However, tests performed in tubular wells showed low production capacity, with pump flow rate of about 6 m<sup>3</sup>/h.

The water pond designed by VOGBR will have the purpose of storing clean water to meet the demand of the plant, estimated at a flow of 150m<sup>3</sup>/hour, working for a year without interruption. The water pond will be located in the Jatobá stream, within the area owned by MCSA.

#### **1.10.5 Project Infrastructure**

Based on the estimated production volumes of copper concentrates, the best logistic alternatives between the Project and ports have been reviewed.

Tucumã, PA was considered as the starting point for the Project, considering:

- Domestic transportation;
- Cargo handling at the port;
- Sea transportation.

For domestic transportation, haulage by truck appears to be the only viable ground transportation. Although Para's State is crossed by the Carajas' Railroad and the Tocantins River, both of these alternatives present some deficiencies that hinder the utilization of the routes.

Vila do Conde has shown the best conditions for loading since Itaqui is limited to train transport options. Further, Vila do Conde is a better organized industrial port, with ample area which can be leased from the port authorities or from third companies.

The primary logistic challenges facing the Project are:

- Long distance to port;
- Limited accessibility to the railroad, owned by a private company with a track record of poor third-party service levels;
- Limited port infrastructure; and,
- Chronic congestion at ports near the Project.

### **1.10.6 Environmental Management and Permitting**

The Pará State Environmental Agency granted a Preliminary License (PL) to MCSA on March 7, 2012 which was subsequently renewed on June 19, 2013. MCSA filed for an Installation License request on April 1, 2013 which is currently under analysis.

A grant for well drilling and evaluation of water potential (considering future groundwater collection for the installation phase) was issued. The formal request for water use will be submitted immediately after the issuance of the Installation License (IL).

The IL is prepared when the project design has advanced far enough for engineering plans to be submitted to the government for approval. The IL is accompanied by an Environmental Control Plan referred to as a PCA (Plano de Controle Ambiental) and a Degraded Area Recovery Plan or PRAD (Plano de Recuperação de Áreas Degradadas). Once the IL has been granted, the DNPM can issue a Mining Concession. It is at this licensing stage that the Legal Reserve is defined. The Legal Reserve is an area whose size depends on state rules requiring the preservation of a portion of the natural biota. It is legalized by the Rural Environmental Register (Cadastro Ambiental Rural – CAR) or at the Real Estate Notary Office as property of the enterprising party, in accordance with Federal Law # 12.651/2012. In Pará the law has established that 80% of the propriety area should remain as a Legal Reserve. This percentage may be changed depending on the specific conditions of Environmental – Economical Zone in each region. This is regulated by the Brazilian Forest Code, Law # 12.651/2012 and Pará State Decree # 2.099/2010.

The area earmarked for deforestation covers 38.65 ha at this stage of the project. The Legal Reserve is being discussed with the Environmental Agency (SEMA) and will be a condition of the IL. The environmental agency is analyzing the IL process for the granting of this license.

The Operating License (OL) allows the project to begin operations and is issued after all of the appropriate environmental measures have been implemented and verified by the authorities. The OL must be renewed during the life of the mine. When the OL is up for renewal, a report summarizing environmental performance must be presented.

If, during the operation, there are substantial changes to the initial project plan (e.g. an additional treatment plant), this will require another specific IL, which will subsequently become an OL.

The baseline characterization studies and environmental impact assessment (EIA) for the Project were prepared and submitted to SEMA in 2008.

The EIA classifies areas of influence into three categories:

- Área Diretamente Afetada (ADA) = Directly Affected Area;
- Área de Influência Direta (AID) = Directly Influenced Area; and
- Área de Influência Indireta (AII) = Indirectly Influenced Area.

Changes to the boundary of the Project area were necessary due to a demand made by the Pará State Environmental Agency during the review of the PL application. The ADA now includes village P07 and drainage of about 200m, which were previously not included. This update added approximately 1,202.1 ha to the ADA. Additionally, the AID now includes springs which flow to the Branco River and Jatobá Creek. The main drainage affected by the project totals 7,204.4 ha.

The final Environmental Control Plan (PCA) was submitted to the environmental agency in April, 2013, and the Company is waiting for grant of the Installation License which is necessary for construction, and ultimately, mining activities, post conversion to an Operating License.

## 1.11 Economic Analysis

Forecast copper prices over the LOM are presented in Table 4.

**Table 4: Copper Prices - US\$/t-Cu**

Commodity	Yr -2	Yr -1	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9
Metallic Copper	6,063	6,614	6,614	6,614	6,614	6,614	6,614	6,614	6,614	6,614	6,614

The price of the copper concentrate is considered CIF at the port of Shanghai, China. Logistics costs to transport copper concentrate from Boa Esperança to China are presented in Table 5 and Table 6. The logistic cost was considered as 50% "Bulk" and 50% "Container". The economic analysis also considered losses of 0.2% in concentrate transportation for both cases.

**Table 5: Logistic Costs - Container**

Items	Cost (R\$/t-conc)
Copper Project Conc (Truck)	175.01
Handling & Storage (Port)	124.39
Ocean Freight	132.30
<b>Total Freight</b>	<b>R\$431.71</b>

**Table 6: Logistic Costs - Bulk**

Items	Cost (R\$/t-conc)
Copper Project Conc (Truck)	175.01
Handling & Storage (Port)	67.57
Ocean Freight	236.25
<b>Total Freight</b>	<b>R\$478.83</b>

All currency is in Brazilian Reais (\$R) unless otherwise stated. The following exchange rates have been considered throughout the economic section of the report

**Table 7: Exchange Rates**

Currency	Exchange Rate (R\$ per US\$)	
	Yr -2	Yr -1 – Yr 9
Reais	\$3.60	\$3.80

### 1.11.1 Capital Expenditures

The capital cost estimate developed for this Feasibility Study comprises the costs associated with the engineering, procurement, construction, commissioning and pre-operation required for all project facilities. SRK relied upon third-party estimation based on studies developed for the project by engineering firms according to the following scope:

- SRK Consulting - Mine Equipment Schedule, Mineral Resources, Mineral Reserves, mine equipment capital and mining operating costs, environment and mine closure;
- Tecnomin Projects e Consultoria Ltda (Minas Gerais, Brazil) - Plant basic engineering;
- Tyno Consultoria Tributária e Empresarial Ltda (Bahia, Brazil) - Fiscal;
- VOGBR Recursos Hídricos & Geotecnia (Minas Gerais, Brazil) - Basic Project of Tailings Dam and Conceptual Design of Water Pond.

The required quotations for equipment, materials and services were obtained mainly by MCSA's Procurement Department (MCPD) and formal enquiries to well-known vendors in the mining business mainly in the 2<sup>nd</sup> quarter 2015. Based on the deceleration in global mining activity and contraction in the Brazilian economy from the period of 2015 to 2017, no escalation

was applied for the current capital cost estimates. SRK has reviewed the costing and third-party reports and is of the opinion that the the estimates are valid for the purposes of this report.

The capital estimate is shown in Table 8.

**Table 8: Capital Costs Summary by Area**

Area	% of Total	LoM Cost (R\$000's)	Initial (R\$000's)	Ongoing (R\$000's)
Pre-Production	14	89,306	89,306	0
Infrastructure	1	6,615	6,615	0
Mine	8	48,075	35,778	12,298
Plant	39	244,109	244,109	0
Power & Automation	12	76,709	76,709	0
Utility Systems	2	12,065	12,065	0
Administration & Support	4	23,562	23,562	0
Tailings Storage Facilities	7	45,439	45,439	0
Water Pond	1	6,398	6,398	0
Indirect Costs	10	59,740	59,740	0
Salvage	-4	(24,796)	0	(24,796)
Closure	6	39,898	0	39,898
<b>Total</b>	<b>100%</b>	<b>R\$627,120</b>	<b>R\$599,721</b>	<b>R\$27,400</b>

### 1.11.2 Operating Costs

Operating costs are based on mine, process, tailings and infrastructure facilities design criteria, engineering, as well as budgetary and vendor quotes. All operating costs include supervision staff, operations labor, maintenance labor, consumables, electricity, fuels, lubricants, maintenance parts and any other operating expenditure identified by contributing engineers. The operating costs are shown on Table 9.

**Table 9: Project Operating Costs**

Item	R\$/t-RoM	R\$/t-Conc	LoM (R\$000's)
Mining	15.69	561.27	305,774
Processing	19.28	689.72	375,741
G&A	9.54	341.59	186,086
<b>Total</b>	<b>R\$44.48</b>	<b>R\$1,592.58</b>	<b>R\$867,598</b>

### 1.11.3 Economic Results

The financial analysis results, shown on Table 10, indicate an after-tax net present value (NPV) for the project at an 8% discount rate of US\$195.3 million with an IRR of 32.7%. Payback from Project start is approximately 3.6 years.

**Table 10: Economic Results**

Item	Unit or Factor	Value
Ore Mined	kt	19,500.3
Mined Cu (contained)	kt	185.0
Recovered Cu	kt	163.4
Payable Cu	kt	156.9
<b>Sales Volumes, Prices and Delivery Costs</b>		
Cu Price (average over production period)	\$/t-Cu	6,614
Treatment Charges (TC)	US\$/t conc.	78.50
Refining Charges (RC)	¢/lb	7.85
Tonnes Cu sold	kt	156.9
<b>Revenue</b>		
Gross Revenue	R\$000's	3,943,195
Logistics & Sales Costs	R\$000's	(333,113)
CFEM Royalty	R\$000's	(63,104)



<b>Gross Income</b>	R\$000's	<b>3,546,942</b>
TC / RCs	R\$000's	(454,875)
<b>Net Revenue</b>	<b>R\$000's</b>	<b>3,488,320</b>
<b>Operating Costs</b>		
Mining	R\$000's	(305,774)
Process	R\$000's	(375,741)
G&A	R\$000's	(186,086)
<b>Total Operating Costs</b>	<b>R\$000's</b>	<b>(867,600)</b>
Project Capital (Equity)	R\$000's	(626,126)
Financing Interest	R\$000's	-
Income & Social Contribution Taxes	R\$000's	(251,907)
<b>Operating Cash Flow</b>	<b>R\$000's</b>	<b>1,972,596</b>
Initial Capital	R\$000's	599,719
Equity for funding	R\$000's	-
Share Holders Equity	R\$000's	599,719
Ongoing Capital	R\$000's	12,298
<b>Free Cash Flow</b>	<b>R\$000's</b>	<b>1,345,477</b>
<b>After-tax NPV 8% (per annum)</b>	<b>US\$000's</b>	<b>195,295</b>
<b>IRR</b>		<b>32.7%</b>
<b>Payback</b>	<b>Yrs</b>	<b>3.6</b>

## 1.12 Conclusions and Recommendations

### Conclusions

SRK concurs with the geological interpretation of the mineralization of the Boa Esperança deposit as silica- and sulfide-filled breccias containing copper and cobalt mineralization associated with magnetite, as a variant of an iron-oxide-copper-gold (IOCG) hydrothermal deposit type. SRK concludes that the mineralization has been sufficiently defined through exploration methods, including core drilling, to support the Mineral Resource and Mineral Reserve estimation for use in a Feasibility Study.

SRK has carried out the appropriate review work to satisfy itself that the Mineral Reserve can be technically and profitably extracted through to the production and sale of copper concentrate. Consideration has been given to all technical areas of study, the associated capital and operating costs, and relevant factors including marketing, permitting, environmental and social. SRK is satisfied that the technical and economic feasibility has been demonstrated.

The Mineral Resource and Mineral Reserve Estimates are compliant within the guidelines of NI 43-101 and SRK has not identified any mining, metallurgical, infrastructure, permitting, legal, political, environmental, technical, or other relevant factors that could materially affect the potential development of estimated Mineral Reserves and Mineral Resources.

### Recommendations

SRK recommends that analytical procedures be standardized, including documentation of procedures, performing check assays and duplicate sampling to provide increased confidence in the database.

SRK also recommends that the tailings filter sizing should be confirmed based on updated material characterization incorporating cyclone and dewatering screen additions to optimize the process and to support the analysis of a filter press to replace the vacuum filter belt.

In addition, it is recommended that social-environmental management practices be undertaken to ensure the success of the operation as well as a review of acid rock potential, and the potential operating costs associated with its treatment.

Finally, SRK recommends that a conceptual geomechanical model be developed to ensure final pit dimensions.

The estimated cost for the recommended work is presented below in Table 1.11.

**Table 1.11: Proposed Budget for Recommended Work**

<b>Program</b>	<b>Budget (US\$)</b>
Check assays at secondary laboratory	\$6,000
Duplicate core samples, including cutting, shipping & analysis	12,000
Confirm tailings thickener design and filter sizing	40,000
Expand studies on acid rock drainage and treatment	32,000
Develop a conceptual geomechanical model	30,000
<b>Total</b>	<b>\$120,000</b>

## **RISK FACTORS**

An investment in the Company is speculative and involves a high degree of risk due to the nature of the Company's business. The following risks, as well as risks currently unknown to the Company, could adversely affect the Company's current or future business, properties, operations, results, cash flows, financial condition and prospects and could cause future results, cash flows, financial condition, prospects, events or circumstances to differ materially from those currently expected, including the estimates and projections contained in this AIF. Investors should carefully consider the risks described below and elsewhere in this AIF. The risks described below and elsewhere in this AIF do not purport to be an exhaustive summary of the risks affecting the Company and additional risks and uncertainties not currently known to the Company or not currently perceived as being material may have an adverse effect on the Company.

### **Risks Related to the Company**

#### ***Copper prices are volatile and may be lower than expected***

The Company's business and its ability to sustain operations are dependent on, amongst other things, the market price of copper. The prices of copper realized by the Company will affect future development decisions, production levels, earnings, cash flows, the financial condition and prospects of the Company. If the world market prices of copper were to drop and the prices realized by the Company on copper sales were to decrease significantly and remain at such level for any substantial period, the Company's business, financial condition, results of operations, cash flows and prospects would be negatively affected.

Some factors that affect the price of copper include: industrial demand; forward or short sales of copper by producers and speculators; future levels of copper production; and rapid short-term changes in supply and demand due to speculative or hedging activities by producers, individuals or funds. Copper prices are also affected by macroeconomic factors including: confidence in the global economy; expectations of the future rate of inflation; the availability and attractiveness of alternative investment vehicles; the strength of, and confidence in, the US dollar, the currency in which the price of copper is generally quoted, and other major currencies; global political or economic events; and costs of production of other copper producing companies. All of the above factors can, through their interaction, affect the price of copper by increasing or decreasing the demand for or supply of copper.

The price of copper has fluctuated widely in recent years, and future material price declines could cause commercial production from the Vale do Curaçá Property or the development of, and commercial production from, the Boa Esperança Property to be less profitable than expected and could render such properties uneconomic. Continuing to conduct mining in a low copper price environment would have a material adverse effect on the Company's business, financial condition, results of operations, cash flows and prospects. Depending on the current and expected price of copper, projected cash flows from planned or current mining operations may not be sufficient to warrant commencing or continuing mining, and the Company could be forced to discontinue development or commercial production. The Company may be forced to sell one or more portions of the Vale do Curaçá Property or the Boa Esperança Property to generate cash. Future production from the Vale do Curaçá Property and the Boa Esperança Property will be dependent on a price of copper that is adequate to make a deposit economically viable. Furthermore, future mine plans using significantly lower copper prices could result in material write-downs of the Company's investment in the Vale do Curaçá Property and the Boa Esperança Property, and in reductions in Mineral Reserve and Mineral

Resource estimates. The occurrence of any of the foregoing could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows and prospects.

A declining or sustained low price of copper could negatively impact the profitability of the Vale do Curaçá Property, and could affect the Company's ability to finance the exploration and development of other properties in the future. In addition, a declining or sustained low price of copper could require a reassessment of the feasibility of the Boa Esperança Property. Although the price of copper is only one of the several factors that the Company will consider in making a development and production decision on the Boa Esperança Property, if the Company determines from a reassessment that the Boa Esperança Property is not economically viable in whole or in part, then operations may cease or be curtailed and the Boa Esperança Property may never be fully developed or developed at all. The occurrence of any of the foregoing could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows and prospects.

### ***Mining operations are risky***

The Company's current business, and any future development or mining operations, involve various types of risks and hazards typical of companies engaged in the mining industry. Such risks include, but are not limited to: (i) industrial accidents; (ii) unusual or unexpected rock formations; (iii) structural cave-ins or slides and pitfall, ground or slope failures and accidental release of water from surface storage facilities; (iv) fire, flooding and earthquakes; (v) rock bursts; (vi) metal losses in handling and transport; (vii) periodic interruptions due to inclement or hazardous weather conditions; (viii) environmental hazards; (ix) discharge of pollutants or hazardous materials; (x) failure of processing and mechanical equipment and other performance problems; (xi) geotechnical risks, including the stability of the underground hanging walls and unusual and unexpected geological conditions; (xii) unanticipated variations in grade and other geological problems, water, surface or underground conditions; (xiii) labour disputes or slowdowns; (xiv) work force health issues as a result of working conditions; and (xv) force majeure events, or other unfavourable operating conditions.

These risks, conditions and events could result in: (i) damage to, or destruction of, the value of the Vale do Curaçá Property, the Boa Esperança Property, the NX Gold Property or their facilities; (ii) personal injury or death; (iii) environmental damage to the Vale do Curaçá Property, the Boa Esperança Property, the NX Gold Property, surrounding lands and waters, or the properties of others; (iv) delays or prohibitions on mining or the transportation of minerals; (v) monetary losses; and (vi) potential legal liability and any of the foregoing could have a material adverse effect on the Company's business, financial condition, results of operation, cash flows or prospects. In particular, underground refurbishment and exploration activities present inherent risks of injury to people and damage to equipment. Significant mine accidents could occur, potentially resulting in a complete shutdown of the Company's operations at the Vale do Curaçá Property or the NX Gold Property which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

There are also risks related to the reliance on the reliability of current and new or developing technology; the reliance on the work performance of outside consultants, contractors, and manufacturers; changes to project parameters over which the Company does not have complete control such as the copper, gold and silver prices or labour or material costs; unknown or unanticipated or underestimated costs or expenses; unknown or unanticipated or underestimated additions to the scope of work due to changing or adverse conditions encountered as a mine is refurbished and redeveloped; unexpected variances in the geometry or quality of ore zones; unexpected reclamation requirements or expenses; permitting time lines; unexpected or unknown ground conditions; unexpected changes to estimated parameters utilized to estimate past timelines, projections, or costs; and liquidity risks. An adverse change in any one of such factors, hazards and risks may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

### ***Mining operations require geologic, metallurgic, engineering, title, environmental, economic and financial assessments that may be materially incorrect and thus the Company may not produce as expected***

The operations of mining properties or mining companies are based in large part on geologic, metallurgic, engineering, title, environmental, economic and financial assessments, which involve uncertainty. Such assessments may differ materially from actual results, which may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects. These assessments include a series of assumptions regarding such factors as the ore body geometries, grades, recoverability, regulatory and environmental restrictions, future prices of metals and operating costs, future capital expenditures and royalties and government levies which will be imposed over the producing life of the Mineral Reserves. There are numerous uncertainties inherent in estimating quantities of Mineral Resources and Mineral Reserves and estimates in projecting potential future rates of mineral production, including factors subject to change and beyond the Company's control. Mineral Reserves and Mineral Resources estimates are based on limited samples and interpretations, which may not be representative of actual Mineral Reserves and Mineral Resources. In addition, title and rights of access to the Company's

properties can never be guaranteed. Although select title and environmental reviews were conducted in connection with the Acquisitions, this review cannot guarantee that any unforeseen defects in the chain of title will not arise to defeat the Company's title to certain assets or that environmental defects, liabilities or deficiencies do not exist or are not greater than anticipated.

The Company's calculations of Mineral Resources and Mineral Reserves are estimates and depend upon geological interpretation and statistical inferences drawn from drilling and sampling analysis, which may prove to be inaccurate. Actual recoveries of copper from mineralized material may be lower than those indicated by test work. Any material change in the quantity of mineralization, grade or stripping ratio, may affect the economic viability of Ero's properties. In addition, there can be no assurance that metal recoveries in small-scale laboratory tests will be duplicated in larger scale tests under on-site conditions or during production. Notwithstanding pilot plant tests for metallurgical recovery and other factors, there remains the possibility that the mineralized material may not perform in commercial production in the same manner as it did in testing. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. Mining and metallurgy are inexact sciences and, accordingly, there always remains an element of risk that a mine may not prove to be commercially viable.

Until a deposit is actually mined and processed, the quantity of Mineral Resources and Mineral Reserves and grades must be considered as estimates only. In addition, the quantity of Mineral Resources and Mineral Reserves may vary depending on, amongst other things, metal prices, cut-off grades and operating costs. Any material change in quantity of Mineral Reserves, Mineral Resources, grade, percent extraction of those Mineral Reserves recoverable by underground mining techniques or the stripping ratio for those Mineral Reserves recoverable by open pit mining techniques may affect the economic viability of Ero's mining projects and could have a material adverse effect on its future revenues, cash flows, profitability, results of operations, financial condition and prospects and result in write-downs of the Company's investment in mining properties and increased amortization charges.

Inferred Mineral Resources are also considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves. Due to the uncertainty which may attach to Inferred Mineral Resources, there is no assurance that Inferred Mineral Resources will be upgraded to Proven Mineral Reserves or Probable Mineral Reserves as a result of continued exploration or as a result of economic considerations being applied to them.

In addition, market fluctuations in the price of copper, gold and silver, as well as increased production costs, reduced recovery rates or increased operating and capital costs due to inflation or other factors, may render the exploitation of certain Mineral Reserves and Mineral Resources uneconomic and may ultimately result in a restatement of Mineral Reserves, Mineral Resources or both. Such a restatement could affect depreciation and amortization rates, and have an adverse effect on the Company's financial performance.

#### ***Geological, hydrological and climatic events could suspend mining operations or increase costs***

All mining operations face geotechnical, hydrological and climate challenges. Unanticipated adverse geotechnical and hydrological conditions, such as landslides, subsidence and uplift, embankment failures and rock fragility may occur in the future and such events may not be detected in advance. Geotechnical instabilities and adverse climatic conditions can be difficult to predict and are often affected by risks and hazards outside of the Company's control, such as severe weather and seismic activity.

Geotechnical failures could result in limited or restricted access to mines, suspension of operations, environmental damage, government investigations, increased monitoring costs, remediation costs, loss of ore and other impacts, which could result in loss of revenue or increased costs, and could result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows and prospects.

On January 22, 2016, MCSA's Pilar Mine flooded. The flooding event was an anomalous occurrence caused by a series of unique and unusual events and circumstances, stemming from MCSA's ongoing construction of a ventilation raise to surface at the Pilar Mine in late 2015. Had the civic works been completed at surface and a cap been placed on the opening of the ventilation raise, flood waters would not have entered the underground of the Pilar Mine during the flash flood. The civic works at surface have been completed and a cap has been installed on the ventilation raise. Although such flooding was an anomalous event in respect of the Company's operations, flooding at the Company's properties may nonetheless occur in the future. Once on the Company's properties, this water must be treated as any other water which the Company seeks to discharge from its properties and must meet environmental standards. This means that, provided there is no regulatory relief, the Company may be required to store and potentially treat the water, and to limit discharge to the approved limits under the Company's permits. If the amount of such water flowing onto the properties exceeds the capacity of the Company's storage ponds, the Company may be required to store water in underground areas of its mines, limiting its ability to operate in those areas. Production and

capital development could be delayed if the Company cannot operate in necessary areas as a result of such flooding, which could cause the Company to miss production targets and to lose revenue. The Company may also incur additional costs as a result of such flooding, both in dealing with the excess water and in remediating any damage resulting from flooding.

***Actual production, capital and operating costs may be different than those anticipated***

Ero prepares estimates of future productions, capital costs and operating costs of production for operations at the Vale do Curaçá Property. In addition, as a result of the substantial expenditures involved in the development of a mineral project such as the Boa Esperança Property, the need to project years into the future, the need to make assumptions and use models that may not adequately approximate reality, and the fluctuation of costs over time, a development project is prone to material cost overruns. The Vale do Curaçá Technical Report and the Boa Esperança Technical Report estimate capital costs and cash operating costs based upon, among other things:

- anticipated tonnage, grades and metallurgical characteristics of the ore to be mined and processed;
- anticipated recovery rates of copper and other metals from the ore;
- cash operating costs of comparable facilities and equipment;
- anticipated availability of labour and equipment; and
- anticipated foreign exchange rates.

Capital costs, operating costs, production and economic returns, and other estimates may differ significantly from those anticipated by the Vale do Curaçá Technical Report and the Boa Esperança Technical Report, and there can be no assurance that the Company's actual capital or operating costs will not be higher than currently anticipated or that returns will not be lower than anticipated. The Company's actual costs may vary from estimates for a variety of reasons, including: limitations inherent in modelling; changes to assumed third party costs; short term operating factors; operational decisions made by the Company; revisions to mine plans; risks and hazards associated with development and mining described elsewhere in this AIF; natural phenomena, such as inclement weather conditions, water availability, floods, and earthquakes; and unexpected labour shortages or strikes. Operating costs may also be affected by a variety of factors, including: changing strip ratios, ore metallurgical grade-recovery curves, the availability of processing operations, the availability of storage capacity, the availability of equipment and facilities necessary to continue operations at the Vale do Curaçá Property and to complete development work at the Boa Esperança Property, the cost of consumables and mining and processing equipment, labour costs, the availability and productivity of skilled labour, the cost of commodities, general inflationary pressures, currency exchange rates, technological and engineering problems, accidents or acts of sabotage or terrorism, the regulation of the mining industry by various levels of government and quasi-governmental organizations and political factors. Many of these factors are beyond the Company's control. Furthermore, significant cost overruns could make the Boa Esperança Property uneconomical. Failure to achieve estimates or material increases in costs could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows and prospects.

Furthermore, unforeseen delays in the construction and commissioning of mining projects or other technical difficulties may result in even further capital expenditures being required. Any delay in the development of a project or cost overruns or operational difficulties with regards to the Vale do Curaçá Property or the Boa Esperança Property may have a material adverse effect on the Company's business, financial condition, results of operations, cash flows and prospects.

***The construction and start-up of new mines is subject to a number of factors and the Company may not be able to successfully complete new construction projects***

The success of construction projects and the start-up of new mines by the Company is subject to a number of factors including the availability and performance of engineering and construction contractors, mining contractors, suppliers and consultants, the receipt of required governmental approvals and permits in connection with the construction of mining facilities and the conduct of mining operations (including environmental and regulatory permits), the successful completion and operation of mining stopes, processing plants and conveyors to move ore, among other operational elements. Any delay in the performance of any one or more of the contractors, suppliers, consultants or other persons on which the Company is dependent in connection with its construction activities, a delay in or failure to receive the required governmental approvals and permits in a timely manner or on reasonable terms, or a delay in or failure in connection with the completion and successful operation of the operational elements in connection with new mines could delay or prevent the construction and start-up of new mines as planned. There can be no assurance that current or future construction and start-up plans implemented by the Company will be successful, that the Company will be able to obtain sufficient funds to finance construction and start-up activities, that personnel and equipment will be available in a timely manner or on reasonable terms to successfully complete construction projects, that the Company will be able to obtain all necessary governmental approvals and permits or that the completion of the construction, the start-up

costs and the ongoing operating costs associated with the development of new mines will not be significantly higher than anticipated by the Company. Any of the foregoing factors could adversely impact the Company's business, financial condition, results of operations, cash flows and prospects.

The capital expenditures and time required to develop new mines or other projects are considerable and changes in costs or construction schedules can affect project economics. Thus, it is possible that actual costs may change significantly and economic returns may differ materially from the Company's estimates.

Commercial viability of a new mine or development project is predicated on many factors. Mineral Reserves and Mineral Resources projected by feasibility studies and technical assessments performed on the Company's projects may not be realized, and the level of future metal prices needed to ensure commercial viability may not materialize. Consequently, there is a risk that startup of new mine and development projects may be subject to write-down and/or closure as they may not be commercially viable.

Any uncertainty and inability in the estimation, recalculation or replacement of Mineral Reserves and Mineral Resources could materially affect the Company's results of operations, cash flows and financial position.

To ensure the continued operation of the business and realize the Company's growth strategy, it is essential that the Company continues to realize its existing identified Mineral Reserves, convert Mineral Resources into Mineral Reserves, increase the Company's Mineral Resource base by adding new Mineral Resources from areas of identified mineralized potential and otherwise successfully undertaking exploration, and/or acquire new Mineral Reserves and Mineral Resources. The life of mine estimates included herein may not be correct.

***Currency fluctuations can result in unanticipated losses***

Currency fluctuations may affect the Company's capital costs and the costs that the Company incurs at its operations. Copper is sold throughout the world based principally on a US dollar price, but a portion of the Company's operating and capital expenses are incurred in Brazilian Reals and Canadian dollars. The appreciation of foreign currencies, particularly the Brazilian Real against the US dollar would increase the costs of copper production at such mining operations, which could materially and adversely affect the Company's earnings and financial condition. The Company has entered into foreign exchange swap contracts to help manage the currency fluctuation risk of the Brazilian Real against the US dollar. However, there is no assurance that such hedging contracts or any other steps taken to help mitigate foreign currency fluctuations will be effective.

***The successful operation of the Vale do Curaçá Property and the successful development and operation of the Boa Esperança Property depend on the skills of the Company's management and teams***

The Company's business is dependent on retaining the services of its key management personnel with a variety of skills and experience, including in relation to the development and operation of mineral projects. The success of the Company is, and will continue to be, dependent to a significant extent on the expertise and experience of its directors and senior management. Failure to retain, or loss of, one or more of these people could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects. The Company's success will also depend to a significant degree upon the contributions of qualified technical personnel and the Company's ability to attract and retain highly skilled personnel. Competition for such personnel is intense, and the Company may not be successful in attracting and retaining qualified personnel, or in obtaining the necessary work permits to hire qualified expatriates. The Company's inability to attract and retain these people could have a material adverse effect on its business, financial condition, results of operations, cash flows or prospects.

***Operations during mining cycle peaks are more expensive***

During times of increased demand for metals and minerals, price increases may encourage expanded mining exploration, development and construction activities. These increased activities may result in escalating demand for and cost of contract exploration, development and construction services and equipment. Increased demand for and cost of services and equipment could cause exploration, development and construction costs to increase materially, resulting in delays if services or equipment cannot be obtained in a timely manner due to inadequate availability, and increased potential for scheduling difficulties and cost increases due to the need to coordinate the availability of services or equipment, any of which could materially increase project exploration, development or construction costs, result in project delays, or increase operating costs.

### ***Title to the Vale do Curaçá Property and/or the Boa Esperança Property may be disputed***

Although the Company has received title opinions for the Vale do Curaçá Property and the Boa Esperança Property there is no guarantee that title to such properties will not be challenged or impugned. The Company's claims may be subject to prior unregistered agreements or transfers and title may be affected by unidentified or unknown defects. The Company has conducted an investigation on the title of properties that it has acquired to confirm that there are no claims or agreements that could affect its title to its mineral tenure or surface rights. There is no guarantee that such title will not be challenged or impaired. If title to the Company's properties is disputed, it may result in the Company paying substantial costs to settle the dispute or clear title and could result in the loss of the property, which events may affect the economic viability of the Company. Title insurance generally is not available for mineral tenure or surface rights and the Company's ability to ensure that it has obtained secure claim to title may be constrained.

### ***The Company may fail to comply with the law or may fail to obtain or renew necessary permits and licenses***

The Company's operations are subject to extensive laws and regulations governing, among other things, such matters as environmental protection, management and use of toxic substances and explosives, health, exploration and development of mines, commercial production and sale of by-products, ongoing and post-closure reclamation, construction and operation of tailings dams, safety and labour, taxation and royalties, maintenance of mineral tenure, and expropriation of property. The activities of the Company require licenses and permits from various governmental authorities.

The costs associated with compliance with these laws and regulations and of obtaining licenses and permits are substantial, and possible future laws and regulations, changes to existing laws and regulations and more stringent enforcement of current laws and regulations by governmental authorities, could cause additional expenses, capital expenditures, restrictions on or suspensions of the Company's operations and delays in the development of its properties. There is no assurance that future changes in such laws and regulations, if any, will not adversely affect the Company's operations. Moreover, these laws and regulations may allow governmental authorities and private parties to bring lawsuits based upon damages to property and injury to persons resulting from the environmental, health and safety practices of the Company's past and current operations, or possibly even the actions of former property owners, and could lead to the imposition of substantial fines, penalties or other civil or criminal sanctions. The Company may fail to comply with current or future laws and regulations. Such non-compliance can lead to financial restatements, civil or criminal fines, penalties, and other material negative impacts on the Company.

The Company is required to obtain or renew further government permits and licenses for its current and contemplated operations, including the issuance of an operation license with respect to the Vermelhos Mine, and an installation license and operation license with respect to the Boa Esperança Property. Obtaining, amending or renewing the necessary governmental permits and licenses can be a time-consuming process potentially involving numerous regulatory agencies, involving public hearings and costly undertakings on the Company's part. The duration and success of the Company's efforts to obtain, amend and renew permits and licenses are contingent upon many variables not within its control, including the interpretation of applicable requirements implemented by the relevant permitting or licensing authority. The Company may not be able to obtain, amend or renew permits or licenses that are necessary to its operations, or the cost to obtain, amend or renew permits or licenses may exceed what the Company believes it can ultimately recover from a given property once in production. Any unexpected delays or costs associated with the permitting and licensing process could impede the ongoing operation of the Vale do Curaçá Property, and could delay the development or impede the operation of the Boa Esperança Property. To the extent necessary permits or licenses are not obtained, amended or renewed, or are subsequently suspended or revoked, the Company may be curtailed or prohibited from proceeding with planned development, commercialization, operation and exploration activities. Such curtailment or prohibition may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

### ***Compliance with environmental regulations can be costly***

The Company's mining operations at the Vale do Curaçá Property and the NX Gold Property, the Company's development of the Boa Esperança Property, and the exploration of these properties are all subject to environmental regulation. Regulations cover, among other things, water quality standards, land reclamation, the generation, transportation, storage and disposal of hazardous waste, the construction and operation of tailings dams, and general health and safety matters. There is no assurance that the Company has been or will at all times be in full compliance with all environmental laws and regulations or hold, and be in full compliance with, all required environmental and health and safety approvals and permits. The potential costs and delays associated with compliance with such laws, regulations, approvals and permits could prevent the Company from economically operating or proceeding with the further development and exploration of the Vale do Curaçá Property, the Boa Esperança Property and/or the NX Gold Property, and any non-compliance with such laws, regulations, approvals and permits

at the Vale do Curaçá Property, the Boa Esperança Property and the NX Gold Property could result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Environmental approvals and permits are currently, and may in the future be, required in connection with the Company's current and planned operations. To the extent such environmental approvals and permits are required and not obtained, the Company's plans and the operation of mines may be curtailed or it may be prohibited from proceeding with planned exploration or development of additional mineral properties. Failure to comply with applicable environmental 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.

There is no assurance that any future changes in environmental regulation will not adversely affect the Company's operations. Changes in government regulations have the potential to significantly increase compliance costs and thus reduce the profitability of current or future operations.

Environmental hazards may also exist on the properties on which the Company holds interests that are unknown to the Company at present and that have been caused by previous or existing owners or operators of the properties and for which the Company may be liable for remediation. Parties engaged in mining operations, including the Company, 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 for violations of applicable environmental laws or regulations, regardless of whether the Company actually caused the loss or damage. The costs of such compensation, fines or penalties could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

#### ***Social and environmental activism can negatively impact exploration, development and mining activities***

There is an increasing level of public concern relating to the effects of mining on the natural landscape, on communities and on the environment. Certain non-governmental organizations, public interest groups and reporting organizations ("NGOs") who oppose resource development can be vocal critics of the mining industry. In addition, there have been many instances in which local community groups have opposed resource extraction activities, which have resulted in disruption and delays to the relevant operation. While the Company seeks to operate in a socially responsible manner and believes it has good relationships with local communities in the regions in which it operates, NGOs or local community organizations could direct adverse publicity against and/or disrupt the operations of the Company in respect of one or more of its properties, regardless of its successful compliance with social and environmental best practices, due to political factors, activities of unrelated third parties on lands in which the Company has an interest or the Company's operations specifically. Any such actions and the resulting media coverage could have an adverse effect on the reputation and financial condition of the Company or its relationships with the communities in which it operates, which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

#### ***The mining industry is intensely competitive***

The mining industry is intensely competitive. The Company competes with other mining companies, many of which have greater resources and experience. Competition in the mining industry is primarily for: (i) properties which can be developed and can produce economically; (ii) the technical expertise to find, develop, and operate such properties; (iii) labour to operate such properties; and (iv) capital to fund such properties. Such competition may result in the Company being unable to acquire desired properties, to recruit or retain qualified employees and consultants or to acquire the capital necessary to fund its operations and develop its properties. The Company's inability to compete with other mining companies for these resources could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Many competitors not only explore for and mine minerals, but conduct refining and marketing operations on a worldwide basis. In the future, the Company may also compete with such mining companies in refining and marketing its products to international markets. Any inability to compete with established competitors could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

#### ***Inadequate infrastructure may constrain mining operations***

Continued production at the Vale do Curaçá Property and any potential commercial production at the Boa Esperança Property, each depend on adequate infrastructure. In particular, reliable power sources, water supply, transportation and surface facilities



are all necessary to develop and operate mines. Failure to adequately meet these infrastructure requirements or changes in the cost of such requirements could affect the Company's ability to continue production at the Vale do Curaçá Property or to develop or commence production at the Boa Esperança Property and could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

***Operating cash flow may be insufficient for future needs***

The exploration, development and operation of the Company's mineral properties will require the commitment of substantial financial resources that may not be available. The amount and timing of expenditures will depend on a number of factors, including the progress of ongoing exploration and development, success of the Company's ongoing operations, the results of consultants' analyses and recommendations, the rate at which operating losses are incurred, the execution of any joint venture agreements with strategic partners and the acquisition of additional property interests, some of which are beyond the Company's control. The Company's business strategies may not be successful and it may not be profitable in any future period. The Company's operating results have varied in the past and they may continue to fluctuate in the future. In addition, the Company's operating results may not follow any past trends.

The Company had negative operating cash flow for the financial year ended December 31, 2016 and positive operating cash flow for the financial year ended December 31, 2017. To the extent that the Company has negative operating cash flow in future periods, the Company may need to allocate a portion of its cash reserves to fund such negative operating cash flow. The Company may also be required to raise additional funds through the issuance of equity or debt securities. There can be no assurance that additional capital or other types of financing will be available when needed or that these financings will be on terms favourable to the Company.

***Fluctuations in the market prices and availability of commodities and equipment affect the Company's business***

The cash flows and profitability of the Company's business will also be affected by the market prices and availability of commodities and equipment that are consumed or otherwise used in connection with the Company's operations and development projects. Prices of such commodities and resources are also subject to volatile price movements, which can be material and can occur over short periods of time due to factors beyond the Company's control.

If there is a significant and sustained increase in the cost of certain commodities, the Company may decide that it is not economically feasible to continue certain or all of the Company's commercial production, development and exploration activities and this could have an adverse effect on profitability. Higher worldwide demand for critical resources like input commodities, drilling equipment, mobile mining equipment, tires and skilled labour could affect the Company's ability to acquire them and lead to delays in delivery and unanticipated cost increases, which could have an effect on the Company's operating costs, capital expenditures and production schedules. The occurrences of one or more of these events may result in a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

***A failure to maintain satisfactory labour relations can adversely impact the Company***

The Company's operations and further development of the Vale do Curaçá Property and the Boa Esperança Property are dependent upon the efforts of its employees and the Company's relations with its unionized and non-unionized employees, and the Company's operations would be adversely affected if it failed to maintain satisfactory labour relations. Some of MCSA's and NX Gold's employees are represented by labour unions under various collective bargaining agreements. Collective bargaining agreements of MCSA must be renewed annually, in September of each year, while NX Gold's collective bargaining agreements must be renewed in May 2018, and every two years thereafter. The Company may not be able to satisfactorily renegotiate its collective bargaining agreements when they expire and may face tougher negotiations or higher compensation demands than would be the case for non-unionized labour. In addition, the existing collective bargaining agreements may not prevent a strike or work stoppage at the Company's facilities in the future. Further, relations between the Company and its employees may be affected by changes in the scheme of labour relations that may be introduced by the relevant governmental authorities who have jurisdiction over the various aspects of the Company's business. Changes in such legislation or in the relationship between the Company and its employees may have a material adverse effect on the Company's business, results of operations and financial condition.

***The Company's insurance coverage may be inadequate to cover potential losses***

The Company's business is subject to a number of risks and hazards (as further described in this AIF). Although the Company maintains insurance to protect against certain risks in such amounts as it considers to be reasonable, its insurance will not cover

all the potential risks associated with its activities, including current and any future mining operations. The Company may also be unable to obtain or maintain insurance to cover its risks at economically feasible premiums, or at all. Insurance coverage may not continue to be available or may not be adequate to cover any resulting liability. Moreover, insurance against risks such as environmental pollution or other hazards as a result of exploration, development or production may not be available to the Company on acceptable terms. The Company might also become subject to liability for pollution or other hazards which it is not currently insured against and/or in the future may not insure against because of premium costs or other reasons. Losses from these events may cause the Company to incur significant costs which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

***It may be difficult to enforce judgments and effect service of process on directors, officers and experts named herein***

Some of the directors and officers of the Company reside outside of Canada, and each of SRK Brazil and GE21 is incorporated, continued or otherwise organized under the laws of a foreign jurisdiction. Some or all of the assets of those persons may be located outside of Canada. Therefore, it may not be possible for investors to collect or to enforce judgments obtained in Canadian courts predicated upon the civil liability provisions of applicable Canadian securities laws against such persons. Moreover, it may not be possible for investors to effect service of process within Canada upon such persons.

***The directors and officers may have conflicts of interest with the Company***

Certain directors and officers of the Company are or may become associated with other mining and/or mineral exploration and development companies which may give rise to conflicts of interest. Directors who have a material interest in any person who is a party to a material contract or a proposed material contract with the Company are required, subject to certain exceptions, to disclose that interest and generally abstain from voting on any resolution to approve such a contract. In addition, directors and officers are required to act honestly and in good faith with a view to the best interests of the Company. Some of the directors and officers of the Company have either other full-time employment or other business or time restrictions placed on them and accordingly, the Company will not be the only business enterprise of these directors and officers. Further, any failure of the directors or officers of the Company to address these conflicts in an appropriate manner or to allocate opportunities that they become aware of to the Company could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

***The Acquisitions and future acquisitions may require significant expenditures and may result in inadequate returns***

The Company may seek to expand through future acquisitions; however, there can be no assurance that the Company will locate attractive acquisition candidates, or that the Company will be able to acquire such candidates on economically acceptable terms, if at all, or that the Company will not be restricted from completing acquisitions pursuant to the terms and conditions from time to time of arrangements with third parties, such as the Company's creditors. Future acquisitions may require the Company to expend significant amounts of cash, resulting in the Company's inability to use these funds for other business or may involve significant issuances of equity or debt. Future acquisitions may also require substantial management time commitments, and the negotiation of potential acquisitions and the integration of acquired operations could disrupt the Company's business by diverting management and employees' attention away from day-to-day operations. The difficulties of integration may be increased by the necessity of coordinating geographically diverse organizations, integrating personnel with disparate backgrounds and combining different corporate cultures.

The Acquisitions and any future acquisition involve potential risks, including, among other things: (i) mistaken assumptions and incorrect expectations about mineral properties, Mineral Resources, Mineral Reserves and costs; (ii) an inability to successfully integrate any operation the Company acquired or acquires, as applicable; (iii) an inability to recruit, hire, train or retain qualified personnel to manage and operate the operations acquired; (iv) the assumption of unknown liabilities; (v) mistaken assumptions about the overall cost of equity or debt; (vi) unforeseen difficulties operating acquired projects, which may be in geographic areas new to the Company; and (vii) the loss of key employees and/or key relationships at the acquired project. In addition, Ero's acquisitions of MCSA and NX Gold were completed with certain of the prior shareholders thereof on an "as is where is" basis, and therefore the Company has no rights of recourse and indemnities against the sellers. Future acquisitions may be subject to similar or other limitations as to rights of recourse and indemnities against the sellers.

MCSA and NX Gold, and future acquisition candidates may have liabilities or adverse operating issues that the Company failed or fails to discover through due diligence prior to the acquisition. If the Acquisitions prove to have, or if the Company consummates any future acquisitions with, unanticipated liabilities or adverse operating issues or if acquisition-related expectations are not met, the Company's business, results of operations, cash flows, financial condition or prospects may be

materially adversely affected. The potential impairment or complete write-off of goodwill and other intangible assets related to any such acquisition may reduce the Company's overall earnings and could negatively affect the Company's balance sheet.

#### ***Failures of information systems or information security threats can be costly***

The Company has entered into agreements with third parties for hardware, software, telecommunications and other information technology ("IT") services in connection with its operations. Such operations depend, in part, on how well the Company and its suppliers protect networks, equipment, IT systems and software against damage from a number of threats, including, but not limited to, cable cuts, damage to physical plants, natural disasters, terrorism, fire, power loss, hacking, computer viruses, vandalism and theft. The Company's operations also depend on the timely maintenance, upgrade and replacement of networks, equipment, IT systems and software, as well as pre-emptive expenses to mitigate the risks of failures. Any of these and other events could result in information system failures, delays and/or increase in capital expenses. The failure of information systems or a component of information systems could, depending on the nature of any such failure, adversely impact the Company's reputation, results of operations, cash flows and financial condition.

Although to date the Company has not experienced any material losses relating to cyber-attacks or other information security breaches, there can be no assurance that it will not incur such losses in the future. The Company's risk and exposure to these matters cannot be fully mitigated because of, among other things, the evolving nature of these threats. As a result, cyber security and the continued development and enhancement of controls, processes and practices designed to protect systems, computers, software, data and networks from attack, damage or unauthorized access remain a priority. As cyber threats continue to evolve, the Company may be required to expend additional resources to continue to modify or enhance protective measures or to investigate and remediate any security vulnerabilities.

Any of these factors could have a material adverse effect on the Company's results of operations, cash flows and financial position.

#### ***The Company may be subject to costly legal proceedings***

The Company may be subject to regulatory investigations, civil claims, lawsuits and other proceedings in the ordinary course of its business. The results of these legal proceedings cannot be predicted with certainty due to the uncertainty inherent in regulatory actions and litigation, the difficulty of predicting decisions of regulators, judges and juries and the possibility that decisions may be reversed on appeal. Defense and settlement costs of legal disputes can be substantial, even with claims that have no merit. Management is committed to conducting business in an ethical and responsible manner, which it believes will reduce the risk of legal disputes. However, if the Company is subject to legal disputes, there can be no assurances that these matters will not have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

Moreover, pursuant to the Acquisitions the Company acquired operations that have been ongoing for a significant period of time. The Company inherited certain liabilities as a result and has been subject to a number of claims (including claims related to tax, labour and social security matters and civil action) in the course of its business which individually are not material and have not been accrued for in its financial statements as it is not probable that a cash outflow will occur. While the Company believes that a significant number of these claims are unlikely to be successful, if all such existing claims were decided against it, the Company could be exposed to liability of up to approximately R\$79 million, which could have an adverse impact on the Company's business, financial condition, results of operations, cash flows or prospects.

Additionally, the legal system in Brazil has inherent uncertainties that could limit the legal protections available to the Company, which include: (i) inconsistencies between and within laws; (ii) limited judicial and administrative guidance on interpreting Brazilian legislation, particularly that relating to business, corporate and securities laws; (iii) substantial gaps in the regulatory structure due to a delay or absence of enabling regulations; (iv) a lack of judicial independence from political, social and commercial forces; (v) corruption; and (vi) bankruptcy procedures that are subject to abuse, any of which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects. Furthermore, it may be difficult to obtain swift and equitable enforcement of a Brazilian judgement, or to obtain enforcement of a judgement by a court of another jurisdiction, which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

### ***The Boa Esperança Property is located in an underdeveloped rural area***

The Boa Esperança Property is located in an underdeveloped rural area, resulting in technical challenges for conducting mineral exploration and development and any potential mining activities at the property. The Company benefits from modern mining transportation skills and technologies for exploring and operating in such areas. Nevertheless, the Company may sometimes be unable to overcome problems related to underdevelopment or unseasonable weather at a commercially reasonable cost, which could negatively affect the Company's mineral exploration and development and any potential mining activities at the property and have a material adverse effect on the Company. The rural location of the Boa Esperança Property also results in increased costs associated with land access and infrastructure, including powerlines, water pipelines and transportation.

### ***Product alternatives may reduce demand for the Company's products***

Copper has a number of different applications, including being used in wiring and cable products, copper tubing and the transportation industry. Alternative technologies are continually being investigated and developed with a view to reducing production costs or for other reasons, such as minimizing environmental or social impact. If competitive technologies emerge that use other materials in place of copper, demand and price for copper might fall, which could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

### ***Changes in climate conditions may affect the Company's operations***

A number of governments have introduced or are moving to introduce climate change legislation and treaties at the international, national, state/provincial and local levels. Regulation relating to emission levels (such as carbon taxes) and energy efficiency is becoming more stringent. If the current regulatory trend continues, this may result in increased costs at the Company's operations. In addition, the physical risks of climate change may also have an adverse effect on the Company's operations. These risks include the following:

- changes in sea levels could affect ocean transportation and shipping facilities that are used to transport supplies, equipment and workforce and products from the Company's operations to world markets;
- extreme weather events (such as prolonged drought) have the potential to disrupt operations at the Company's mines and may require the Company to make additional expenditures to mitigate the impact of such events; and
- the Company's facilities depend on regular supplies of consumables (diesel, tires, reagents, etc.) to operate efficiently. In the event that the effects of climate change or extreme weather events cause prolonged disruption to the delivery of essential commodities, production levels at the Company's operations may be reduced.

There can be no assurance that efforts to mitigate the risks of climate change will be effective and that the physical risks of climate change will not have an adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

### ***The Company is subject to restrictive covenants that limit its ability to operate its business***

The Company's subsidiaries are subject to certain affirmative and restrictive covenants contained in the loan agreements entered into with the Bank of Nova Scotia, Santander Bank, Banco ABC Brasil and the Other Institutional Lenders. The loan agreements contain operating and financial covenants that could restrict the Company's subsidiaries' ability to, among other things: incur additional indebtedness needed to fund its respective operations; pay dividends or make certain other distributions; make investments; create liens; sell or transfer assets; or enter into transactions with affiliates. In addition, the Company's subsidiaries must maintain certain financial ratios and satisfy non-financial maintenance and other covenants. Compliance with the covenants and financial ratios may impair the Company's subsidiaries' and thereby the Company's ability to finance future operations or capital needs or to take advantage of other favourable corporate opportunities. The restrictions on the Company's subsidiaries ability to manage their business in management's sole discretion could adversely affect the Company's subsidiaries' and the Company's business by, among other things, limiting its ability to take advantage of business opportunities that management believes would be beneficial to the shareholders and limiting their ability to adjust to changing market conditions. The Company's subsidiaries' ability to comply with such covenants and financial ratios will depend on their future performance and may be affected by events beyond the Company's or such subsidiaries' control, including economic, financial and industry conditions.

## **Risks Related to the Company's Foreign Operations**

### ***The Company's Brazilian operations are subject to political and other risks associated with operating in a foreign jurisdiction***

The Vale do Curaçá Property, the Boa Esperança Property and the NX Gold Property are located in Brazil, exposing the Company to the socioeconomic conditions as well as the laws governing the mining industry in the country. Inherent risks with conducting foreign operations include, but are not limited to: high rates of inflation; extreme fluctuations in currency exchange rates, military repression; war or civil war; social and labour unrest; organized crime; hostage taking; terrorism; violent crime; expropriation and nationalization; renegotiation or nullification of existing concessions, licenses, approvals, permits and contracts; illegal mining; changes in taxation policies; restrictions on foreign exchange and repatriation; and changing political norms, currency controls and governmental regulations that favour or require the Company to award contracts in, employ citizens of, or purchase supplies from, the jurisdiction.

The Brazilian government frequently intervenes in the Brazilian economy and occasionally makes significant changes in policies and regulations. Changes, if any, in mining or investment policies or shifts in political attitude in Brazil may adversely affect the Company's operations or profitability. Operations may be affected in varying degrees by government regulations with respect to, but not limited to, restrictions on production, price controls, export controls, currency remittance, importation of parts and supplies, income and other taxes, royalties, the repatriation of profits, expropriation of property, foreign investment, maintenance of concessions, licenses, approvals and permits, environmental matters, land use, land claims of local people, water use and mine safety. Failure to comply strictly with applicable laws, regulations and local practices relating to mineral right applications and tenure could result in loss, reduction or expropriation of entitlements, or the imposition of additional local or foreign parties as joint venture partners with carried or other interests.

In addition, uncertainty over whether the Brazilian government will implement changes in policy or regulation may contribute to economic uncertainty in Brazil. Historically, Brazilian politics have affected the performance of the Brazilian economy. Past political crises have affected the confidence of investors and the public, generally resulting in an economic slowdown.

Global economic crises could negatively affect investor confidence in emerging markets or the economies of the principal countries in Latin America, including Brazil. Such events could materially and adversely affect the Company's business, financial condition, results of operations, cash flows or prospects.

The Company continues to monitor developments and policies in Brazil and the impact thereof to its operations; however, they cannot be accurately predicted and could have an adverse effect on the Company's operations or profitability.

### ***The Company may be negatively impacted by changes to mining laws and regulations***

The Company's activities are subject to various laws governing prospecting, exploration, development, production, taxes, labour standards and occupational health, mine safety, toxic substances and other matters. Mining, exploration and development activities are also subject to various laws and regulations relating to the protection of the environment. Although the Company believes that its activities are currently carried out in accordance with all applicable rules and regulations, no assurance can be given that new rules and regulations will not be enacted or that existing rules and regulations will not be applied in a manner that could limit or curtail production or development of the Company's properties. Amendments to current laws and regulations governing the Company's operations and activities or more stringent implementation of such laws and regulations could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

New regulations are also being issued in Brazil with regards to the commercial production and sale of by-products. It is uncertain how the current and past operations of the Company will be affected by such legal changes or more stringent enforcement of past and current laws and regulations by governmental authorities. The Company may be subject to administrative, civil and criminal sanctions should a more conservative interpretation of past and current laws and regulations be adopted by governmental authorities.

### ***Corruption and fraud in Brazil relating to ownership of real property may adversely affect the Company's business***

Under Brazilian law, real property ownership is normally transferred by means of a transfer deed, and subsequently registered at the appropriate real property registry office under the corresponding real property record. There are uncertainties, corruption and fraud relating to title ownership of real property in Brazil, mostly in rural areas. In certain cases, a real property registry office may register deeds with errors, including duplicate and/or fraudulent entries, and, therefore, deed challenges frequently

occur, leading to judicial actions. Property disputes over title ownership are frequent in Brazil, and, as a result, there is a risk that errors, fraud or challenges could adversely affect the Company's ability to operate, although ownership of mining rights are separate from ownership of land.

***The Company is exposed to the possibility that applicable taxing authorities could take actions that result in increased tax or other costs that might reduce the Company's cash flow***

The Company pays a variety of taxes, fees and other governmental charges in connection with the operation of the Company's business, including income taxes, mining royalties, ad valorem property taxes, sales and use taxes, inventory taxes, social security contributions and various assessments. These taxes, fees and other charges are assessed by a variety of taxing authorities pursuant to applicable laws, regulations and rules. The Brazilian tax regime is complex and subject to a variety of interpretations by government authorities. Such complexity may expose the Company to unpredicted challenges to day to day practices in bookkeeping, accounting and payment of taxes. From time to time, the Company may enter into specific agreements with such taxing authorities that provide for the reduction, abatement or deferral of such taxes, fees or charges in exchange for certain payments or undertakings on the Company's part. If the Company enters into any such arrangements, the Company can give no assurance that any such reduction, abatement or deferral arrangements will be honored or that the applicable taxing authorities will not take actions that materially increase the amount of such taxes, fees or other governmental charges that the Company is required to pay. In addition, the Company may incur additional and unanticipated costs and expenses in connection with the Company's efforts to resist any proposed increases in such taxes, fees or other charges or in connection with the Company's efforts to enforce any reduction, abatement or deferral arrangements that the Company has previously put in place.

The Brazilian government may implement changes to the Brazilian tax regime that may affect the Company. These changes could include changes in prevailing tax rates and the imposition of new or temporary taxes, the proceeds of which are earmarked for designated government purposes. Some of these changes may result in increases in the Company's tax payments, which could have an adverse effect on the Company's operations or profitability. The Company cannot provide assurance that it will be able to be profitable following any increases in Brazilian taxes applicable to the Company and its operations.

The Company is subject to a number of ongoing proceedings in Brazil related to tax matters that have not been accounted for in its financial statements, given the Company's assessment of the probability of adverse judgment against it. If all such tax matters were decided against it, the Company could be exposed to liability of up to approximately R\$41.3 million, which could have an adverse impact on the Company's business, financial condition, results of operations, cash flows or prospects.

***Inflation in Brazil, along with Brazilian governmental measures to combat inflation, may have a significant negative effect on the Brazilian economy and also on the Company's financial condition and results of operations***

In the past, high levels of inflation have adversely affected the economies and financial markets of Brazil, and the ability of its government to create conditions that stimulate or maintain economic growth. Moreover, governmental measures to curb inflation and speculation about possible future governmental measures have contributed to the negative economic impact of inflation in Brazil and have created general economic uncertainty. As part of these measures, the Brazilian government has at times maintained a restrictive monetary policy and high interest rates that have limited the availability of credit and economic growth. Brazil may experience high levels of inflation in the future. Inflationary pressures may weaken investor confidence in Brazil and lead to further government intervention in the economy, including interest rate increases, restrictions on tariff adjustments to offset inflation, intervention in foreign exchange markets and actions to adjust or fix currency values, which may trigger or exacerbate increases in inflation, and consequently have an adverse impact on the Company. In an inflationary environment, the value of uncollected accounts receivable, as well as of unpaid accounts payable, declines rapidly. If Brazil experiences high levels of inflation in the future and price controls are imposed, the Company may not be able to adjust the rates the Company charges its customers to fully offset the impact of inflation on the Company's cost structures, which could adversely affect the Company's results of operations or financial condition.

***Exchange rate instability may have a material adverse effect on the Brazilian economy***

The Brazilian Real has experienced frequent and substantial variations in relation to the US dollar and other foreign currencies during the last decades. Depreciation of the Brazilian Real against the US dollar could create inflationary pressures in Brazil and cause increases in interest rates, which could negatively affect the growth of the Brazilian economy as a whole and harm the Company's financial condition and results of operations. On the other hand, appreciation of the Brazilian Real relative to the US dollar and other foreign currencies could lead to a deterioration of the Brazilian foreign exchange current accounts, as well as dampen export-driven growth. Depending on the circumstances, either depreciation or appreciation of the Brazilian Real could have a material adverse effect on the Brazilian economy.

***The Company's operations may be impaired as a result of restrictions to the acquisition or use of rural properties by foreign investors or Brazilian companies under foreign control***

Non-resident individuals and non-domiciled foreign legal entities are subject to restrictions for the acquisition or lease for agricultural purpose, or arrendamento, of rural properties in Brazil. Limitations also apply to legal entities domiciled in Brazil controlled by foreign investors, such as the Company's subsidiaries through which the Company operates in Brazil.

Accordingly, the Company's current and future operations may be impaired as a result of such restrictions on the acquisition or use of rural properties, and the Company's ownership or access rights in respect of any rural properties in Brazil may be subject to legal challenges, all of which could result in a material adverse effect on the Company's business, results of operations, financial condition and cash flows.

***Recent disruptions in international and domestic capital markets may lead to reduced liquidity and credit availability for the Company***

The disruptions recently experienced in the international and domestic capital markets have led to reduced liquidity and increased credit risk premiums for certain market participants and have resulted in a reduction of available financing. Companies located in countries in the emerging markets may be particularly susceptible to these disruptions and reductions in the availability of credit or increases in financing costs, which could result in them experiencing financial difficulty. In addition, the availability of credit to entities operating within the emerging and developing markets is significantly influenced by levels of investor confidence in such markets as a whole and as such any factors that impact market confidence (for example, a decrease in credit ratings, state or central bank intervention in one market or terrorist activity and conflict) could affect the price or availability of funding for entities within any of these markets.

***The Company may be responsible for corruption and anti-bribery law violations***

The Company's business is subject to the United States *Foreign Corrupt Practices Act of 1977* ("FCPA") and the *Corruption of Foreign Public Officials Act (Canada)* ("CFPOA"), which generally prohibit companies and company employees from engaging in bribery or other prohibited payments to foreign officials for the purpose of obtaining or retaining business. The FCPA also requires companies to maintain accurate books and records and internal controls, including at foreign-controlled subsidiaries. Since all of the Company's presently held interests are located in Brazil, there is a risk of potential FCPA violations. In addition, the Company is subject to the anti-bribery laws of Brazil and of any other countries in which it conducts business in the future. The Company's employees or other agents may, without its knowledge and despite its efforts, engage in prohibited conduct under the Company's policies and procedures and the FCPA, the CFPOA or other anti-bribery laws for which the Company may be held responsible. The Code and the Anti-Corruption Policy mandate compliance with these anti-corruption and anti-bribery laws and the Company has implemented training programs, internal monitoring and controls, and reviews and audits to ensure compliance with such laws. However, there can be no assurance that the Company's internal control policies and procedures will always protect it from recklessness, fraudulent behavior, dishonesty or other inappropriate acts committed by its affiliates, employees, contractors or agents. If the Company's employees or other agents are found to have engaged in such practices, the Company could suffer severe penalties and other consequences that may have a material adverse effect on its business, financial condition and results of operations.

**Risks Related to the Common Shares**

***Investors may lose their entire investment***

An investment in the Common Shares is speculative and may result in the loss of an investor's entire investment. Only potential investors who are experienced in high risk investments and who can afford to lose their entire investment should consider an investment in the Company.

***Dilution from equity financing could negatively impact holders of Common Shares***

The Company may from time to time raise funds through the issuance of Common Shares or the issuance of debt instruments or other securities convertible into Common Shares. The Company cannot predict the size or price of future issuances of Common Shares or the size or terms of future issuances of debt instruments or other securities convertible into Common Shares, or the effect, if any, that future issuances and sales of the Company's securities will have on the market price of the Common Shares. Sales or issuances of substantial numbers of Common Shares, or the perception that such sales or issuances could occur, may adversely affect prevailing market prices of the Common Shares. With any additional sale or issuance of Common Shares,

or securities convertible into Common Shares, investors will suffer dilution to their voting power and the Company may experience dilution in its earnings per share.

***Equity securities are subject to trading and volatility risks***

The securities of publicly traded companies can experience a high level of price and volume volatility and the value of the Company's securities can be expected to fluctuate depending on various factors, not all of which are directly related to the success of the Company and its operating performance, underlying asset values or prospects. These include the risks described elsewhere in this AIF. Factors which may influence the price of the Company's securities, including the Common Shares, include, but are not limited to:

- worldwide economic conditions;
- changes in government policies;
- investor perceptions;
- movements in global interest rates and global stock markets;
- variations in operating costs;
- the cost of capital that the Company may require in the future;
- metals prices;
- the price of commodities necessary for the Company's operations;
- recommendations by securities research analysts;
- issuances of equity securities or debt securities by the Company;
- operating performance and, if applicable, the share price performance of the Company's competitors;
- the addition or departure of key management and other personnel;
- the expiration of lock-up or other transfer restrictions on outstanding Common Shares (see, "Escrowed Securities and Securities Subjected to Contractual Restriction on Transfer" below);
- significant acquisitions or business combinations, strategic partnerships, joint ventures or capital commitments by or involving the Company or its competitors;
- news reports relating to trends, concerns, technological or competitive developments, regulatory changes and other related industry and market issues affecting the mining sector;
- litigation;
- publicity about the Company, the Company's personnel or others operating in the industry;
- loss of a major funding source; and
- all market conditions that are specific to the mining industry.

There can be no assurance that such fluctuations will not affect the price of the Company's securities, and consequently purchasers of Common Shares may not be able to sell Common Shares at prices equal to or greater than the price or value at which they purchased the Common Shares or acquired them by way of the secondary market.

In addition, the Company has a number of shareholders who have held the Company's securities since September 2016, during which time there has not been a public market for the Company's securities. There is a risk that the future sale of a substantial number of Common Shares by such shareholders or the perception that such sales could occur, could have a material adverse effect on the market price of the Common Shares.

***Sales by existing shareholders can reduce share prices***

Sales of a substantial number of Common Shares in the public market could occur at any time. These sales, or the market perception that the holders of a large number of Common Shares intend to sell Common Shares, could reduce the market price of the Common Shares. If this occurs and continues, it could impair the Company's ability to raise additional capital through the sale of securities.

***The Company does not intend to pay dividends***

The Company has not, since the date of its incorporation, declared or paid any dividends or other distributions on its Common Shares. The Company anticipates that, for the foreseeable future, it will retain its cash resources for the operation and development of its business. The declaration and payment of any dividends in the future is at the discretion of the Board and will depend on numerous factors, including compliance with applicable laws, financial performance, working capital



requirements of the Company and such other factors as its directors consider appropriate, and the Company may never pay dividends.

While the Company does not have any restrictions on paying dividends itself, pursuant to the restructured loan agreements with the Bank of Nova Scotia, Santander Bank and Banco ABC Brasil, MCSA is prohibited from distributing dividends and interest on net equity or any other resource to its shareholders, including the Company. This may impede the Company's ability to declare or pay any dividends or other distributions on its Common Shares.

***Public companies are subject to securities class action litigation risk***

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. If the Company faces such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could materially harm its business.

***If securities or industry analysts do not publish research or publish inaccurate or unfavourable research about the Company's business, the price and trading volume of the Common Shares could decline***

The trading market for the Common Shares will depend on the research and reports that securities or industry analysts publish about the Company and its business. The Company does not have any control over these analysts. The Company cannot assure that analysts will cover it or provide accurate or favourable coverage. If one or more of the analysts who cover the Company downgrade its stock or change their opinion of the Common Shares, price of Common Shares would likely decline. If one or more of these analysts cease coverage of the Company or fail to regularly publish reports, the Company could lose visibility in the financial markets, which could cause the price and trading volume of the Common Shares to decline.

***Global financial conditions can reduce the price of the Common Shares***

Following the onset of the credit crisis in 2008, global financial conditions were characterized by extreme volatility and several major financial institutions either went into bankruptcy or were rescued by governmental authorities. While global financial conditions subsequently stabilized, there remains considerable risk in the system given the extraordinary measures adopted by government authorities to achieve that stability. Global financial conditions could suddenly and rapidly destabilize in response to future economic shocks, as government authorities may have limited resources to respond to future crises. Future economic shocks may be precipitated by a number of causes, including a rise in the price of oil, geopolitical instability and natural disasters. Any sudden or rapid destabilization of global economic conditions could impact the Company's ability to obtain equity or debt financing in the future on terms favourable to the Company. Additionally, any such occurrence could cause decreases in asset values that are deemed to be other than temporary, which may result in impairment losses. Further, in such an event, the Company's operations and financial condition could be adversely impacted.

Furthermore, general market, political and economic conditions, including, for example, inflation, interest and currency exchange rates, structural changes in the global mining industry, global supply and demand for commodities, political developments, legislative or regulatory changes, social or labour unrest and stock market trends will affect the Company's operating environment and its operating costs, profit margins and share price. Any negative events in the global economy could have a material adverse effect on the Company's business, financial condition, results of operations, cash flows or prospects.

## **DIVIDENDS AND DISTRIBUTIONS**

The Company has not, since the date of its incorporation, declared or paid any dividends or other distributions on its Common Shares, and does not currently have a policy with respect to the payment of dividends or other distributions. The Company anticipates that for the foreseeable future it will retain future earnings, if any, and other cash resources for the operation and development of its business. The declaration and payment of any dividends in the future is at the discretion of the Board and will depend on numerous factors, including compliance with applicable laws, financial performance, working capital requirements of the Company and its subsidiaries and such other factors as its directors consider appropriate.

While the Company does not have any restrictions on paying dividends itself, pursuant to the restructured loan agreements with the Bank of Nova Scotia, Santander Bank and Banco ABC Brasil, MCSA is prohibited from distributing dividends and interest on net equity or any other resource to its shareholders, including the Company.

## DESCRIPTION OF CAPITAL STRUCTURE

The Company's authorized share capital consists of an unlimited number of Common Shares without par value. As at March 28, 2018, there are 84,455,650 Common Shares issued and outstanding, 3,678,000 Common Shares issuable pursuant to outstanding options of the Company to purchase Common Shares ("Options") pursuant to the stock option plan of the Company adopted by the Board on May 15, 2017 and 3,333,328 Common Shares issuable pursuant to outstanding Founder Warrants.

All of the Common Shares rank equally as to voting rights, participation in a distribution of the assets of the Company on a liquidation, dissolution or winding-up of the Company and entitlement to any dividends declared by the Company. The holders of the Common Shares are entitled to receive notice of, and to attend and vote at, all meetings of shareholders (other than meetings at which only holders of another class or series of shares are entitled to vote). Each Common Share carries the right to one vote. In the event of the liquidation, dissolution or winding-up of the Company, or any other distribution of the assets of the Company among its shareholders for the purpose of winding-up its affairs, the holders of the Common Shares will be entitled to receive, on a pro rata basis, all of the assets remaining after the payment by the Company of all of its liabilities. The holders of Common Shares are entitled to receive dividends as and when declared by the Board in respect of the Common Shares on a pro rata basis.

Any alteration of the rights, privileges, restrictions and conditions attaching to the Common Shares under the Company's Articles of Incorporation ("Articles") must be approved by at least two-thirds of the Common Shares voted at a meeting of the Company's shareholders.

## MARKET FOR SECURITIES

### Market

The Common Shares commenced trading on the TSX under the symbol "ERO" on October 19, 2017.

### Trading Price and Volume

The following sets out information relating to the monthly trading of the Common Shares on the TSX for the months indicated.

Period	High (\$)	Low (\$)	Volume
October 19 to 31, 2017	5.23	4.70	2,300,792
November 2017	7.01	5.06	1,378,244
December 2017	7.60	6.47	356,688

The closing price of the Common Shares as quoted by the TSX on December 29, 2017 was \$7.58 and on March 28, 2018 was \$8.40.

### Prior Sales

The following table summarizes the securities of the Company that are outstanding but not listed or quoted on a marketplace that have been issued by the Company during the financial year ended December 31, 2017:

Date of Issue	Type of Securities	Aggregate Number Issued	Exercise Price
May 15, 2017	Options	1,615,000	US\$1.50
July 10, 2017	Options	100,000	US\$1.50
November 24, 2017	Options	318,000	C\$6.48
December 7, 2017	Options	1,460,000	C\$6.74

## ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTION ON TRANSFER

The following table sets forth, as of the date of this AIF, the number of securities of each class of securities of the Company held, to the knowledge of the Company, in escrow or that are subject to a contractual restriction on transfer and the percentage that number represents of the outstanding securities of that class for the Company's most recently completed financial year.

Designation of Class	Number of Securities Held in Escrow or that are Subject to a Contractual Restriction on Transfer	Percentage of Class
Common Shares	50,008,313 <sup>(1)(2)</sup>	59.21% <sup>(3)</sup>
Founder Warrants	3,333,328 <sup>(1)(2)</sup>	100%

### Notes:

- (1) 10,500,000 Common Shares and 3,333,328 Founder Warrants are subject to the terms of escrow agreements (the “Escrow Agreements”) entered into among the Company, Computershare Trust Company of Canada as escrow agent (the “Escrow Agent”) and each holder of subject securities. The securities subject to the Escrow Agreements will be released from escrow upon receipt by the Escrow Agent of a direction confirming the release date, delivered on behalf of the Company and the securityholders subject to the Escrow Agreements, on December 12, 2018. These securities are also subject to lock-up agreements, as described in Note (2), immediately below.
- (2) Pursuant to the Underwriting Agreement, other than in connection with the secondary offering, each of the directors, officers and principal shareholders of the Company and certain other persons as mutually agreed to by the Company and the Underwriters, entered into lock-up agreements pursuant to which, for a period of 180 days from the October 19, 2017 closing date of the Offering, each such person has agreed not to, among other things, directly or indirectly, offer, sell, contract to sell, grant any option to purchase, make any short sale, or otherwise dispose of, or transfer, or announce any intention to do so, any Common Shares or securities convertible into or exercisable or exchangeable for Common Shares, including the Founder Warrants (subject to certain exemptions provided to a limited number of shareholders of the Company party to such lock-up agreements).
- (3) Presented on a non-diluted basis. As at March 28, 2018, there are 84,455,650 Common Shares issued and outstanding.

## DIRECTORS AND EXECUTIVE OFFICERS

### Director and Executive Officer Profiles

The following table sets forth the name of each director and executive officer of the Company as at December 31, 2017 and the date of this AIF, their province or state and country of residence, their position(s) and office(s) held with the Company, their principal occupation(s) during the preceding five years, the date they became a director of the Company, if applicable, and the number and percentage of Common Shares they beneficially own, or control or direct, directly or indirectly. Each director's term will expire immediately prior to the next annual meeting of shareholders of the Company.

Name and Residence	Position(s) and Office(s) with Ero	Principal Occupation(s) During Past Five Years	Director Since	Number of Common Shares Held <sup>(1)</sup>
Christopher Noel Dunn <sup>(16)(17)</sup> Massachusetts, USA	Executive Chairman Director	Executive Chairman, Ero Copper Corp. since May 16, 2016; Co-Managing Partner of Ero Resource Partners LLC since February 2014 (currently inactive); Managing Director of Liberty Metals & Mining LLC from 2011 until 2013.	May 16, 2016	3,026,667 <sup>(2)</sup>
David Strang <sup>(17)</sup> British Columbia, Canada	President and Chief Executive Officer Director	Director, President and Chief Executive Officer, Ero Copper Corp. since May 16, 2016; Co-Managing Partner of Ero Resource Partners LLC since February 2014 (currently inactive); CEO and Director, Lumina Copper Corp. from August 2008 until August 2014.	May 16, 2016	5,255,936 <sup>(3)</sup>
Wayne Drier British Columbia, Canada	Chief Financial Officer	Chief Financial Officer, Ero Copper Corp. since March 2017; Executive, Corporate Development, Asanko Gold Inc. from July 2014 until March 2017; Vice President: Strategy & Development, Coalspur Mines Ltd. from July 2011 until June 2014.	-	166,333 <sup>(4)</sup>

<b>Name and Residence</b>	<b>Position(s) and Office(s) with Ero</b>	<b>Principal Occupation(s) During Past Five Years</b>	<b>Director Since</b>	<b>Number of Common Shares Held<sup>(1)</sup></b>
Michel (Mike) Richard Santiago, Chile	Chief Geological Officer	Chief Geological Officer (previously, Senior Vice President Exploration), Ero Copper Corp. since January 2017; Director New Business Development South America, Lundin Mining Corporation from April 2012 to January 2016; General Manager TEMCL, Teck Resources Limited from May 1994 to March 2012.	-	2,000,000 <sup>(5)</sup>
Makko DeFilippo Arizona, USA	Vice President, Corporate Development	Vice President, Corporate Development, Ero Copper Corp. since February 2017; Director Corporate Finance, Global Mining Advisory Practice from January 2016 until January 2017; Partner, Ero Resource Partners from January 2014 until January 2016; Investment Analyst, Liberty Metals & Mining, LLC from October 2011 until December 2013.	-	6,324 <sup>(6)</sup>
Michal Romanowski Arizona, USA	Vice President, Evaluations and Planning	Vice President, Evaluations and Planning, Ero Copper Corp. since January 2017; Partner, Ero Resource Partners LLC from May 2014 until December 2016; Investment Analyst, Liberty Metals & Mining LLC from January 2013 until April 2014; Principal Consultant, Romanowski & Company from January 2011 until December 2013.	-	200,000 <sup>(7)</sup>
Jonathan Singh British Columbia, Canada	Vice President, Finance	Vice President, Finance, Ero Copper Corp. since February 2017; Chief Financial Officer of: Aurora Mineral Resources Group from September 2011 until January 2016, Kaminak Gold Corporation, from October 2011 until January 2016, Kivalliq Energy Corporation, from October 2011 until January 2016, West Melville Metals Inc., from September 2011 until September 2015, and Bluestone Resources Inc., September 2011 until February 2014.	-	127,333 <sup>(8)</sup>
Deepk Hundal British Columbia, Canada	Vice President, General Counsel and Corporate Secretary	Vice President, General Counsel & Corporate Secretary, Ero Copper Corp. since July 2017; General Counsel, Retirement Concepts Senior Services Ltd. & Pacific Reach Properties Ltd., from July 2014 until July 2017; Vice President, Legal, Elgin Mining from May 2012 until July 2013; Vice President, Legal and Corporate Secretary Aura Minerals Inc. from June 2007 until April 2012.	-	10,526 <sup>(9)</sup>
Matthew Wubs <sup>(14)(15)</sup> British Columbia, Canada	Director	Co-Chief Executive Officer, Westland Insurance Group Ltd. Since January 2016; Chief Financial Officer, Westland Insurance Group Ltd. from January 2002 until December 2015.	July 27, 2016	2,455,935 <sup>(10)</sup>
John Wright <sup>(14)(15)</sup> British Columbia, Canada	Director	Assisting Capstone Mining Corp. in a Business Development role since December 2006.	July 27, 2016	866,666 <sup>(11)</sup>
Lyle Braaten <sup>(14)(15)(16)</sup> British Columbia, Canada	Director	President and Chief Executive Officer, Miedzi Copper Corp. since March 2012; Vice President, Legal, Lumina Gold Corp. since June 2014; Vice President, Legal, Anfield Gold Corp. since May	July 27, 2016	316,666 <sup>(12)</sup>

<u>Name and Residence</u>	<u>Position(s) and Office(s) with Ero</u>	<u>Principal Occupation(s) During Past Five Years</u>	<u>Director Since</u>	<u>Number of Common Shares Held<sup>(1)</sup></u>
Steven Busby <sup>(16)(17)</sup> British Columbia, Canada	Director	2016; Legal Counsel, Alterra Power Corp. since June 2008. Chief Operating Officer of Pan American Silver Corp. since 2008.	July 27, 2016	366,666 <sup>(13)</sup>

**Notes:**

- (1) On a non-diluted basis.
- (2) Mr. Dunn also holds 1,000,000 Founder Warrants and 409,000 Stock Options, entitling him to acquire in the aggregate an additional 1,409,000 Common Shares.
- (3) Mr. Strang also holds 1,000,000 Founder Warrants and 409,000 Stock Options, entitling him to acquire in the aggregate an additional 1,409,000 Common Shares.
- (4) Mr. Drier also holds 715,000 Options, entitling him to acquire in the aggregate an additional 715,000 Common Shares.
- (5) Mr. Richard also holds 666,666 Founder Warrants and 125,000 Stock Options, entitling him to acquire in the aggregate an additional 791,666 Common Shares.
- (6) Mr. DeFilippo also holds 275,000 Options, entitling him to acquire in the aggregate an additional 275,000 Common Shares.
- (7) Mr. Romanowski also holds 66,666 Founder Warrants and 75,000 Stock Options, entitling him acquire in the aggregate an additional 141,666 Common Shares.
- (8) Mr. Singh also holds 150,000 Stock Options, entitling him to acquire in the aggregate an additional 150,000 Common Shares.
- (9) Mr. Hundal also holds 175,000 Stock Options, entitling him to acquire in the aggregate an additional 175,000 Common Shares.
- (10) Mr. Wubs also holds 66,666 Founder Warrants and 30,000 Stock Options, entitling him to acquire in the aggregate an additional 96,666 Common Shares.
- (11) Mr. Wright also holds 66,666 Founder Warrants and 30,000 Stock Options, entitling him to acquire in the aggregate an additional 96,666 Common Shares.
- (12) Mr. Braaten also holds 66,666 Founder Warrants and 30,000 Stock Options, entitling him to acquire in the aggregate an additional 96,666 Common Shares.
- (13) Mr. Busby also holds 66,666 Founder Warrants and 30,000 Stock Options, entitling him to acquire in the aggregate an additional 96,666 Common Shares.
- (14) Member of the Audit Committee. Mr. Wubs is the Chairman of this committee.
- (15) Member of the Compensation Committee. Mr. Wright is the Chairman of this committee.
- (16) Member of the Nominating and Corporate Governance Committee. Mr. Braaten is the chairman of this committee.
- (17) Member of the Environmental, Health, Safety and Sustainability Committee. Mr. Busby is the Chairman of this committee.

Based on the disclosure available on the System for Electronic Disclosure by Insiders (SEDI), as of the date of this AIF, the directors and executive officers of the Company, as a group, beneficially owned, or controlled or directed, directly or indirectly, 14,799,052 Common Shares, representing approximately 17.5% of the total number of Common Shares outstanding before giving effect to the exercise of any Options and Founder Warrants held by such directors and executive officers.

**Cease Trade Orders, Bankruptcies, Penalties or Sanctions**

None of the Company's directors or executive officers is, as at the date hereof, or was within 10 years before the date hereof, 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 securities legislation, that was in effect for a period of more than 30 consecutive days (an "Order") that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer, 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.

None of the Company's directors or executive officers, nor, to its knowledge, any shareholder holding a sufficient number of its securities to affect materially the control of the Company (a) is, as at the date hereof, or has been within the 10 years before the date hereof, 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, or (b) has, within the 10 years before the date hereof, 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 the assets of such director, executive officer or shareholder.

None of the Company's directors or executive officers, nor, to its knowledge, any shareholder holding a sufficient number of its securities to affect materially the control of the Company, has been subject to (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or (b) any other 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.

## **Conflicts of Interest**

To the best of the Company's knowledge, there are no existing or potential material conflicts of interest between the Company and any of its directors or officers as of the date hereof. However, certain of the Company's directors and officers are, or may become, directors or officers of other companies with businesses which may conflict with its business. Accordingly, conflicts of interest may arise which could influence these individuals in evaluating possible acquisitions or in generally acting on the Company's behalf.

Pursuant to the BCBCA, directors and officers of the Company are required to act honestly and in good faith with a view to the best interests of the Company. As required under the BCBCA and the Articles:

- a director or senior officer who holds any office or possesses any property, right or interest that could result, directly or indirectly, in the creation of a duty or interest that materially conflicts with that individual's duty or interest as a director or senior officer of the Company, must promptly disclose the nature and extent of that conflict; and
- a director who holds a disclosable interest (as such term is defined under the BCBCA) in a contract or transaction into which the Company has entered or proposes to enter may generally not vote on any directors' resolution to approve such contract or transaction.

Generally, as a matter of practice, directors and officers who have disclosed a material interest in any contract or transaction that the Board is considering will not take part in any Board discussion respecting that contract or transaction. If on occasion such directors do participate in the discussions, they will refrain from voting on any matters relating to matters in which they have disclosed a material interest. In appropriate cases, the Company will establish a special committee of independent directors to review a matter in which directors or officers may have a conflict.

## **AUDIT COMMITTEE**

The Audit Committee provides assistance to the Board in fulfilling its obligations relating to the integrity of the internal financial controls and financial reporting of the Company. The external auditors of the Company report directly to the Audit Committee. The Audit Committee's primary duties and responsibilities include: (i) reviewing and reporting to the Board on the annual audited financial statements (including the auditor's report thereon) and unaudited interim financial statements and any related management's discussion and analysis, if any, and other financial disclosure related thereto that may be required to be reviewed by the Audit Committee pursuant to applicable legal and regulatory requirements; (ii) reviewing material changes in accounting policies and significant changes in accounting practices and their impact on the financial statements; (iii) overseeing the audit function, including engaging in required discussions with the Company's external auditor and reviewing a summary of the annual audit plan at least annually, overseeing the independence of the Company's external auditor, overseeing the Company's internal auditor, and pre-approving any non-audit services to the Company; (iv) reviewing and discussing with management the appointment of key financial executives and recommending qualified candidates to the Board; (v) reviewing with management and the Company's external auditors, at least annually, the integrity of the internal controls over financial reporting and disclosure; (vi) reviewing management reports related to legal or compliance matters that may have a material impact on the Company and the effectiveness of the Company's compliance policies; and (vii) establishing whistleblowing procedures and investigating any complaints or concerns it deems necessary. The full text of the Audit Committee mandate is attached to this prospectus as Appendix "A".

### **Composition of the Audit Committee**

The Audit Committee is composed of Messrs. Matthew Wubs (Chair), Lyle Braaten and John Wright, all of whom are independent directors and all of whom are financially literate, in each case within the meaning of National Instrument 52-110, *Audit Committees*.

### **Relevant Education and Experience**

Each of the members of the Audit Committee has extensive education and experience relevant to the performance of their responsibilities as members of the Audit Committee.

Matthew Wubs graduated with a B.A. from the University of British Columbia in 1992 and has been a Chartered Professional Accountant since 1996. Mr. Wubs is the Co-Chief Executive Officer of Westland Insurance Group Ltd., one of the largest private insurance brokerage operations in Canada. Westland directly manages over \$700 million in premium volume through

its brokerage, insurance company and wholesale operations. Mr. Wubs is responsible for oversight of insurance, reinsurance, risk management, finance and M&A. He joined Westland in the role of Controller in 1997. In 2001 he was promoted to Chief Financial Officer, a position he held until 2015 when he was promoted to Co-Chief Executive Officer. Previous to Westland, he held a consulting role in Management Information Systems at International Forest Products Ltd. and obtained his Chartered Professional Accountant designation while working at Deloitte LLP. Mr. Wubs is also a director of Westland Insurance Company Limited, a provincially licensed property and casualty insurer and has been on the board's audit committee for 10 years.

Lyle Braaten graduated with a B.Sc. from the University of Calgary in 1986 and an LL.B. from the University of British Columbia in 1989. He was the General Counsel of Magma Energy Corp. from June 2008 to May 2011 when it acquired Plutonic Power Corp. and changed its name to Alterra Power Corp. Prior to joining Magma, he was involved in the management of a mid-sized law firm and served as its Managing Director from 2001 to 2008 with overall responsibility for the oversight of the firm's financial results and reporting. He has been an audit committee member of Lumina Gold Corp. since July 2014 and has at least three years' experience in audit committee positions.

John Wright was a co-founder, and former Director, President and Chief Operating Officer of Pan American Silver Corp. Mr. Wright was also the co-founder of Equinox Resources. Previously, he spent 10 years with Teck Cominco where he worked at the Trail Smelter operations and later participated in the management of the feasibility studies, marketing and mine construction at the Afton, Highmont, Bull Moose and David Bell Mines. Mr. Wright is a former Director of Lumina Copper Corp., Northern Peru Copper Corp., Global Copper Corp. and Regalito Copper Corp. Mr. Wright has been involved in multiple asset purchases and sales and the accounting associated therewith. Mr. Wright was an audit committee member of Northern Peru Copper Corp. and Regalito Copper Corp. and has at least six years' experience in audit committee positions.

### Pre-Approval Policies and Procedures

The Audit Committee mandate requires that the Audit Committee pre-approve any retainer of the auditor of the Company to provide any non-audit services to the Company that it deems advisable in accordance with applicable legal and regulatory requirements and policies and procedures of the Board. The Audit Committee is permitted to delegate pre-approval authority to one of its members; however, the decision of any member of the Audit Committee to whom such authority has been delegated must be presented to the full Audit Committee at its next scheduled meeting.

### External Auditor Service Fees

The following table discloses the aggregate fees billed to the Company and its subsidiaries by its external auditors in the financial years ended December 31, 2017 and 2016:

Financial Year End	Audit Fees <sup>(1)</sup>	Audit Related Fees	Tax Fees	All Other Fees
December 31, 2017	US\$234,000	US\$91,500 <sup>(2)</sup>	US\$22,800 <sup>(3)</sup>	US\$259,200 <sup>(4)</sup>
December 31, 2016	US\$260,400	-	-	-

Note:

- (1) The aggregate fees billed for the audit of the annual consolidated financial statements of the Company and statutory audits of the Company's Brazilian subsidiaries.
- (2) The aggregate fees billed for professional services rendered by the external auditors in connection with an internal review of the unaudited financial statements of the Company for the period ended September 30, 2017, assistance in diagnosing the impacts of adopting and implementing International Financial Reporting Standards on the Company's subsidiaries and specified audit related procedures in Brazil.
- (3) The aggregate fees billed for professional services rendered by the external auditors in connection with the review of income tax and social contribution taxes of the Company's Brazilian subsidiaries for the 2013 to 2017 fiscal years.
- (4) The aggregate fees billed for professional services rendered by the external auditor in connection with the Company's prospectus and related services associated with the Offering.

### PROMOTERS

Christopher Noel Dunn, the Executive Chairman and a director of Ero, may be considered to be a promoter of the Company in that he took the initiative in organizing the business of the Company. The following table sets out the number and percentage

of each class of voting securities and equity securities of Ero beneficially owned, or controlled or directed, directly or indirectly, by Mr. Dunn as at the date of this AIF.

<u>Designation of Class</u>	<u>Number of Securities</u>	<u>Percentage of Class</u>
Common Shares	3,026,667	3.58% <sup>(1)</sup>
Options	409,000	11.12%
Founder Warrants	1,000,000	30.00%

**Notes:**

(1) Calculated on a non-diluted basis. As at March 28, 2018, there are 84,455,650 Common Shares issued and outstanding.

Additional information about Mr. Dunn is disclosed elsewhere in this AIF in connection with his capacity as a director and officer of the Company.

David Strang, the President and Chief Executive Officer and a director of Ero, may be considered to be a promoter of the Company in that he took the initiative in organizing the business of the Company. The following table sets out the number and percentage of each class of voting securities and equity securities of Ero beneficially owned, or controlled or directed, directly or indirectly, by Mr. Strang as at the date of this AIF.

<u>Designation of Class</u>	<u>Number of Securities</u>	<u>Percentage of Class</u>
Common Shares	5,255,936	6.22% <sup>(1)</sup>
Options	409,000	11.12%
Founder Warrants	1,000,000	30.00%

**Notes:**

(1) Calculated on a non-diluted basis. As at March 28, 2018, there are 84,455,650 Common Shares issued and outstanding.

Additional information about Mr. Strang is disclosed elsewhere in this AIF in connection with his capacity as a director and officer of the Company.

Other than as disclosed in this AIF, neither Mr. Dunn nor Mr. Strang have received, directly or indirectly, anything of value, including money, property, contracts, options or rights of any kind from Ero or its subsidiaries, and neither Ero nor its subsidiaries have received any assets, services or other consideration from Mr. Dunn or Mr. Strang in return.

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

To the Company's knowledge, there are no legal proceedings material to the Company to which it is a party, or has been a party to, or of which any of its property is the subject matter of, or was the subject matter of, since the beginning of the financial year ended December 31, 2017, and no such proceedings or actions are known by the Company to be contemplated.

There have been no penalties or sanctions imposed against the Company by a court relating to securities legislation or by a securities regulatory authority during the financial year ended December 31, 2017 or other penalties or sanctions imposed by a court or regulatory body against the Company since incorporation that would likely be considered important to a reasonable investor in making an investment decision, and the Company has not entered into any settlement agreements before a court relating to securities legislation or with a securities regulatory authority during the financial year ended December 31, 2017.

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

Other than as described below or as disclosed elsewhere herein, no director or executive officer of the Company or any of its subsidiaries or any person or company that beneficially owns, or controls or directs, directly or indirectly, more than 10 percent of the outstanding Common Shares, or any of their respective associates or affiliates, has or has had any material interest, direct or indirect, in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or is reasonably expected to materially affect the Company or any of its subsidiaries.



On January 18, 2017, the Company completed a private placement offering, issuing an aggregate principle amount of US\$2,750,000 of General Debentures as described in this AIF under the heading “*General Development and Business of the Company – Three Year History*”. David Strang, the President and Chief Executive Officer of the Company and Matthew Wubs, a director of the Company, each participated in the offering by subscribing to US\$500,000 of General Debentures. In January 2018, Messrs Strang and Wubs both exercised their option to convert the outstanding principal and accrued and unpaid interest (US\$53,562) on their General Debentures into General Debenture Units and concurrently exercised the underlying General Warrants. As a result, they were each issued an aggregate of 922,602 Common Shares by the Company, of which, 184,520 Common Shares were issued upon exercise of the underlying General Warrants.

### AUDITORS, TRANSFER AGENT AND REGISTRAR

The Company’s auditors are KPMG LLP, Chartered Professional Accountants, having an address at 777 Dunsmuir Street, 11<sup>th</sup> Floor, Vancouver, British Columbia, Canada, V7Y 1K3.

The transfer agent and registrar for the Common Shares is Computershare Investor Services Inc., at its principal office in Vancouver, British Columbia. The warrant agent for the Founder Warrants is Computershare Trust Company of Canada, at its principal office in Vancouver, British Columbia.

### MATERIAL CONTRACTS

Except for material contracts entered into in the ordinary course of business, set out below are material contracts to which the Company or any of its subsidiaries are a party, entered into prior to or since the date of incorporation of the Company and which still remain in effect and material to the Company. Copies of such material contracts are available for review under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com).

- The investor rights agreement dated March 22, 2017 between the Company and Tembo Capital Mining Fund II LP, acting by its general partner, Tembo Capital Mining GP LP, acting by its general partner, Tembo Capital Mining GP Ltd. (“**Tembo**”) entered into in connection with the Company’s private placement offering of 18,423,593 Common Shares at a price of US\$1.50 per Common Share on March 22, 2017 (“**Tembo Investor Rights Agreement**”). Pursuant to the Tembo Investor Rights Agreement, for so long as Tembo’s affiliate, Ndovu Capital IX B.V. (“**Ndovu**”), holds at least 5% of the issued and outstanding Common Shares, Ndovu is entitled to request from the Company, among other things, monthly reports of financial and operation performance, and meetings with management of the Company, and has a participation right to subscribe for Common Shares, securities convertible into or exchangeable for Common Shares, or any other securities of the Company, as applicable, in order to preserve its proportionate interest in the total issued and outstanding Common Shares, in connection with any equity financings and certain other non-cash transactions involving the issuance of equity securities by the Company;
- the Private Deed of the 5th Issue of Simple Debentures, Nonconvertible into Shares, in Two Series, of the Unsecured Type with Additional Personal Guarantee, to be Converted Into in Rem and Personal Guarantee, for Public Distribution with Restricted Placement Efforts of MCSA dated December 15, 2016 among MCSA, Pentágono S.A. Distribuidora de Títulos e Valores Mobiliários and NX Gold. This loan originally comprised a US\$29.912 million debt obligation. Pursuant to the foregoing restructuring agreement, the loan was split into US\$11.965 million in Class A notes and US\$17.947 million in Class B notes, with an annual interest rate of 8.83% and a maturity date of November 15, 2026, please see “*General Development and Business of the Company – Three Year History*” for further information;
- the (i) Third Amendment and Restatement of Bank Credit Certificate – No. 4051233 dated December 2, 2016 among Banco Santander (Brasil) S.A., Banco Santander (Brasil) S.A., Grand Cayman Branch, MCSA and NX Gold; (ii) Fourth Amendment and Restatement of Bank Credit Certificate – No. 4050555 (Current 4058762) (Import Financing) dated December 2, 2016 among Banco Santander (Brasil) S.A., Banco Santander (Brasil) S.A., Grand Cayman Branch, MCSA and NX Gold; and (iii) Private Instrument of Acknowledgement and Payment of Debt dated December 2, 2016 among Banco Santander (Brasil) S.A., MCSA and NX Gold. This loan originally comprised a US\$59.082 million debt obligation. Pursuant to the foregoing restructuring agreements, the loan was split into US\$23.633 million in Class A notes and US\$35.449 million in Class B notes, with an annual interest rate of 8.83% and a maturity date of November 15, 2026, please see “*General Development and Business of the Company – Three Year History*” for further information;
- the (i) First Amendment of the Public Deed of Rectification and Ratification to the Public Deed of Credit Opening Registered in Book 006/2011 on Sheets 61 to 83V Both sides, on February 23, 2011, at the Notary Office for the District of Jaguarari, Bahia, Signed Between the Northeast Bank of Brazil S.A. and the Credited Signed at the End, with Mortgage Guarantee, Registered in Book 2-A of the General Registry under Number R-10/151 on February 23, 2011 dated December 29, 2016 between Banco do Nordeste do Brasil S.A. and MCSA (ii) Budget Attachment to

Public Deed for Credit Opening dated February 23, 2011 between Banco do Nordeste do Brasil S.A. and MCSA; (iii) General Provisions of Public Deed for Credit Opening dated February 23, 2011 between Banco do Nordeste do Brasil S.A. and MCSA; and (iv) Public Deed for Credit Opening dated February 23, 2011 between Banco do Nordeste do Brasil S.A. and MCSA. This loan originally comprised a US\$12.088 million debt obligation, with an annual interest rate of 10%. Pursuant to the restructuring, the principle is not payable for 29 months commencing on December 2, 2016, the annual interest rate is subject to a 25% discount if the interest payments are made on the due dates and the maturity date of the loan is now December 29, 2026, please see “*General Development and Business of the Company – Three Year History*” for further information;

- Underwriting Agreement referred to under “*General Development and Business of the Company – Three Year History*”; and
- the Credit Agreement and the Participation Agreement referred to under “*General Development and Business of the Company – Three Year History*”.

## INTEREST OF EXPERTS

Information of a scientific or technical nature in respect of the Vale do Curaçá Property is included in this AIF based upon the Vale do Curaçá Technical Report, dated September 7, 2017 with an effective date of June 1, 2017, prepared by Rubens Mendonça, MAusIMM, of SRK Brazil as at the date of the report (now of Planminas), and Porfirio Cabaleiro Rodrigues, MAIG, Mário Conrado Reinhardt, MAIG, Fábio Valério Xavier, MAIG and Bernardo H.C. Viana, MAIG, all of GE21, who are “qualified persons” and “independent” of the Company within the meanings of NI 43-101. In addition, information of a scientific or technical nature set out in the AIF under the heading “*Vale do Curaçá Property – Updated Information with respect to the Vale do Curaçá Property*”, has been reviewed and approved by Rubens Mendonça, MAusIMM, of Planminas (formerly of SRK Brazil), who is a “qualified person” and “independent” of the Company within the meanings of NI 43-101. To the best of the Company’s knowledge, after reasonable inquiry, as of the date hereof, the aforementioned individuals and their firms do not beneficially own, directly or indirectly, any Common Shares.

Information of a scientific or technical nature in respect of the Boa Esperança Property is included in this AIF based upon the Boa Esperança Technical Report, dated September 7, 2017 with an effective date of June 1, 2017, prepared by Rubens Mendonça, MAusIMM, of SRK Brazil as at the date of the report (now of Planminas) and Carlos Barbosa, MAIG, and Girogio di Tomi, MAusIMM, both of SRK Brazil, who are “qualified persons” and “independent” of the Company within the meanings of NI 43-101. To the best of the Company’s knowledge, after reasonable inquiry, as of the date hereof, the aforementioned individuals and their firms do not beneficially own, directly or indirectly, any Common Shares.

KPMG LLP, Chartered Professional Accountants, the auditors of the Company, has advised the Company that it is independent of the Company in accordance with the Rules of Professional Conduct of the Chartered Professional Accountants of British Columbia.

## ADDITIONAL INFORMATION

Additional information relating to the Company may be found under the Company’s profile on SEDAR at [www.sedar.com](http://www.sedar.com). Additional information, including directors’ and officers’ remuneration and indebtedness, principal holders of the Company’s securities, and securities authorized for issuance under equity compensation plans, is contained in the Company’s information circular for its most recent annual meeting of shareholders that involves the election of directors.

Financial information is provided in the Company’s annual audited consolidated financial statements for the year ended December 31, 2017 and the Management’s Discussion and Analysis relating thereto and may be found on SEDAR.

Copies of these documents may be obtained by contacting the Company at:

Ero Copper Corp.  
Suite 1050 – 625 Howe Street  
Vancouver, B.C. V6C 2T6  
Tel: (604) 449-9244  
Fax: (604) 398-3767  
Email: [info@erocopper.com](mailto:info@erocopper.com)

**APPENDIX “A”  
ERO COPPER CORP.  
AUDIT COMMITTEE MANDATE**

**1. Introduction**

The Audit Committee (the “**Committee**” or the “**Audit Committee**”) of Ero Copper Corp. (“**Ero**” or the “**Company**”) is a committee of the Board of Directors (the “**Board**”) of the Company. The Committee shall oversee the accounting and financial reporting practices of the Company and the audits of the Company’s financial statements and exercise the responsibilities and duties set out in this Mandate.

**2. Membership**

*Number of Members*

The Committee shall be composed of three or more members of the Board.

*Independence of Members*

Each member of the Committee must be independent, subject to any exemptions or relief that may be granted from such requirement. “Independent” shall have the meaning, as the context requires, given to it in National Instrument 52-110 Audit Committees, as may be amended from time to time.

*Chair*

At the time of the annual appointment of the members of the Audit Committee, the Board shall appoint a Chair of the Audit Committee. The Chair shall be a member of the Audit Committee, preside over all Audit Committee meetings, coordinate the Audit Committee’s compliance with this Mandate, work with management to develop the Audit Committee’s annual work-plan and provide reports of the Audit Committee to the Board.

*Financial Literacy of Members*

At the time of his or her appointment to the Committee, each member of the Committee shall have, or shall acquire within a reasonable time following appointment to the Committee, the ability to read and understand a set of financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues that can reasonably be expected to be raised by the Company’s financial statements.

*Term of Members*

The members of the Committee shall be appointed annually by the Board. Each member of the Committee shall serve at the pleasure of the Board until the member resigns, is removed, or ceases to be a member of the Board. Unless a Chair is elected by the Board, the members of the Committee may designate a Chair by majority vote of the full Committee membership.

**3. Meetings**

*Number of Meetings*

The Committee may meet as many times per year as necessary to carry out its responsibilities.

*Quorum*

No business may be transacted by the Committee at a meeting unless a quorum of the Committee is present. A majority of members of the Committee shall constitute a quorum.

### ***Calling of Meetings***

The Chair, any member of the Audit Committee, the external auditors, the Chairman of the Board, the Chief Executive Officer or the Chief Financial Officer may call a meeting of the Audit Committee by notifying the Company's Corporate Secretary who will notify the members of the Audit Committee. The Chair shall chair all Audit Committee meetings that he or she attends, and in the absence of the Chair, the members of the Audit Committee present may appoint a chair from their number for a meeting.

### ***Minutes; Reporting to the Board***

The Committee shall maintain minutes or other records of meetings and activities of the Committee in sufficient detail to convey the substance of all discussions held. Upon approval of the minutes by the Committee, the minutes shall be circulated to the members of the Board. However, the Chair may report orally to the Board on any matter in his or her view requiring the immediate attention of the Board.

### ***Attendance of Non-Members***

The external auditors are entitled to attend and be heard at each Audit Committee meeting. In addition, the Committee may invite to a meeting any officers or employees of the Company, legal counsel, advisors and other persons whose attendance it considers necessary or desirable in order to carry out its responsibilities. At least once per year, the Committee shall meet with the internal auditor and management in separate sessions to discuss any matters that the Committee or such individuals consider appropriate.

### ***Meetings without Management***

The Committee shall hold unscheduled or regularly scheduled meetings, or portions of meetings, at which management is not present.

### ***Procedure***

The procedures for calling, holding, conducting and adjourning meetings of the Committee shall be the same as those applicable to meetings of the Board.

### ***Access to Management***

The Committee shall have unrestricted access to the Company's management and employees and the books and records of the Company.

## **4. Duties and Responsibilities**

The Committee shall have the functions and responsibilities set out below as well as any other functions that are specifically delegated to the Committee by the Board and that the Board is authorized to delegate by applicable laws and regulations. In addition to these functions and responsibilities, the Committee shall perform the duties required of an audit committee by any exchange upon which securities of the Company are traded, or any governmental or regulatory body exercising authority over the Company, as are in effect from time to time (collectively, the "**Applicable Requirements**").

### ***Financial Reports***

#### **(a) General**

The Audit Committee is responsible for overseeing the Company's financial statements and financial disclosures. Management is responsible for the preparation, presentation and integrity of the Company's financial statements and financial disclosures and for the appropriateness of the accounting principles and the reporting policies used by the Company. The auditors are responsible for auditing the Company's annual consolidated financial statements and for reviewing the Company's unaudited interim financial statements.

**(b) Review of Annual Financial Reports**

The Audit Committee shall review the annual consolidated audited financial statements of the Company, the auditors' report thereon and the related management's discussion and analysis of the Company's financial condition and results of operation ("MD&A"). After completing its review, if advisable, the Audit Committee shall approve and recommend for Board approval the annual financial statements and the related MD&A.

**(c) Review of Interim Financial Reports**

The Audit Committee shall review the interim consolidated financial statements of the Company, the auditors' review report thereon and the related MD&A. After completing its review, if advisable, the Audit Committee shall approve and recommend for Board approval the interim financial statements and the related MD&A.

**(d) Review Considerations**

In conducting its review of the annual financial statements or the interim financial statements, the Audit Committee shall:

- (i) meet with management and the auditors to discuss the financial statements and MD&A;
- (ii) review the disclosures in the financial statements;
- (iii) review the audit report or review report prepared by the auditors;
- (iv) discuss with management, the auditors, and internal legal counsel (if any), as requested, any litigation claim or other contingency that could have a material effect on the financial statements;
- (v) review the accounting policies followed and critical accounting and other significant estimates and judgements underlying the financial statements as presented by management;
- (vi) review any material effects of regulatory accounting initiatives or off-balance sheet structures on the financial statements as presented by management, including requirements relating to complex or unusual transactions, significant changes to accounting principles and alternative treatments under Canadian GAAP;
- (vii) review any material changes in accounting policies and any significant changes in accounting practices and their impact on the financial statements as presented by management;
- (viii) review management's report on the effectiveness of internal controls over financial reporting;
- (ix) review the factors identified by management as factors that may affect future financial results;
- (x) review results of the Company's audit committee whistleblower hotline program; and
- (xi) review any other matters, related to the financial statements, that are brought forward by the auditors, management or which are required to be communicated to the Audit Committee under accounting policies, auditing standards or Applicable Requirements.

**(e) Approval of Other Financial Disclosures**

The Audit Committee shall review and, if advisable, approve and recommend for Board approval financial disclosure in a prospectus or other securities offering document of the Company, press releases disclosing, or based upon, financial results of the Company and any other material financial disclosure, including financial guidance provided to analysts, rating agencies or otherwise publicly disseminated.

## *Auditors*

### **(a) General**

The Audit Committee shall be responsible for oversight of the work of the auditors, including the auditors' work in preparing or issuing an audit report, performing other audit, review or attest services or any other related work.

### **(b) Nomination and Compensation**

The Audit Committee shall review and, if advisable, select and recommend for Board approval the external auditors to be nominated and the compensation of such external auditor. The Audit Committee shall have ultimate authority to approve all audit engagement terms and fees, including the auditors' audit plan.

### **(c) Resolution of Disagreements**

The Audit Committee shall resolve any disagreements between management and the auditors as to financial reporting matters brought to its attention.

### **(d) Discussions with Auditors**

At least annually, the Audit Committee shall discuss with the auditors such matters as are required by applicable auditing standards to be discussed by the auditors with the Audit Committee.

### **(e) Audit Plan**

At least annually, the Audit Committee shall review a summary of the auditors' annual audit plan. The Audit Committee shall consider and review with the auditors any material changes to the scope of the plan.

### **(f) Quarterly Review Report**

The Audit Committee shall review a report prepared by the auditors in respect of each of the interim financial statements of the Company.

### **(g) Independence of Auditors**

At least annually, and before the auditors issue their report on the annual financial statements, the Audit Committee shall obtain from the auditors a formal written statement describing all relationships between the auditors and the Company; discuss with the auditors any disclosed relationships or services that may affect the objectivity and independence of the auditors; and obtain written confirmation from the auditors that they are objective and independent within the meaning of the applicable Rules of Professional Conduct/Code of Ethics adopted by the provincial institute or order of chartered professional accountants to which the auditors belong and other Applicable Requirements. The Audit Committee shall take appropriate action to oversee the independence of the auditors.

### **(h) Evaluation and Rotation of Lead Partner**

At least annually, the Audit Committee shall review the qualifications and performance of the lead partner(s) of the auditors and determine whether it is appropriate to adopt or continue a policy of rotating lead partners of the external auditors.

### **(i) Requirement for Pre-Approval of Non-Audit Services**

The Audit Committee shall approve in advance any retainer of the auditors to perform any non-audit service to the Company that it deems advisable in accordance with Applicable Requirements and Board approved policies and procedures. The Audit Committee may delegate pre-approval authority to a member of the Audit Committee. The decisions of any member of the Audit Committee to whom this authority has been delegated must be presented to the full Audit Committee at its next scheduled Audit Committee meeting.

**(j) Approval of Hiring Policies**

The Audit Committee shall review and approve the Company's hiring policies regarding partners, employees and former partners and employees of the present and former external auditors of the Company.

**(k) Communication with Internal Auditor**

The internal auditor shall report regularly to the Committee. The Committee shall review with the internal auditor any problem or difficulty the internal auditor may have encountered including, without limitation, any restrictions on the scope of activities or access to required information, and any significant reports to management prepared by the internal auditing department and management's responses thereto.

The Committee shall periodically review and approve the mandate, plan, budget and staffing of the internal audit department. The Committee shall direct management to make changes it deems advisable in respect of the internal audit function.

The Committee shall review the appointment, performance and replacement of the senior internal auditing executive and the activities, organization structure and qualifications of the persons responsible for the internal audit function.

**(l) Financial Executives**

The Committee shall review and discuss with management the appointment of key financial executives and recommend qualified candidates to the Board, as appropriate.

***Internal Controls***

**(a) General**

The Audit Committee shall review the Company's system of internal controls.

**(b) Establishment, Review and Approval**

The Audit Committee shall require management to implement and maintain appropriate systems of internal controls in accordance with Applicable Requirements, including internal controls over financial reporting and disclosure and to review, evaluate and approve these procedures. At least annually, the Audit Committee shall consider and review with management and the auditors:

- (i) the effectiveness of, or weaknesses or deficiencies in: the design or operation of the Company's internal controls (including computerized information system controls and security); the overall control environment for managing business risks; and accounting, financial and disclosure controls (including, without limitation, controls over financial reporting), non-financial controls, and legal and regulatory controls and the impact of any identified weaknesses in internal controls on management's conclusions;
- (ii) any significant changes in internal controls over financial reporting that are disclosed, or considered for disclosure, including those in the Company's periodic regulatory filings;
- (iii) any material issues raised by any inquiry or investigation by the Company's regulators;
- (iv) the Company's fraud prevention and detection program, including deficiencies in internal controls that may impact the integrity of financial information, or may expose the Company to other significant internal or external fraud losses and the extent of those losses and any disciplinary action in respect of fraud taken against management or other employees who have a significant role in financial reporting; and
- (v) any related significant issues and recommendations of the auditors together with management's responses thereto, including the timetable for implementation of recommendations to correct weaknesses in internal controls over financial reporting and disclosure controls.

### ***Compliance with Legal and Regulatory Requirements***

The Audit Committee shall review reports from the Company's management members on: legal or compliance matters that may have a material impact on the Company; the effectiveness of the Company's compliance policies; and any material communications received from regulators. The Audit Committee shall review management's evaluation of and representations relating to compliance with specific applicable law and guidance, and management's plans to remediate any deficiencies identified.

### ***Audit Committee Hotline Whistleblower Procedures***

The Audit Committee shall 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. Any such complaints or concerns that are received shall be reviewed by the Audit Committee and, if the Audit Committee determines that the matter requires further investigation, it will direct the Chair of the Audit Committee to engage outside advisors, as necessary or appropriate, to investigate the matter and will work with management and the general counsel to reach a satisfactory conclusion.

### ***Audit Committee Disclosure***

The Audit Committee shall prepare, review and approve any audit committee disclosures required by Applicable Requirements in the Company's disclosure documents.

### ***Delegation***

The Audit Committee may, to the extent permissible by Applicable Requirements, designate a sub-committee to review any matter within this mandate as the Audit Committee deems appropriate.

## **5. Independent Advisors**

The Audit Committee shall have the authority to retain external legal counsel, consultants or other advisors to assist it in fulfilling its responsibilities and to set and pay the respective compensation for these advisors without consulting or obtaining the approval of the Board or any Company officer. The Company shall provide appropriate funding, as determined by the Audit Committee, for the services of these advisors.

## **6. No Rights Created**

This Mandate is a statement of broad policies and is intended as a component of the flexible governance framework within which the Audit Committee, functions. While it should be interpreted in the context of all applicable laws, regulations and listing requirements, as well as in the context of the Company's Notice of Articles and Articles, it is not intended to establish any legally binding obligations.

## **7. Mandate Review**

The Committee shall review and update this Mandate annually and present it to the Board for approval.

Adopted: May 15, 2017