

# lundin mining

**Annual Information Form  
For the Year Ended December 31, 2013**

**March 31, 2014**

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## DEFINITIONS

In this Annual Information Form all units are SI metric unless otherwise noted. Abbreviations are as defined below unless the context otherwise indicates:

**Ag** means silver.

**AIF** means this Annual Information Form.

**ARMC** means Amended and Restated Mining Convention.

**C\$** means Canadian dollars.

**CIM** means the Canadian Institute of Mining, Metallurgy and Petroleum.

**CIM Standards** means the definitions adopted by CIM Council on November 27, 2010, which were adopted by the Canadian Securities Administrators in National Instrument 43-101.

**Co** means cobalt.

**Cu** means copper.

**DRC** means Democratic Republic of the Congo.

**Dollars** or **\$** means United States dollars.

**€** means the Euro.

**Eagle Project or Eagle** means Eagle Mine LLC (United States), a wholly-owned indirect subsidiary of the Company that owns the Eagle project located in the state of Michigan, United States of America.

**Equinox** means Equinox Minerals Limited.

**EuroZinc** means EuroZinc Mining Corporation, which was acquired by the Company on October 31, 2006 and subsequently amalgamated with the Company effective November 30, 2006.

**FCX or Freeport** means Freeport-McMoRan Copper & Gold Inc., a premier U.S. based natural resource company with an industry leading global portfolio of mineral assets, significant oil and gas resources and a growing production profile. FCX has headquarters in Phoenix, Arizona, and owns the majority of TF Holdings and Freeport Cobalt and is indirectly majority owner and operator of TFM.

**Freeport Cobalt** means Freeport Cobalt Oy a large scale cobalt chemical refinery located in Kokkola, Finland and the related sales and marketing areas.

**Freeport-McMoRan Corporation or FMC** means the company formally called Phelps Dodge Corporation.

**GAAP** means generally accepted accounting principles.

**Galmoy** means Galmoy Mines Ltd. (Ireland), a wholly-owned indirect subsidiary of the Company that owns the Galmoy mine located in Ireland.

**Gécamines** means La Générale des Carrières et des Mines, the GDRC state-owned mining company.

**GDRC** means the Government of the DRC.

**Gpm** means gallons per minute.

**ha** means hectare.

**HSEC** means Health, Safety, Environment and Community.

**IFC** means the International Finance Corporation.

**IFRS** means International Financial Reporting Standards.

**Inmet** means Inmet Mining Corporation.

**km** means kilometre.

**LOM** means life of mine.

**Lundin Mining** or the **Company** means Lundin Mining Corporation, including Lundin Mining Corporation and its subsidiaries.

**m** means metre.

**mm** means millimetre.

**MD&A** means Management's Discussion and Analysis of results of operations and financial condition of the Company for the fiscal year ended December 31, 2013, dated February 20, 2014.

**mtpa** means million tonnes per annum.

**National Instrument 43-101** means National Instrument 43-101 "Standards for Disclosure For Mineral Projects" adopted by the Canadian Securities Administrators.

**National Instrument 52-110** means National Instrument 52-110 "Audit Committees" adopted by the Canadian Securities Administrators.

**Ni** means nickel.

**NSR** means Net Smelter Return.

**OMX** means the NASDAQ OMX Nordic Exchange, Stockholm.

**Oz** means ounces.

**Pb** means lead.

**PD or Phelps Dodge** means Phelps Dodge Corporation.

**Qualified Person** means a qualified person as defined within National Instrument 43-101.

**Rights Plan** means Shareholder Rights Plan.

**Rio Narcea** means Rio Narcea Gold Mines, Ltd. (Canada), a wholly-owned indirect subsidiary of the Company.

**Rio Tinto** means the Rio Tinto Group.

**SEDAR** means the System for Electronic Document Analysis and Retrieval.

**SEK** means Swedish kronor.

**SI** means International System of Units.

**Silverstone** means Silverstone Resources Corp.

**Silver Wheaton** means Silver Wheaton Corp., which acquired Silverstone in May 2009.

**Somincor** means Somincor-Sociedade Mineira de Neves-Corvo, S.A. (Portugal), a wholly-owned indirect subsidiary of the Company that owns the Neves-Corvo mine located in Portugal.

**Tenke Holdings** means Tenke Holdings Ltd. (Bermuda), a wholly-owned subsidiary of the Company that owns a minority interest in TF Holdings and a minority indirect interest in TFM.

**Tenke Mining** means Tenke Mining Corp. which was acquired by the Company on July 3, 2007 and subsequently amalgamated with the Company effective July 31, 2007.

**TF Holdings** means TF Holdings Limited (formerly, Lundin Holdings Ltd.), a Bermuda company owned 30% by Tenke Holdings and 70% by a wholly-owned subsidiary of FCX that owns a controlling position of TFM.

**TFM** means Tenke Fungurume Mining SARL, a Congolese company that owns the Tenke Fungurume mine.

**Tenke Fungurume mine** means the deposits of copper, cobalt and associated minerals under mining concessions granted to TFM in 1996 at Tenke and Fungurume, Katanga Province, DRC.

**tpa/d** means tonnes per annum/day.

**TSX** means the Toronto Stock Exchange.

**Zinkgruvan** means Zinkgruvan Mining AB (Sweden), a wholly-owned indirect subsidiary of the Company that owns the Zinkgruvan mine located in Sweden.

**Zn** means zinc.

## CAUTIONARY STATEMENT ON FORWARD-LOOKING INFORMATION

*Certain of the statements made and information contained herein is "forward-looking information" within the meaning of the Ontario Securities Act. This report includes, but is not limited to, forward looking statements with respect to the Company's expected exploration, drilling and development activities, various site expansion programs, commercial production at Eagle Mine and closure activities at former operating sites. These estimates and other forward-looking statements are based on a number of assumptions and are subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking statements, including, without limitation, risks and uncertainties relating to the estimated cash costs, timing and amount of production from the Eagle Mine, cost estimates for the Eagle Mine, foreign currency fluctuations; risks inherent in mining including environmental hazards, industrial accidents, unusual or unexpected geological formations, ground control problems and flooding; risks associated with the estimation of mineral resources and reserves and the geology, grade and continuity of mineral deposits; the possibility that future exploration, development or mining results will not be consistent with the Company's expectations; the potential for and effects of labour disputes or other unanticipated difficulties with or shortages of labour or interruptions in production; actual ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics; the inherent uncertainty of production and cost estimates and the potential for unexpected costs and expenses, commodity price fluctuations; uncertain political and economic environments; changes in laws or policies, foreign taxation, delays or the inability to obtain necessary governmental permits; litigation risks; and other risks and uncertainties, including those described under the Risks and Uncertainties section of this document and in each Management's Discussion and Analysis. Forward-looking information may also be based on other various assumptions including, without limitation, the expectations and beliefs of management, the assumed long term price of copper, zinc, lead and nickel; that the Company can access financing, appropriate equipment and sufficient labour and that the political environment where the Company operates will continue to support the development and operation of mining projects. Should one or more of these risks and uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in the forward-looking statements. Accordingly, readers are advised not to place undue reliance on forward-looking statements.*

## ITEM 1 INTRODUCTION

### 1.1. Date of Information

All information in this AIF is as of December 31, 2013 unless otherwise indicated.

### 1.2. Currency

The Company reports its financial results and prepares its financial statements in United States (“US”) dollars. All currency amounts in this AIF are expressed in United States dollars, unless otherwise indicated. The United States dollar exchange rates for the Company’s principal operating currencies and for the Canadian dollar are as follows:

As at December 31	2013	2012	2011
Canadian dollar (C\$)	1.0636	0.9949	1.0170
Euro (€)	0.7251	0.7579	0.7729
Swedish krona (SEK)	6.5084	6.5156	6.9234

### 1.3. Accounting Policies and Financial Information

Financial information is presented in accordance with IFRS as issued by the International Accounting Standards Board and with interpretations of the International Financial Reporting Interpretations Committee which the Canadian Accounting Standards Board has approved for incorporation into Part 1 of the CPA Canada Handbook – Accounting.

This AIF refers to various non-GAAP measures, such as “operating earnings” and “cash cost per pound”, which are used by the Company to manage and evaluate operating performance at each of Lundin Mining’s mines and are widely reported in the mining industry as benchmarks for performance but do not have standardized meaning. To facilitate a better understanding of these measures, as calculated by the Company, please refer to the MD&A where detailed descriptions and reconciliations, where applicable, have been provided.

### 1.4. Conversion Table

In this AIF, metric units may be used with respect to Lundin Mining’s various mineral properties and operations. Conversion rates from imperial measures to metric units and from metric units to imperial measures are provided in the table set out below.

<u>Imperial Measure</u>	=	<u>Metric Unit</u>	<u>Metric Unit</u>	=	<u>Imperial Measure</u>
2.47 acres		1 hectare	0.4047 hectares		1 acre
3.28 feet		1 metre	0.3048 metres		1 foot
0.62 miles		1 kilometre	1.609 kilometres		1 mile
2.2 pounds		1 kilogram	0.454 kilograms		1 pound
0.032 ounces (troy)		1 gram	31.1 grams		1 ounce (troy)
2,204.62 pounds		1 tonne	0.000454 tonnes		1 pound

### 1.5. Classification of Mineral Reserves and Resources

In this AIF, the definitions of proven and probable Mineral Reserves and measured, indicated and inferred Mineral Resources are those used by Canadian Securities Administrators and conform to the definitions utilized by the CIM in the CIM Guidelines. Where Mineral Resources are stated alongside Mineral Reserves, those Mineral Resources are inclusive of, and not in addition to, the stated Mineral Reserves.



## ITEM 2 CORPORATE STRUCTURE

### 2.1. Name, Address and Incorporation

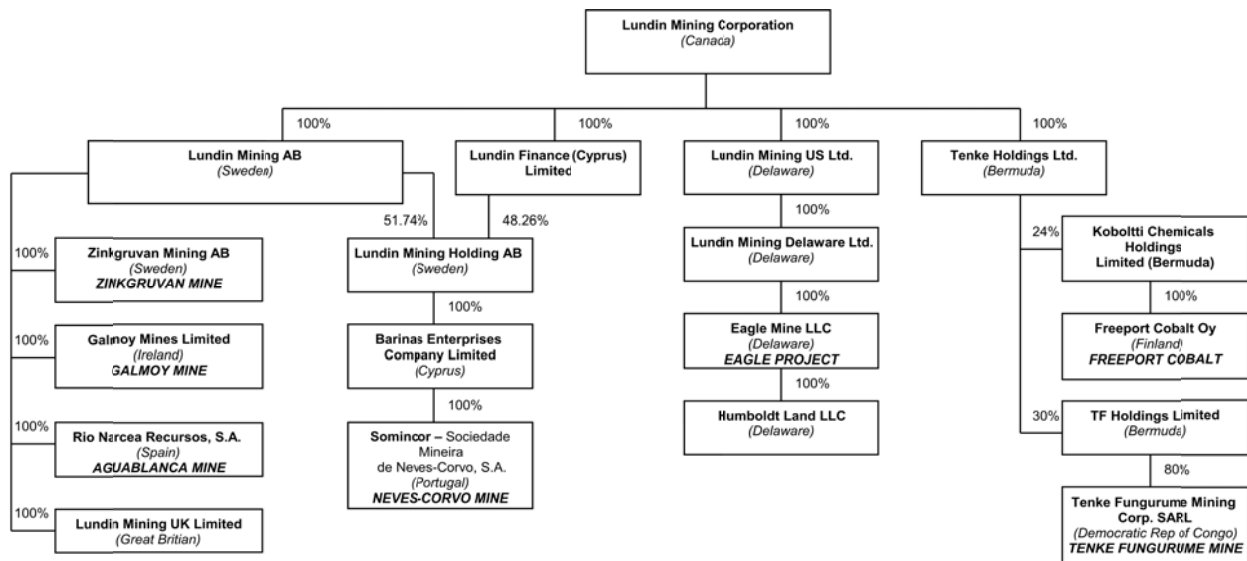
Lundin Mining was incorporated by Articles of Incorporation on September 9, 1994, under the *Canada Business Corporations Act* as South Atlantic Diamonds Corp. and subsequently changed its name to South Atlantic Resources Ltd. on July 30, 1996, and to South Atlantic Ventures Ltd. on March 25, 2002. The Company changed its name to Lundin Mining Corporation on August 12, 2004.

The Company amalgamated with EuroZinc effective November 30, 2006 and with Tenke Mining effective July 31, 2007.

As at December 31, 2013, the Company's registered and records office and corporate head office was located at 150 King Street West, Suite 1500, Toronto, Ontario, Canada M5H 1J9; telephone: +1 416 342 5560.

### 2.2. Inter-Corporate Relationships

A significant portion of the Company's business is carried on through its various subsidiaries. The following chart illustrates, as at December 31, 2013, the Company's significant subsidiaries, including their respective jurisdiction of incorporation and the percentage of voting securities in each that are held by the Company either directly or indirectly:



### ITEM 3 GENERAL DEVELOPMENT OF THE BUSINESS

Lundin Mining is a diversified Canadian base metals mining company with operations and development projects in Portugal, Sweden, Spain, and the US, producing copper, zinc, lead and nickel. In addition, Lundin Mining holds a 24% equity stake in the world-class Tenke Fungurume copper/cobalt mine in the DRC and in the Freeport Cobalt business, which includes a cobalt refinery located in Kokkola, Finland.

#### 3.1. Three Year History

##### 2011

- a) On January 12, 2011, Lundin Mining and Inmet announced that they had entered into an arrangement agreement (the "Arrangement Agreement") to merge and create Symterra Corporation, a leading international copper producer. The transaction was valued at approximately C\$9 billion.
- b) On February 27, 2011, Lundin Mining announced that it had been advised by Equinox that Equinox intended to make an unsolicited take-over bid for the shares of Lundin Mining.
- c) On March 29, 2011, Lundin Mining and Inmet jointly announced the termination of the Arrangement Agreement dated January 12, 2011. Also on that day, Lundin Mining announced that its Board of Directors had adopted a limited duration Rights Plan to enable a full consideration of strategic alternatives.
- d) On April 18, 2011, Lundin Mining announced that the government of the DRC had issued a Presidential Decree approving the amendments to the Tenke Fungurume mining contracts and the decree was published in the DRC Official Gazette.

This decree formalized the conclusion of a contract review process by the DRC government and confirmed that the Tenke Fungurume contracts were in good standing, and acknowledged the parties' continuing commitment to the rights and benefits granted under the Tenke Fungurume Mining contracts.

- e) On April 25, 2011, Equinox announced the withdrawal of its offer to acquire the common shares of Lundin Mining. Subsequent to the hostile take-over bid for Lundin Mining, Equinox became subject to a take-over bid by Barrick Gold Corporation which was conditional on Equinox abandoning its bid for Lundin Mining.
- f) On May 25, 2011, Lundin Mining announced the conclusion of its strategic review process and the expiration of the Rights Plan, which was not renewed.
- g) In September 2011, the Company announced the results of the Feasibility Study for the Lombador Phase I project. The Feasibility Study showed that Lombador Phase I could be developed as a profitable and value accretive extension to the Neves-Corvo mine, and would extend the mine life to at least 2026.
- h) On October 31, 2011, the Company announced the formal appointment of Mr. Paul Conibear as President and Chief Executive Officer, after having held the role on an interim basis following the retirement of Mr. Philip Wright on June 30, 2011.
- i) On November 1, 2011, the Company reported that FCX, as operator of the Tenke Fungurume mining operations, approved the undertaking of a second phase expansion ("Phase 2 Expansion") of the Tenke Fungurume mine to add approximately 68,000 tonnes of copper cathode production annually. The Phase 2 Expansion was designed to increase annual copper production by 50% to approximately 195,000 tonnes of copper cathode and 15,000 tonnes of cobalt in hydroxide, by 2013. The expansion cost of approximately \$850 million includes additional mining equipment, mill upgrades, acid plant expansion and a doubling of tank house capacity.

- j) In December 2011, the Company released an interim report on exploration activities including an initial Inferred Mineral Resource for the Semblana Copper Deposit located adjacent to its 100% owned Neves-Corvo mine in southern Portugal.

## 2012

- a) On January 23, 2012, Lundin Mining released a summary of the results of the initial Future Underground Materials Handling Study (the "Study") for its Neves-Corvo mining complex in southern Portugal. This conceptual level Study identified and evaluated various underground materials handling and access options necessary to pursue the exploitation of the deeper Lombador copper/zinc resources as well as the Semblana copper deposit which are adjacent to the Company's Neves-Corvo mine.
- b) On March 26, 2012 the President and Prime Minister of the DRC signed a decree approving the bylaw changes for TFM as announced in October 2010 and approved by Presidential Decree in April 2011. Accordingly, as of March 26, 2012, Lundin Mining's effective ownership interest in TFM was reduced from 24.75% to 24% and \$50 million in intercompany loans were converted to equity.
- c) On April 11, 2012, the Company announced that it had entered into a purchase option agreement ("Option Agreement") to acquire an 80% interest in the Touro copper project located in northern Spain owned by two private Spanish companies. The Option Agreement gave Lundin Mining an exclusive option until October 1, 2012, to purchase an 80% interest in the project, pending satisfactory completion of due diligence, including confirmatory and step-out drilling and other technical work to be conducted by the Company.
- d) At the end of August 2012, Aguablanca restarted production ahead of schedule after a pit slope failure in 2010.
- e) On September 25, 2012, the Company announced that it had notified the owners of the Touro copper project that it did not intend to exercise its option under the Option Agreement to acquire a controlling interest in the project.
- f) In December 2012, Lundin Mining announced that it executed an amendment to its revolving credit facility increasing the amount of its revolving credit facility to \$350 million from \$300 million and extending the term of the facility to December 2015.

## 2013

- a) On March 29, 2013, the Company announced the closing of the acquisition of the large scale cobalt chemical refinery located in Kokkola, Finland and the related sales and marketing business from OM Group, Inc. The acquisition would provide direct end-market access for the cobalt hydroxide production from the Tenke Fungurume mine among other advantages. Lundin Mining would hold an effective 24% ownership interest in the joint venture, with Freeport holding an effective 56% ownership interest and acting as operator of the joint venture and Gécamines would hold a 20% interest. Initial consideration of \$348 million, excluding cash acquired, was paid at closing. Under the terms of the agreement, there is the potential for additional consideration of up to \$110 million payable over a period of three years from the acquisition date, contingent upon the achievement of revenue-based performance targets. Lundin Mining's share of the investment, including acquired cash, was \$116 million based on a 30/70% split with Freeport and will be repaid in full prior to any distributions.
- b) In late January 2013, Lundin Mining filed updated independent NI 43-101 Technical Reports on the Neves-Corvo mine and Semblana deposit and the Zinkgruvan mine which were filed on SEDAR ([www.sedar.com](http://www.sedar.com)).

- c) In March 2013, the Company announced amendments to its by-laws to include an advance notice policy (the "Policy") which requires advance notice to the Company in circumstances where nominations of persons for election to the Board of Directors are made by shareholders of the Company other than pursuant to: (i) the requisition of a meeting, or (ii) a shareholder proposal, both made pursuant to the provisions of the *Canada Business Corporations Act*. The amended by-laws, which include the Policy, are effective as of the date they were approved by the Board of Directors, being February 21, 2013. In accordance with the Act, the amendments to the Company's by-laws were confirmed by shareholders at the annual shareholders meeting.
- d) On June 12, 2013 the Company announced that it had entered into a definitive agreement with Rio Tinto Nickel Company, a subsidiary of Rio Tinto plc, to purchase the high grade Eagle Project.
- e) On July 17, 2013, the Company completed the acquisition of the high grade Eagle Project from Rio Tinto Nickel Corporation, a subsidiary of Rio Tinto plc. Total consideration paid was \$315 million, consisting of a \$250 million purchase amount plus project expenditures from January 1, 2013 until transaction closing of \$65 million, subject to customary closing adjustments.
- f) In late July 2013, Lundin Mining filed an independent NI 43-101 Technical Report for its Eagle nickel/copper mine which was filed on SEDAR ([www.sedar.com](http://www.sedar.com)).
- g) In September 2013, the Company reported its Mineral Reserve and Resource Estimate Update as at June 30, 2013. The full release can be found on the Company's website at [www.lundinmining.com](http://www.lundinmining.com).
- h) On September 25, 2013, the Company announced the appointment of Mr. Peter Jones to the Company's Board of Directors, replacing Mr. Colin Benner who stepped down for personal reasons in July 2013.
- i) On October 7, 2013, the Company announced that it had completed amendments to its credit agreement, which included the provision for a new term loan of \$250 million and an extension of the maturity of the existing \$350 million revolving credit facility to October 2017. This arrangement is expected to provide funding in excess of that which is required to complete the construction of the Eagle Project.

## **ITEM 4 DESCRIPTION OF THE BUSINESS**

Lundin Mining is a diversified Canadian base metals mining company with operations and development projects in Portugal, Sweden, Spain, and the US, producing copper, zinc, lead and nickel. In addition, Lundin Mining holds a 24% equity stake in the world-class Tenke Fungurume copper/cobalt mine in the DRC and in the Freeport Cobalt business, which includes a cobalt refinery located in Kokkola, Finland.

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

Lundin Mining's principal products and sources of sales are copper, zinc, lead and nickel concentrates from Neves-Corvo, Zinkgruvan and Aguablanca. Lundin Mining also holds a minority interest in TFM and Freeport Cobalt. Information related to Lundin Mining's segmented information is set forth in Note 24 to the consolidated annual financial statements for the year ended December 31, 2013. The MD&A discusses each operation that is separately defined as a segment.

Production from operations was as follows:

	2013	2012	2011
Copper (tonnes)	66,246	63,878	75,877
Zinc (tonnes)	124,748	122,204	111,445
Lead (tonnes)	34,370	38,464	41,130
Nickel (tonnes)	7,574	2,398	-
Copper (tonnes) Tenke attributable (24%) <sup>(1)</sup>	50,346	38,105	31,523

<sup>(1)</sup> The Company's interest in Tenke was reduced from 24.75% to 24.0% effective March 26, 2012 as a result of signed modifications to Tenke Fungurume Mining's bylaws that reflect the signed agreements with the DRC government.

## 4.2 Employees

As of December 31, 2013, Lundin Mining has a total of approximately 1,700 employees and 1,750 contract employees located in Canada, Ireland, Portugal, Spain, Sweden, United Kingdom and the United States.

## 4.3 Health, Safety, Environment and Community

Lundin Mining's policy is to conduct its business responsibly and in a manner designed to protect its employees, adjacent communities and the natural environment. The Company is committed to achieving a safe, productive and healthy work environment and to upholding the values of human rights. Lundin Mining seeks to create sustainable value for employees, business partners and the communities in which it operates. These commitments are described in the Company's HSEC policy.

The HSEC policy, approved by the Board of Directors, commits the Company to compliance with applicable legal requirements as a minimum and to go beyond those requirements where deemed appropriate.

HSEC planning is part of the Company's business planning processes to assess the potential safety, health and environmental effects of its activities and integrate these considerations into its operational decisions and processes.

The Company is committed to design, develop and operate its facilities with a view to minimizing the environmental impact of its operations; providing efficient use of energy, water and other resources; reducing or preventing pollution; limiting waste generation and disposal; and where waste must be disposed of, doing so responsibly.

The Company has in place closure plans for all its operations and these are reviewed and updated in accordance with relevant national legislation. Each mine has in place an agreed financial mechanism to meet anticipated closure costs. Wherever practicable, the operations progressively rehabilitate areas no longer required for ongoing operations using environmentally sound methods.

Lundin Mining has a company-wide HSEC system that formalizes the Company's implementation of the HSEC policy supporting consistency across sites owned or operated by the Company, and clearly setting out expectations for HSEC management for joint ventures. The management system describes how the Company's operations and projects will comply with the Company's corporate values and commitments.

The HSEC system exists to:

- a) Ensure that sound management practices and processes are in place in sites across the Company resulting in strong HSEC performance.
- b) Describe and formalize the expectations of the Company with respect to HSEC management.

- c) Provide a systematic approach to the identification of HSEC issues and ensure that a system of risk identification and risk management is in place.
- d) Provide a framework for HSEC responsibility and a systematic approach for the attainment of corporate HSEC objectives.
- e) Provide a structure to drive continuing improvement of HSEC programs and performance.

In applying the HSEC system, the Company engages its employees, contractors, the community, regulators and other interested parties to ensure that stakeholder concerns are considered in managing aspects of our business that have the potential to impact health, safety, the environment and adjacent communities.

The Company strives for continuous improvement in its HSEC performance through the development of objectives and targets. To achieve this, the Company advises and trains employees and contractors as necessary to meet HSEC undertakings and the operations establish clear accountabilities for employees, and especially managers, with respect to their HSEC performance.

To ensure that the Company meets its objectives and targets, management monitors and reviews performance and publicly reports progress.

For further information on the Company's social and community programs and other HSEC information please consult Lundin Mining's most recent Sustainability Report which is available on the Company's website at [www.lundinmining.com](http://www.lundinmining.com).

#### **4.4 Description of Properties**

##### **4.4.1 MATERIAL PROPERTIES**

The following descriptions of Lundin Mining's material operating properties, being Neves-Corvo, Zinkgruvan, as well as Tenke Fungurume and Lundin Mining's development project, Eagle, are based on filed technical reports, the most recent 2013 Resource and Reserve Estimate Update, included in this AIF as Schedule "A", and on the Company's previously filed material change reports, financial statements and MD&A. Unless noted otherwise, all of the technical reports referenced in this AIF have been filed on SEDAR under the Company's profile. For more detailed information in respect of Lundin Mining's properties, direct reference should be made to these technical reports.

###### **4.4.1.1 NEVES-CORVO MINE**

The following information has been based the NI 43-101 technical report entitled "NI 43-101 Technical Report for Neves-Corvo Mine and Semblana Deposit, Portugal" dated January 18, 2013 (the "Neves-Corvo Report") prepared for Lundin Mining by Mark Owen, BSc, MSc (MCSM), CGeol, EurGeol, FGS and Lewis Meyer, ACSM, MCSM, BEng, MSc, PhD, CEng, FIMMM, qualified persons as defined by NI 43-101. The authors have reviewed and approved all scientific and technical information in this summary, including all scientific and technical information relating to any updates to the Neves-Corvo mine since the date of the Neves-Corvo Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining activities and have been reviewed and approved as indicated in Schedule A. The Neves-Corvo Report is available for review under Lundin Mining's SEDAR profile at [www.sedar.com](http://www.sedar.com)

###### **4.4.1.1.1 Project Description and Location**

The Neves-Corvo mine is owned and operated by the Portuguese company Somincor, which is a subsidiary of Lundin Mining. It is situated approximately 220 km southeast of Lisbon in the Alentejo district of southern Portugal. The mine site is located some 15 km southeast of the town of Castro Verde and exploits five major orebodies from an underground mine. The ore is processed on-site and tailings are disposed of in the Cerro de Lobo impoundment some 3 km from the plant. Concentrates are dispatched by rail and road for onward shipping to customers.

The mining operations are contained within a mining concession contract between the State and Somincor covering 13.5 km<sup>2</sup>, located in the parishes of Santa Bárbara de Padrões and Senhora da Graça de Padrões, counties of Castro Verde and Almodôvar, district of Beja. The concession provides the rights to exploit the Neves-Corvo deposits for copper, zinc, lead, silver, gold, tin and cobalt for an initial period of fifty years (from November 24, 1994) with two further extensions of twenty years each.

This mining concession is in turn surrounded by the Castro Verde exploration concession, signed in 2006, covering an area of 294 km<sup>2</sup>.

The mine is operated under an Integrated Pollution Prevention and Control Licence (IPPC) granted by the Portuguese Environmental Agency in 2008.

#### **4.4.1.1.2 Accessibility, Climate, Local Resource, Infrastructure and Physiography**

Neves-Corvo has good connections to the national road network which links with Faro to the south and Lisbon to the north. The mine has a dedicated rail link into the Portuguese rail network and to the port of Setúbal.

There are no major centres of population close to the mine, although a number of small villages with populations numbered in the hundreds are located within the mining concession. Most employees travel to the mine by company-provided buses or private cars.

The climate of the region is semi-arid with an average July temperature of 23°C (maximum 40°C) and an average minimum temperature in winter of 3.8°C. Rainfall averages 426 mm, falling mainly in the winter months.

The topography around the mine is relatively subdued, comprising low hills with minimal rock outcrop. The mine collar is 210 m above sea level. The area supports low intensity agriculture confined to stock rearing and the production of cork and olives.

Fresh water is supplied to the mine via a 400 mm diameter pipeline from the Santa Clara reservoir, approximately 40 km west of the mine. The mine is connected to the national grid by a single 150 kV, 50 MVA rated, overhead power line 22.5 km long.

The mining concession provides sufficient surface rights to accommodate the existing mine infrastructure and allows for expansion if required.

#### **4.4.1.1.3 History**

The Neves-Corvo ore bodies were discovered in 1977. The Portuguese company Somincor was established to exploit the deposit and by 1983, the Corvo, Graça, Neves and Zambujal sulphide deposits had been partially outlined, covering an area of some 1.5 km by 2 km. Rio Tinto became involved in the project in 1985, effectively forming a 49%:51% joint venture with the Portuguese government (EDM). The project was reappraised with eventual first production commencing from the Upper Corvo and Graça orebodies in January 1989.

During the development of the mine, high-grade tin ores were discovered, associated with the copper mineralization, which led to the rapid construction of a tin plant that was commissioned in 1990.

The railway link between Neves-Corvo and Setúbal was constructed between 1990 and 1992 for the shipment of concentrates and the hauling of sand for backfill on the return journey. This was followed between 1992 and 1994 by a major mine deepening exercise to access the Lower Corvo orebody through the installation of an inclined conveyor ramp linking the 700 and 550 levels.

In June 2004, EuroZinc acquired a 100% interest in Somincor for consideration of €128 million. In October 2006, EuroZinc merged with Lundin Mining and the Lundin Mining name was retained.

In 2006, zinc production was commenced at Neves-Corvo with processing through the modified tin plant. In June 2007, Silver Wheaton (formerly Silverstone) agreed to acquire 100% of the life-of-mine payable silver production from the mine, as the mine produces around 0.5 million ounces of silver per year in copper concentrate. Zinc production was suspended in November 2008 due to the low prevailing zinc price. In September 2009, the decision was made to expand the zinc plant at an estimated cost of €43 million, to a design capacity of 50,000 tpa zinc in concentrate and first zinc production was achieved from the expanded plant in mid-2011.

In mid-2009, a copper tailings retreatment circuit was commissioned to recover both copper and zinc, and in late 2010, tailings disposal changed from subaqueous to paste methods at the Cerro do Lobo facility.

In October 2010, the copper rich Semblana deposit was discovered located one km to the northeast of the Zambujal copper-zinc orebody within the Castro Verde exploration concession. In December 2011, following extensive diamond drilling, an initial Inferred Mineral Resource was published, and that was further updated in June 2012. A high-resolution 3D seismic survey carried out in 2011 also identified several new exploration targets in the Neves-Corvo vicinity.

A feasibility study on the Lombador Phase 1 Project, which contemplated mining this zinc rich orebody and expanding the overall zinc capacity at Neves-Corvo to 2.5 mtpa, was completed in September 2011. The underground elements of this project were advanced in 2013 with the first zinc stopes mined to provide high grade feed to the existing 1.0 mtpa zinc plant. Development of the mine accesses initiated in 2012 to the Semblana orebody were suspended in mid 2013 pending resolution of discussions with government on royalties and concession rights. Studies continue on low capital cost expansion opportunities to exploit the large remaining copper and zinc Mineral Resource and Reserves particularly in the Lombador South and North orebodies.

#### **4.4.1.1.4 Geological Setting**

Neves-Corvo is located in the western part of the Iberian Pyrite Belt, which stretches through southern Spain into Portugal and which has historically hosted numerous major stratiform volcano-sedimentary massive sulphide deposits.

The Neves-Corvo deposits occur within the Volcanic Sedimentary Complex, which consists of acid volcanics separated by shale units, with a discontinuous black shale horizon immediately below the lenses. Above the mineralization, there is a thrust-faulted repetition of volcano-sedimentary and flysch units. The whole assemblage has been folded into a gentle anticline oriented northwest to southeast which plunges to the southeast, resulting in orebodies distributed on both limbs of the fold. All the deposits have been affected by both sub-vertical and low angle thrust faults, causing repetition in some areas.

#### **4.4.1.1.5 Exploration**

Exploration work within the mining concession has concentrated primarily on the extension of known orebodies by both underground and surface drilling. Some of the Neves-Corvo orebodies have not been completely delineated. Drilling from both surface and underground in the last few years has identified significant new zinc and copper mineralization within the Lombador massive sulphide lens and associated stockworks, as well as important bridge fissural copper mineralization between the Lower Corvo, Neves and Lombador orebodies.

In 2010, the Semblana deposit, a new massive sulphide deposit containing a zone of copper-rich sulphide mineralization, was discovered by surface drilling. Semblana, lies 1.3 km northeast of the Zambujal orebody and is located in the exploration concession that surrounds the mine. In 2011, surface exploration drilling focused on delineating the extent of Semblana and defining an initial Mineral Resource. In December 2011, a National Instrument 43-101 compliant Inferred Mineral Resource of 6.58 million tonnes grading 3.0% copper was announced; this was updated with additional drilling in



September 2012 to 7.13 million tonnes grading 2.8% copper. This incorporated the copper mineralization discovered in late 2011, located approximately 300 metres south of the Semblana resource.

A high resolution 3D seismic survey covering the area immediately east and southeast of the mine was also completed in 2011. This survey was successful in detecting both the Lombador and Semblana massive sulphide bodies in great detail, in addition to identifying several seismic reflectors that have similar characteristics to massive sulphide bodies. Drilling of one of these high-priority reflectors led to the discovery of the high-grade copper sulphides located just south of Semblana. During the fourth quarter of 2011, a new copper discovery was made called Monte Branco, located just west of the tailings dam. Drilling continued on extending the Monte Branco mineralization approximately 1.4 km south of Semblana in the vicinity of the tailings management facility. Priority was given to ongoing exploration of this new discovery in 2012 and 2013.

#### **4.4.1.1.6 Mineralization**

Six massive sulphide lenses have been defined at Neves-Corvo comprising Neves (divided into North and South), Corvo, Graça, Zambujal, Lombador (divided North, South and East), and Semblana. The base metal grades are segregated by the strong metal zoning into copper, tin and zinc zones, as well as barren massive pyrite. The massive sulphide deposits are typically underlain by stockwork sulphide zones which form an important part of the copper orebodies.

#### **4.4.1.1.7 Drilling**

Surface and underground exploration drilling is an ongoing operation at the mine with the work undertaken by both contractors and in-house drill rigs. The nominal hole spacing on the underground diamond drilling is between 17.5 m and 35 m, with surface drilling on a spacing of 75 m to 100 m. As a standard procedure, drill holes are surveyed with an Eastman Single Shot or Reflex EZ-Shot tool at 30 m intervals, which provides an accurate location of the drill intersections.

In 2013, 49,034 m of drilling was completed from surface with 46 holes completed and 42,685 m was drilled from underground in 249 holes.

#### **4.4.1.1.8 Sampling and Analysis**

Industry standard exploration drill core splitting, sampling, insertion of quality control samples and density measurement protocols and procedures are in place at Neves-Corvo. In addition to drill core sampling, underground grade control sampling is carried out using face sampling in the areas subject to drift-and-fill mining and short diamond drill holes in the bench-and-fill areas. Samples are prepared on-site and analyzed at either the mine's fully accredited assay laboratory facility or by the ALS Chemex laboratory in Vancouver, Canada.

#### **4.4.1.1.9 Security of Samples**

Data and sample security procedures that conform to industry standards are in place at Neves-Corvo. All drill cores are logged and photographed, and the cores and sampling splits are stored on-site. Traceability records prevent errors of identification and ensure sample history can be followed.

#### **4.4.1.1.10 Mineral Resource and Mineral Reserve Estimates**

Mineral Resources at Neves-Corvo are estimated using three dimensional interpretation and modelling methods with calculations performed using specialized software and in particular Leapfrog® and Vulcan® 3D. The ordinary kriging method of interpolation is used to estimate metal grades and a multiple regression formula using the estimated metal grades is used to estimate density.

Mineral Reserves are calculated by the Neves-Corvo mine planning department primarily using Vulcan® 3D software. Stopping volumes are cognizant of the method of access to allow for the cut-off grade

boundary and include an allowance for planned and unplanned dilution and ore loss. An effective minimum mining width of 5 m is applied.

The Semblana Mineral Resource was modelled and estimated using Datamine Studio software. Metal grades were estimated using ordinary kriging or inverse distance weighting. Bulk density was estimated using inverse distance weighting.

Details of the June 2013 Mineral Resource and Reserve estimates for Neves-Corvo and Semblana are included in Schedule A, attached to this AIF.

#### **4.4.1.1.11 Mining Operations**

Neves-Corvo is a major underground mine. The principal means of mine access are provided by one vertical 5 m diameter shaft and a ramp from surface. The shaft is used to hoist ore from the 700 m level. The surface is nominally 1,200 m above datum. A conveyor decline descends from the 700 m level to the 550 m level and provides ore hoisting from the deeper levels of the mine. The mine is highly mechanized and a number of different stoping methods are employed but the most significant are bench-and-fill and drift-and-fill. Backfill is provided by hydraulically placed sand, paste tailings and internally generated waste rock.

The treatment facility at Neves-Corvo comprises of two processing plants. The copper plant treats copper ores and has a maximum capacity of approximately 2.6 mtpa and the zinc plant (former tin plant) which treats zinc or copper ores was expanded to 1.0 mtpa capacity during 2011. Both processing plants comprise secondary crushing, rod and ball mill grinding circuits, flotation cells and concentrate thickening and dewatering. In mid-2009, modifications to the copper plant were completed to regrind and recover additional copper and zinc concentrate from the copper tailings stream.

Concentrates are transported by rail to a dedicated port facility at Setúbal, Portugal from where they are shipped to smelter customers.

Tailings disposal was changed from subaqueous to paste techniques during 2010 following approval by the Portuguese authorities. Tailings are thickened and pumped from a new facility located at the Cerro de Lobo tailings impoundment, 3 km from the mine site.

Copper, zinc and lead concentrates from the mine are sold to a variety of smelter customers that are primarily European based. Multi-year sales contracts are normally agreed with customers and treatment, refining and penalty charges are typical of those for copper, zinc and lead sulphide concentrates.

The mine operates under an IPPC licence (No.18/2008) granted by the Portuguese Environmental Agency in 2008. The licence includes conditions covering environmental management systems, tailings and waste rock disposal, water and energy consumption, emissions to atmosphere, emissions to water courses and water treatment, noise, industrial waste disposal, emergency and closure planning. Key environmental issues include the acid-generating potential of the ore and waste rocks; the close proximity of the Oeiras River to the mine site; the groundwater is a significant aquifer and connects to local water supplies and the Oeiras River; and the dispersal of dust and noise from the mine site. The mine permit requires that closure plans for the mine are updated every 5 years, and an accumulating closure fund is in place to cover final closure costs.

The corporation tax rate in Portugal is 25%, and a local tax of 1.5% is also payable. For 2013, an extra tax rate of 3% for profits between €1.5 million and €7.5million (2012-€10 million) was applicable, increasing to 5% for profits above €7.5 million (2012-€10 million). Royalties are either a profit-related royalty of 10%, or a revenue-based royalty of 1% (at the State's discretion). The payment may be reduced by 0.25% of the revenue-based royalty provided that the corresponding amount of such percentage is spent on mining development investment.

The current copper Mineral Reserves at Neves-Corvo will support a mine life of around 10 years with copper production, based on currently known reserves, gradually decreasing, and planned zinc

production increasing. The Lombador Phase 1 ramp reached its planned depth in 2013 and initial production of both copper and high grade zinc mineralization commenced. Development of twin access ramps to the Semblana orebody was suspended in 2013. Studies continue on low capital cost expansion opportunities to exploit the large remaining copper and zinc Mineral Resource and Reserves particularly in the Lombador South and North orebodies.

#### **4.4.1.1.12 Exploration and Development**

Surface drilling in 2014 will focus on exploring for extensions to the Monte Branco deposit. In addition there will be drill testing of various 3D seismic targets and step-outs to investigate areas between Zambujal and Monte Branco and the area between Semblana and Monte Branco. Underground drilling will focus primarily on upgrading the Lombador North ore body.

#### **4.4.1.2 ZINKGRUVAN MINE**

The following information has been based on the NI 43-101 technical report entitled “NI 43-101 Technical Report for the Zinkgruvan Mine, Central Sweden” dated January 18, 2013 (the “Zinkgruvan Report”) prepared for Lundin Mining by Mark Owen, BSc, MSc (MCSM), CGeol, EurGeol, FGS and Lewis Meyer, ACSM, MCSM, BEng, MSc, PhD, CEng, FIMMM, qualified persons as defined by NI 43-101. The authors have reviewed and approved all scientific and technical information in this summary, including all scientific and technical information relating to any updates to the Zinkgruvan mine since the date of the Zinkgruvan Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining activities and have been reviewed and approved as indicated in Schedule A. The Zinkgruvan Report is available under Lundin Mining’s SEDAR profile at [www.sedar.com](http://www.sedar.com).

##### **4.4.1.2.1 Project Description and Location**

The Zinkgruvan mine is located approximately 200 km southwest of Stockholm in south central Sweden. The mine site is some 15 km from the town of Askersund and comprises a deep underground mine, a processing plant and associated infrastructure and tailings disposal facilities. Concentrates are trucked from the mine to the inland port of Otterbäcken on Lake Vänern from where they are shipped via canal and sea to European smelter customers.

The mining operations are contained within two exploitation concessions covering the deposit and its immediate area. The Zinkgruvan concession was amalgamated from a large number of smaller rights in 2000, has an area of 254 ha and is valid until 2025. The neighbouring Klara concession was granted in 2002, has an area of 355 ha and is valid until 2027. These concessions are automatically extendable for periods of 10 years provided the concession is being regularly exploited. In addition, the mine currently holds exploration concessions in the area totaling 10,096 ha. For exploitation concessions granted before 2005, there are no mining royalties in Sweden.

The mine is currently operated under an environmental licence granted by the Swedish authorities that is valid until December 2017.

##### **4.4.1.2.2 Accessibility, Climate, Local Resource, Infrastructure and Physiography**

Zinkgruvan has good local road access and is close to the main E18 highway linking Stockholm and Oslo. Rail and air links are available at the town of Örebro some 60 km distant. Lake Vänern, the largest lake in Sweden, is 100 km distant and provides access to coastal shipping via a series of inland canals and the port of Göteborg.

The climate of the area is mild in the summer with average temperatures of 18°C, while in the winter temperatures are below freezing with a average low of -4°C in February. Annual rainfall is approximately 750 mm with modest snowfalls during the winter months.

The topography around the mine comprises gently rolling terrain approximately 175 m above sea level. The area is largely forested and is bisected by slow-moving streams in shallow valleys.

There is ready access to power, telephone lines and domestic water and industrial water sources. The mine owns sufficient freehold surface land to accommodate the existing and planned mine infrastructure.

#### **4.4.1.2.3 History**

The Zinkgruvan deposit has been known since the sixteenth century but it was not until 1857 that large scale production commenced under the ownership of the Belgian Vieille Montagne Company (“Vieille Montagne”). The processing plant for these operations was initially based in Åmmeberg on the shores of Lake Vättern with ore transported approximately 5 km from the mine site by narrow gauge railway.

In the mid-1970s, a decision was made to significantly expand production to 600,000 tpa. A new shaft, named P2, was sunk to access deeper ore and a new concentrator and tailings facility established adjacent to the mine site.

In 1990, Vieille Montagne merged with Union Miniere, and in 1995, North Limited of Australia (“North”) acquired the Zinkgruvan mine. In August 2000, Rio Tinto became the owner of the mine following its acquisition of North. In June 2004, Lundin Mining purchased the mine from Rio Tinto.

In December 2004, Silver Wheaton agreed to purchase the LOM silver production from the Zinkgruvan mine. In October 2007, the Zinkgruvan expansion program was announced, a project to increase ore production by 300,000 tpa through the addition of copper to the current zinc-lead production.

In late 2010, the copper plant was commissioned and during 2011 modifications were made to allow this plant’s 300,000 tpa ore capacity to be used to also treat zinc/lead ores. In November 2010, an access ramp from the surface to the underground workings was completed, allowing a significant increase in the mine’s operational flexibility. Studies initiated in 2012 to modernize the front end of the processing plant have been deferred indefinitely while low cost modifications to the ore handling system have been successful.

#### **4.4.1.2.4 Geological Setting**

Zinkgruvan is located in the south west corner of the Proterozoic aged Bergslagen greenstone belt. The district is comprised of a series of small, elongated basins with felsic metavolcanics overlain by metasediments. The basins are surrounded by mainly granitoid intrusions of which the oldest are the same age as the metavolcanics.

The Zinkgruvan deposit is situated in an east-west striking synclinal structure. The tabular-shaped Zn-Pb-Ag orebodies occur in a 5 m to 25 m thick stratiform zone in the upper part of the metavolcanic-sedimentary group. The orebody is 5 km long and is proven to a depth of 1,500 m below surface. A major sub-vertical fault splits the ore deposit in two parts, the Knalla mine to the west and the Nygruvan to the east.

#### **4.4.1.2.5 Exploration**

Exploration has focused primarily on replacing depleted resources initially by exploring the Nygruvan and Burkland areas at depth, and more recently in the Knalla area to the west. Due to the depth of the exploration areas and the relatively complex geometry, exploration is done by underground drilling. Additional underground development is required in order to provide drill platforms to fully evaluate the potential of new zones intersected from initial surface drilling.

#### **4.4.1.2.6 Mineralization**

The Zinkgruvan orebodies are dominated by sphalerite and galena and are generally massive, well banded and stratiform. Remobilization of galena and silver has occurred in response to metamorphism and deformation, and is most pronounced in the lead-rich western extension of Nygruvan and in the Burkland area.

Copper stockwork mineralization has been identified in the structural hanging wall of the Burkland deposit. Chalcopyrite is the main copper mineral and occurs as coarse disseminations and patches within a marble host rock.

#### **4.4.1.2.7 Drilling**

Underground exploration, comprising resource and stope definition drilling, is carried out on an ongoing basis. Stope definition holes are drilled from underground with intersections typically on 15 m by 20 m centres. All drill holes are surveyed at 3 m intervals using Maxibore surveying equipment which provides an accurate location of the drill intersections. In 2013, 29,989 m of drilling was completed from underground. From surface 3,105 m was completed into the Isåsen and Dalby areas.

#### **4.4.1.2.8 Sampling and Analysis**

Industry standard exploration drill core splitting, sampling, insertion of QC samples and density measurement protocols and procedures are in place. Samples are prepared on-site and sent to ACME's laboratory in Vancouver, Canada for assay.

#### **4.4.1.2.9 Security of Samples**

Data and sample security procedures that conform to industry standards are in place at Zinkgruvan. All drill core is logged and photographed, and the cores and sampling splits are stored on-site in a purpose built facility at the mine site. Traceability records prevent errors of identification and ensure sample history can be followed.

#### **4.4.1.2.10 Mineral Resource and Reserve Estimates**

Mineral Resources at Zinkgruvan are estimated using two methods: the polygonal method and 3D block modelling. The polygonal method is generally used at the early stages of resource assessment and is carried out on parts of Nygruvan, Mellanby, and Sävsjön. The remaining areas of Nygruvan and all of Burkland are estimated using block modelling with Microstation® AutoCad and Prorok® software. ordinary kriging and inverse distance weighting methods are used for grade estimation and density estimation uses a regression formula based on estimated metal grades.

Mineral Reserves are calculated from the resources using Prorok® and Microstation® software. A zinc equivalent cut-off is applied together with dilution and mining recovery factors that are based on the mine's long operating experience.

Details of the June 2013 Mineral Resource and Reserve estimate for Zinkgruvan are included in Schedule A, attached to this AIF.

#### **4.4.1.2.11 Mining Operations**

Zinkgruvan is an underground mine with a long history. Mine access is currently via three shafts, with the principal P2 shaft providing hoisting and man access to the 800 m and 850 m levels with the shaft bottom at 900 m. A ramp connecting the underground workings with surface was completed in 2010 and now provides vehicle access direct to the mine. A system of ramps is employed to exploit resources below the shaft and the deepest mine level is now at 1,130 m below surface. The mine is highly mechanized and uses longhole primary secondary panel stoping in the Burkland area of the mine, sublevel benching in the Nygruvan area and in the Cecilia area. All stopes are backfilled with either paste tailings and cement or waste rock.

The processing plant is located adjacent to the P2 shaft. The run-of-mine ore is secondary crushed and then ground in an AG and ball mill circuit. A bulk flotation concentrate is produced initially before further flotation to separate zinc and lead concentrates. The concentrates are thickened and filtered and then

stockpiled under cover. Tailings are pumped some 4 km to a dedicated tailings impoundment from which decant water is returned to the process.

A separate 0.3 mtpa copper treatment line in the processing plant was commissioned during 2010, and copper production has commenced. This line was further modified during 2011 to allow it the flexibility to treat zinc-lead ore as well as copper ore.

Current Mineral Reserves at Zinkgruvan are sufficient for a mine life in excess of 10 years and the mine is able to fund all currently planned capital program through cash flow.

Zinc and lead concentrates from the mine are sold to a variety of European smelters. Multi-year sales contracts are normally agreed upon with customers and treatment, refining and penalty charges are typical of those for zinc and lead sulphide concentrates. The lead concentrates are particularly high grade and contain elevated levels of silver.

The mine is currently operated under an environmental licence granted by the Swedish authorities that is valid until December 2017. The licence includes conditions covering production levels, tailings disposal, water discharge limits, hazardous materials, process chemicals, water recirculation, noise levels, dust pollution, waste handling, energy use and closure planning.

The corporation tax rate in Sweden is 22% and Zinkgruvan does not pay mining royalties.

#### **4.4.1.2.12 Exploration and Development**

Exploration activities in 2014 will focus on converting Inferred Mineral Resources to Indicated Resources through in-fill definition drilling, defining new Inferred Resources through down-dip and step-out drilling of existing Mineral Resources. Exploration drives will continue to be developed in order to establish underground drill platforms to allow drilling of deep extensions of known orebodies. Drilling of approximately 3,000m from surface to explore the continuation of the Dalby area is also planned in 2014.

#### **4.4.1.3 TENKE FUNGURUME MINE**

The following information has been based on the NI 43-101 technical report entitled “Technical Report Expansion Feasibility Study for the Tenke Fungurume Mine, Katanga Province, Democratic Republic of Congo” dated December 15, 2011 (the “**Tenke Report**”) prepared for Lundin Mining by John Nilsson, P.Eng., Ronald G. Simpson, P.Geo. and William MacKenzie, P. Eng., qualified persons as defined by NI 43-101. The authors have reviewed and approved all scientific and technical information in this summary, including all scientific and technical information relating to any updates to the Tenke Fugurume mine since the date of the Tenke Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining activities and have been reviewed and approved as indicated in Schedule A. The Tenke Report is available under Lundin Mining’s SEDAR profile at [www.sedar.com](http://www.sedar.com)

##### **4.4.1.3.1 Property Description and Location**

TFM’s copper-cobalt deposits comprise one of the world’s largest known copper-cobalt resources. The deposits are located on contiguous concessions which total in excess of 1,500 km<sup>2</sup>. These concessions are located in Katanga Province, DRC, approximately 175 km northwest of Lubumbashi, the provincial capital.

Construction started in late 2006 on open-pit and oxide ore processing facilities designed to produce 115,000 tpa of cathode copper and over 8,000 tpa of cobalt in hydroxide. Commissioning of the copper facilities occurred at the end of the first quarter 2009, and of the cobalt hydroxide facilities at the end of the second quarter. By year end 2009, full name plate capacities for both products were being achieved. Subsequent debottlenecking and plant upgrades allowed expansion to increase to 132,000 tpa of copper cathode and approximately 11,000 tpa cobalt hydroxide. A further Phase 2 Expansion of the plant was substantially completed at the end of 2013, which has increased nameplate capacity to 195,000 tpa of copper cathode and 15,000 tpa cobalt hydroxide.

This is one of several stages of development contemplated with the objective of ultimately producing up to 500,000 tpa of copper mining multiple deposits concession-wide.

#### **4.4.1.3.2 Accessibility, Climate, Local Resources, Infrastructure and Physiography**

The main highway, railroad and power line connecting Kolwezi and Likasi with Lubumbashi pass through the concessions. Scheduled air services are available between Lubumbashi and the capital Kinshasa, as well as from Johannesburg, South Africa and Zambia. An airstrip constructed on the concession can accommodate freight aircraft and small passenger jets. Most copper and cobalt product and bulk mine consumables are transported primarily by truck and to an extent by rail between Tenke and ports in Durban, South Africa and Dar-es-Salaam, Tanzania.

The site climate is characterized as mild, rainy, sub-tropical mid-latitude with dry winters, with three seasons. The average annual rainfall is approximately 1,150 mm. Monthly average temperatures are 28°C (max); 20°C (min) in September and 22°C (max); 13°C (min) in June.

Tailings facilities are located to the north of the process plant site and a first raise of the initial facility was completed during 2010. The current tailings storage location is of sufficient size to handle the majority of currently proven/probable reserves. Other adjacent areas have been identified to provide life-of-mine storage capacity. A potential location for a future sulphide concentrator has been identified as having potential heap leach pad areas.

Electrical power is provided from the national grid. The local Nseke hydro power station is being renovated and expanded as part of the project and new local power lines have been constructed. Water from local boreholes supplements runoff water collected and the project is operated in line with a zero discharge water management philosophy.

The dominant landform is the Dipeta Syncline, an east-west trending valley approximately 15 km long and 3 km wide. The Dipeta River runs along the valley bottom while the Kwatebala, Tenke (formerly called Goma) and Fwaulu orebodies lie on the north-western crest of this valley. The orebodies presently form hills and ridges rising to elevations of about 1,500 m above sea level and up to 170 m above adjacent valleys. The plant site elevation is 1,200 m above sea level. The ore deposits lie on a surface water divide, with waters to the north flowing into the Mofya River and waters to the south flowing into the Dipeta River.

The flora of the concessions is dominated by an agricultural mosaic of croplands and fallow fields. The second most common vegetation type is miombo woodland. The third most common type of vegetation is degraded miombo woodland (miombo woodland that has been impacted by agricultural clearing activity). Copper-cobalt vegetation types occupy less than five percent of the area.

#### **4.4.1.3.3 History and Development Terms**

The Tenke Fungurume deposits have a history dating back to at least 1917. A controlling interest in the concessions was acquired from Gécamines following a lengthy tender process, and in November 1996, pursuant to a mining convention and TFM formation agreement, the concessions were transferred to TFM in exchange for a series of transfer bonus payments and other significant commercial and development commitments. TFM was established in December 1996 under the DRC Companies Act and formed for the purpose of developing the deposits of copper, cobalt and associated minerals under mining concession n° 198<sup>1</sup> and mining concession n° 199<sup>2</sup> granted to TFM in 1996 at Tenke and Fungurume. TF Holdings paid Gécamines the first stage of the transfer payments (\$50 million) in May 1997.

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<sup>1</sup>Renumbered n° 123 by the *Cadastre Minier Certificat d'Exploitation* n° CAMI/CE/940/2004 dated November 3, 2004; subsequently divided and renumbered n° 123, n° 9707 and n° 9708 by the *Ministère des Mines* through Ministerial Decree dated February 20, 2009.

<sup>2</sup>Renumbered n° 159 by the *Cadastre Minier Certificat d'Exploitation* n° CAMI/CE/941/2004 dated November 3, 2004; subsequently divided and renumbered n° 159, n° 4728 and n° 4729 by the *Ministère des Mines* through Ministerial Decree dated July 7, 2006.

In December 1998, Tenke Mining concluded an option agreement with BHP Copper Inc. (now BHP Billiton (“BHPB”)) which established a formal structure for BHPB to acquire, directly or indirectly, a controlling interest in the Tenke Fungurume project. In December 2000, Phelps Dodge entered into an agreement with BHPB, whereby Phelps Dodge had the opportunity to earn up to one-half of BHPB’s position. On September 13, 2002, BHPB’s rights and obligations under the option agreement with the Corporation were formally transferred to Phelps Dodge.

As a result of the DRC’s new 2002 World Bank sponsored mining code and other developments resulting from the DRC conflict, an extensive renegotiation process commenced upon formation of the transitional government in 2003, which successfully concluded with amended agreements (“Amended Agreements”) in late 2005. Pursuant to the terms agreed in the Amended Agreements, including the ARMC, the single purpose joint venture company, TF Holdings then controlled 70:30% by FCM and Tenke Mining, agreed to pay Gécamines an additional US\$50 million in stages based on pre-agreed development-related milestones. In accordance with shareholding agreements finalized between FCM and Tenke Mining in January 2004, FCM was obligated to fund \$42.5 million of this balance, with Tenke Mining funding the remaining \$7.5 million.

Upon the entry into force of the Amended Agreements, TF Holdings paid Gécamines \$15 million. Additional payments of \$5 million on a positive build decision; \$10 million on commencement of commercial operations, and \$10 million on each of the two successive anniversaries of commencement of commercial operations were made, which payments have now been paid in full. As the deposits have been brought to the ‘exploitation stage’, TFM enjoys all rights and privileges with respect to mining activity including surface usage. A positive build decision was made in December 2006 by then operator FMC.

Initial facilities were ultimately designed for a capacity of 115,000 tpa copper production. The Amended Agreements contain objectives without guarantee of reaching in excess of 130,000 tpa copper production by year 5 and 400,000 tpa by year 11 of operations, subject to a number of qualifications including DRC conditions and markets.

In early 2007, Freeport acquired FMC, which resulted in them taking over as operator and owner of a 70% interest in TF Holdings. In mid-2007, Lundin Mining acquired Tenke Mining, resulting in Lundin Mining controlling the remaining 30% of TF Holdings. This resulted in FCX indirectly holding 57.75% of TFM, and Lundin Mining indirectly holding 24.75% of TFM. Gécamines held the balance of ownership – 17.5% by way of a directly held carried interest in TFM.

In accordance with the Amended Agreements, a base metals royalty is payable at the rate of 2% of net sales. In addition, a 1% net sales metals export duty applies. Full repatriation of funds is allowed, subject to a 10% expatriated dividends withholding tax. Income tax is payable at the rate of 30% and certain other minor taxes and duties apply as defined in TFM’s Amended Agreements consistent with the 2002 DRC Mining Code Title IX. In addition to the 15% of the base metals royalty that is defined to be repatriated by the GDRC to the region of the mine, TFM has committed to a 0.3% net sales social fund, to be administered annually to benefit local communities.

In February 2008, the Ministry of Mines, Government of the DRC, sent a letter seeking comment on proposed material modifications to the mining contracts for the Tenke Fungurume concession, including the amount of transfer payments payable to the government, the government’s percentage ownership and involvement in the management of the mine, regularization of certain matters under Congolese law and the implementation of social plans.

In October 2010, the government of the DRC announced the conclusion of the review of TFM’s mining contracts. The conclusion of the review process confirmed that TFM’s existing mining contracts are in good standing and acknowledged the rights and benefits granted under those contracts. TFM’s key fiscal terms, including a 30% income tax rate, a 2% mining royalty rate and a 1% export fee, will continue to apply and are consistent with the rates in the DRC’s current Mining Code. In connection with the review, TFM made several commitments, which have been reflected in amendments to its mining contracts, including: an increase in the ownership interest of Gécamines, which is wholly owned by the government of the DRC, from 17.5% (non-dilutable) to 20.0% (non-dilutable), resulting in a decrease of Freeport’s



effective ownership interest from 57.75% to 56% and Lundin Mining's effective ownership interest from 24.75% to 24%; an additional royalty of \$1.2 million for each 100,000 tonnes of proven and probable copper reserves above 2.5 million tonnes at the time new reserves are established by FCX; additional payments totalling \$30 million to be paid in six equal installments of \$5 million upon reaching certain production milestones; conversion of \$50 million in intercompany loans to equity; a payment of approximately \$5 million for surface area fees and ongoing surface area fees of approximately \$0.8 million annually; incorporating clarifying language stating that TFM's rights and obligations are governed by the ARMC; and expanding Gécamines' participation in TFM management. TFM has also reiterated its commitment to the use of local services and Congolese employment. In connection with the modifications, the annual interest rate on advances from TFM shareholders increased from a rate of LIBOR plus 2% to LIBOR plus 6%.

In December 2010, the addenda to TFM's ARMC and Amended and Restated Shareholders' Agreement were signed by all parties. In April 2011, the amended agreements were ratified by a Presidential Decree. On March 26, 2012, the President and Prime Minister of the DRC signed a decree approving the bylaw changes for TFM. Accordingly, the change in Lundin Mining's ownership interest in TFM and the conversion of intercompany loans to equity became effective at that date.

#### **4.4.1.3.4 Geological Setting**

The Tenke Fungurume copper-cobalt deposits are typical of those that comprise the Central African Copperbelt. The Copperbelt is located in a major geological structure called the Lufilian Arc, a 500 km fold belt that stretches from Kolwezi in the southern DRC to Luanshya in Zambia. The deposits of the Tenke Fungurume district are located at the northernmost apex of the arc. The arc formed between the Angolan Plate to the southeast and Congo Plate to the northwest during the late Neoproterozoic, approximately 650 to 600 million years before present (Ma). Rocks in the arc are exposed in a series of tightly folded and thrust anticlines and synclines, generally trending east-west to southeast-northwest in the southern DRC. The Tenke Fungurume group of sediment-hosted copper cobalt deposits occurs near the base of a thick succession of sedimentary rocks belonging to the Katanga System of Proterozoic age (1050-650 Ma).

The older rocks of the basement complex belonging to the Kibara Supergroup form the framework within which the Katangan sediments were deposited and consist of granitic rocks and metamorphosed sediments. Sedimentation took place in shallow intra-cratonic basins bounded by rifts. A series of cratonic events of Pan African age (650 Ma to 500 Ma) resulted in extensive deformation of these rocks. The principal tectonic event is referred to as the Lufilian Orogeny and this led to the formation of the Lufilian Arc. All of the major Zambian and Congolese copper-cobalt deposits are located along this 500 km long arcuate structure, which extends from Kolwezi in the DRC to Luanshya in Zambia. The Tenke and Fungurume deposits are located in the northernmost apex of the arc.

#### **4.4.1.3.5 Exploration and Concession Potential**

The mineral concessions have been subject to multiple phases of exploration over time. Exploration in 2013 continued the focus on finding additional high-grade oxide resources and the investigation of deeper mixed and sulphide mineralization. A total of 108,762 m of diamond drilling was completed during 2013 in 597 individual holes. The exploration objectives were to convert oxide and mixed resources to reserve class, locate additional oxide resources, add to existing resources of sulphide and mixed material and supply samples for mixed ore metallurgical sampling.

A concession-wide airborne geophysical survey was carried out in June and July of 2013 by Fugro Airborne Surveys Ltd. A total of 5,545 line kilometres were flown over an area of approximately 1,000 km<sup>2</sup>. The aircraft carried a time-domain electromagnetic CGG:TEMPEST system and also gathered radiometric data. TEMPEST was designed to acquire high resolution, fully calibrated TEM data that can be used in a quantitative fashion for both conductivity mapping applications and conductive target detection. Results will be used to define new exploration targets in the Mines Series units characterized by low conductivity near surface and higher conductivity at depth due to the presence of sulphide minerals.

Underground development for bulk metallurgical sampling was started at Fungurume in 2012. A vertical shaft started in June 2012 and reached its final depth in late 2013. A crosscut has been started to intersect the mineralized units. The goal is to obtain mixed oxide-sulphide bulk samples for metallurgical testing in 2014. A similar shaft is also underway at Kwatebala again with bulk samples due in 2014.

Due to data and time availability, there are still a number of deposits that have yet to be assessed with Mineral Resource and Reserve models.

#### **4.4.1.3.6 Mineralization**

The copper-cobalt mineralization is mainly associated with two dolomitic shale horizons, each ranging in thickness from 5 m to 15 m, separated by 20 m of cellular silicified dolomite (RSC).

The main economic minerals present are malachite, chrysocolla, bornite, and heterogenite. Primary copper and cobalt mineralogy is predominately chalcocite, digenite, bornite, and carrollite. Oxidation has resulted in widespread alteration producing malachite, pseudomalachite, chrysocolla (hydrated copper silicate) and heterogenite.

The primary copper-cobalt mineral associations are homogeneous in both mineralized zones and any variations are due to the effect of oxidation and supergene enrichment. Consequently the mineral assemblages can be grouped into three main categories dependent upon the degree of alteration – oxide, mixed and sulphide zones. Dolomite and quartz are the main gangue minerals present. Dolomite or dolomitic rocks make up the bulk of the host strata. Weathering of the host rocks is normally depth-related, intensity decreasing with increasing depth, producing hydrated iron oxides and silica at the expense of dolomite, which is leached and removed.

#### **4.4.1.3.7 Drilling**

The exploration and drilling history of Tenke Fungurume deposits began in 1919. Union Minière du Haut Katanga explored the surface and drilled exploration core holes between 1919-1921, 1942-1951 and 1958-1968. Gécamines conducted exploration and drilling 1968-70 and 1981-1991. SMTF carried out exploration and core drilling 1971-1976. TFM carried out additional core drilling in 1997. These campaigns totalled 186,376 m of drilling plus mapping, trenching and exploration audits. Exploration core drilling carried out by FMC/FCX between 2006 and the end of 2013 comprised 3,561 core holes totaling approximately 580,884 m. Reverse circulation drilling was used locally to drill through unmineralized waste.

In 2014, drilling will continue for metallurgical sampling and resource conversion on some of the smaller oxide models. Drilling will also support geotechnical and metallurgical information gathering. Drilling is budgeted at 30,000 m for exploration, 1,750 m for metallurgical sampling, 12,000 m for development, and 4,000 m for geotechnical holes.

Underground bulk sample of mixed/sulphide mineralization will be obtained via small shafts and underground development in the Fungurume and Kwatebala orebodies for metallurgical testwork purposes.

#### **4.4.1.3.8 Sampling and Analysis**

Industry standard exploration drill core splitting, sampling, quality control sample insertion and density measurement protocols have been followed by FMC and subsequently by FCX. Regular independent audits to review sampling activities with respect to quality assurance, quality control and sample security are completed. In addition to drill core and drill cutting sampling, open-pit grade control sampling is carried out using a trench cutting tool.

Samples are prepared on-site and analyzed at the mine's assay laboratory facility. Strict quality assurance/quality control protocols are in place including placement and assaying of duplicates, blanks

and check samples. A computerized Laboratory Information Management System is used to manage data.

#### **4.4.1.3.9 Security of Samples**

Data and sample security procedures that conform to industry standards are in place. All drill cores are logged and photographed and the cores and sampling splits are stored on-site. These and other traceability records prevent errors of identification and ensure sample history can be followed.

#### **4.4.1.3.10 Mineral Resource and Mineral Reserve Estimates**

The current mineral resources at Tenke Fungurume have been estimated with 14 deposit models within the concessions: Kwatebala, Tenke, Fwaulu, Mwadinkomba, Kansalawile, Fungurume, Fungurume V1/VI Extension, Katuto, Shinkusu, Kazinyanga, Mambilima, Pumpi, Zikule and Mudilandima.

Mineral Resources have been estimated using three dimensional modelling methods with Minesight® software being used for geological modeling. Grade estimation has been carried out using specially developed Local Anisotropy Kriging (LAK) techniques to account for the narrow and complex nature of the orebodies.

The open-pit designs were optimized for all the 14 deposits listed above. Datamine NPV Scheduler was used for nine of the deposits with Tenke, Fungurume and Katuto being evaluated using Minesight® as it uses a rotated model. In each case, a Lerch Grossman algorithm was used to maximize the gross value of the pit. Pits were designed with 38 degree inter-ramp slope angle, 35 degree overall slope angle and double 5 m benches between berms. Input parameters to the open-pit optimizations were updated in 2013 and include revisions to the mine operating costs, cobalt recovery factors and the gangue acid consumption estimations.

Dilution is potentially a significant issue as mineralized zones are long, typically narrow (6 m to 15 m wide), faulted and folded, and contacts are relatively sharp. To address this issue, the resource and reserve models have block dimensions of 5 m by 2.5 m by 2.5 m; the ore mining fleet uses small equipment and 0.625 m ore cuts broken by the surface miners. For mine planning purposes, resource grades are reduced by 5% to account for anticipated grade dilution during operations. A Minesight® ore control system based on the reserve block model and refined by trench sampling is used to control the selectivity of mining.

Details of the December 2013 resource and reserve estimate for Tenke Fungurume are included in Schedule A, attached to this AIF.

#### **4.4.1.3.11 Mining Operations**

The Tenke Fungurume operation mines copper-cobalt oxide ores by open-pit mining techniques. Continuous miners are used to break the ore, and drill and blast is employed in the waste rock. Conventional loaders and trucks transport the ore to the crusher or stockpiles and the waste to dumps. Larger mining equipment is currently being introduced to enable increased mining rates. In 2013, production was sourced primarily from the Kwatebala, Fwaulu, Tenke and Mwandinlomba orebodies. The other orebodies are scheduled to be mined in a number of phases over time.

The latest proven process technology is being used to extract copper and cobalt. Copper is extracted using standard SAG milling, sulphuric acid leach, solvent extraction and electro-winning (“SXEW”) to produce copper cathode. Solution from the copper SXEW plant feeds the cobalt plant where cobalt hydroxide is produced through purification and precipitation processes. Copper is marketed with guidance from FCX’s global copper marketing program. Cobalt is sold as cobalt hydroxide under contract and on the spot market.

Nominal daily mill feed of oxide ore has increased from the original design of 8,000 tpd to 11,000 tpd to 14,500 tpd following several phases of plant debottlenecking and the completion of a Phase 2 expansion. Planned copper production levels have increased from 115,000 tpa to 132,000 tpa to 208,000 tpa.

Capital investment of approximately \$2.0 billion was made for the initial project facilities, which included aspects to support major future expansions. This included a projected \$250 million for loans and overseeing of the provincial hydro power rehabilitation project to provide reliable power to the mine and national grid. Total power available to the TFM mine resulting from the power loan investment under agreement with SNEL (DRC power authority) is in excess of 200 MW to support expansions, which is more than sufficient for current plans.

The Phase 2 expansion of Tenke Fungurume was substantially complete at 2013 year end increasing annual copper production by 50% to a nameplate of 195,000 tonnes copper cathode and 15,000 tonnes cobalt hydroxide. The expansion, which was substantially completed under budget at a cost of \$670 million, included additional mining equipment, mill upgrades, acid plant expansion and a doubling of the existing tank house capacity. During 2011 and 2012, test scale on/off heap leach pads were constructed and operated on site to evaluate the potential of commencing heap leaching of the low grade ores that are currently being mined and stockpiled, and future utilization of the excess SX-EW capacity.

FCX continues to engage in drilling activities, exploration analyses and metallurgical testing on mixed and sulphide ores to evaluate the full potential of the highly prospective minerals district at Tenke. These analyses are being incorporated in the evaluation of several further phases of expansion.

#### **4.4.1.3.12 Environmental and Social Aspects**

The Tenke project has been developed in accordance with Equator Principles, Voluntary Principles of Security and Human Rights, applicable World Bank/IFC standards and the Extractive Industries Transparency Initiative. Development and operation are subject to a number of DRC laws, regulations and standards dealing with the protection of public health, public safety and the environment. Permits and authorizations are in place for construction and operation.

Key environmental issues addressed by the project include mitigation of damage to sensitive indigenous flora unique to highly mineralized areas of the DRC copper belt, design of the project to zero discharge objectives, and adoption of fully plastic-lined process water and tailings storage impoundments. As this is the first commercial development of mining on the concessions, there are no known existing environmental liabilities.

Key social investments addressed during project development include extensive community consultation and stimulation of both direct and indirect employment – during the initial phase of construction, employment peaked at more than 8,000 DRC nationals. As of December 2013, TFM employed approximately 3,400 full time personnel and 3,800 contractors. According to an economic impact assessment commissioned by TFM, both directly and indirectly TFM accounts for 5 percent of all formal employment in the DRC's private sector.

Other social investments include medical, fresh water supply, education, agricultural and regional infrastructure investments in power, roads and border crossings.

#### **4.4.1.4 EAGLE PROJECT**

The following information has been based on the NI 43-101 technical report entitled “NI 43-101 Technical Report on the Eagle Mine, Upper Peninsula of Michigan, USA (the **Eagle Report**)” dated 26 July 2013 prepared for Lundin Mining by Mark Owen, BSc, MSc (MCSM), CGeol, EurGeol, FGS and Lewis Meyer, ACSM, MCSM, BEng, MSc, PhD, CEng, FIMMM, qualified persons as defined by NI 43-101. The authors have reviewed and approved all scientific and technical information in this summary, including all scientific and technical information relating to any updates to the Eagle mine since the date of the Eagle Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining activities and have been

reviewed and approved as indicated in Schedule A. The Eagle Report is available under Lundin Mining's SEDAR profile at [www.sedar.com](http://www.sedar.com).

#### **4.4.1.4.1 Project Description and Location**

The Eagle mine is located in the Upper Peninsula of Michigan, USA, in Michigamme Township, Marquette County. The property is on the watershed divide of the Yellow Dog River and Salmon Trout Rivers.

The closest community to the mine site is Big Bay, 24km from the property by road. Big Bay is an unincorporated community within Powell Township and has limited services. The closest full service community is Marquette, 53km by road from the property. Marquette provides a regional airport, rail and shipping facilities, and a full range of commercial services.

The Humboldt mill property, a former iron ore processing facility, occupying approximately 142 hectares, is located 61km west of Marquette, Michigan. The facility is located in the township of Humboldt, Marquette County, Michigan.

Ore from the Eagle mine will be trucked 105 km to the Humboldt mill for processing.

#### **4.4.1.4.2 Accessibility, Climate, Local Resource, Infrastructure and Physiography**

Road access to the mine property is by means of maintained loose surface and paved roads from the communities of Big Bay to the east, L'Anse to the west, and Marquette to the south. The Humboldt mill is located close to the main US Route 41. The route for trucking ore from the Eagle mine to the Humboldt mill is 105km long.

Eagle mine and Humboldt mill sites are located in a temperate region. The area's weather is characterised by variable weather patterns and large seasonal temperature variations. Summers are often warm and humid and winters can be very cold with frequent snow falls and snow cover. Extreme recorded temperatures range from -33.6°C along the coast to +43.6°C inland. Snowfall is heaviest inland, averaging 508 cm, and is least along the coast, averaging 304-355cm. Average annual precipitation is 81 to 91 cm; the heaviest precipitation falls at high elevations inland.

The property is in the Marquette Highland physiographic region characterized by uplands of variable topography controlled by bedrock. In some areas, the terrain consists of low rocky ridges less than 15 m high, with many small lakes and swamps. Eagle mine is located on Yellow Dog plain where two erosionally resistant hillocks of peridotite protrude through the till. Lakes, rivers and smaller streams are numerous.

Both the mine and mill sites are serviced by grid power. An existing non-potable well, in conjunction with a potable well, provides service and drinking water to the mine site and each is capable of delivering 100 gpm. There are plans to refurbish the existing Humboldt mill potable water well for future facility operations. Hydrology studies at both sites indicate viable long term aquifers.

The area is served by an extensive network of paved roads, a regional airport, rail service, excellent telecommunications facilities, national grid electricity, an ample supply of water and a highly educated work force.

#### **4.4.1.4.3 History**

The Eagle deposit was first drilled in 2002 as part of a nickel exploration program commenced by Rio Tinto in 2000. Following further drilling an initial Mineral Resource was estimated in early 2004.

Following further drilling, feasibility studies, and the receipt of all relevant permits Rio Tinto began construction of the Eagle mine site in 2010 and began underground development in September 2011. The re-construction work at the Humboldt mill also commenced in 2011.

In July 2013, Lundin Mining acquired the Eagle mine from Rio Tinto. Following the purchase, construction of the project has been accelerated and first concentrate production is expected to be achieved in late 2014.

#### **4.4.1.4.4 Geological Setting**

Eagle is an ultramafic-intrusive-hosted high grade Ni-Cu deposit, with associated cobalt, platinum, palladium, silver and gold, which is interpreted to have formed from multiple intrusive phases. The peridotite intrusive is hosted in paleoproterozoic metasediments, which exhibit hornfels at the contact with the intrusion. The whole area is mostly covered by pleistocene glacial till.

The Eagle deposit is hosted by one of two peridotite intrusions historically known as the Yellow Dog Peridotites and referred to as Eagle peridotites within the project lexicon. The eastern intrusion forms a prominent outcrop that rises above the Yellow Dog Plains and is being evaluated as the Eagle East target. The western intrusion, 650m to the west and host to Eagle, is only poorly exposed in a small outcrop on the north side of Salmon Trout River. The intrusions are characterized by very prominent magnetic highs relative to the surrounding sedimentary rocks.

The high-grade Eagle deposit measures approximately 300m in strike length, up to 85m in width, and 340m in vertical depth.

#### **4.4.1.4.5 Exploration**

Exploration work within the mining concession in 2013 has concentrated primarily on searching for an extension of the known orebody by both underground and surface drilling. A small number of regional generative targets were also tested.

#### **4.4.1.4.6 Mineralization**

The Eagle deposit is a high-grade magmatic sulphide deposit containing nickel and copper mineralization and minor amounts of cobalt, precious and platinum group metals (PGMs). The economic minerals associated with this deposit are predominately pentlandite and chalcopyrite.

Three distinct types of sulphide mineralization occur at the Eagle deposit. They are described as disseminated, semi-massive and massive sulphide. Massive sulphide is generally over 90% pyrrhotite-pentlandite-chalcopyrite. Semi-massive, or matrix ore, is 30% or greater net textured sulphide. Disseminated mineralization is generally uneconomic. The semi-massive and massive sulphides occur in separate zones called the Massive Sulphide, Semi-massive East, and Semi-massive West zones.

#### **4.4.1.4.7 Drilling**

Surface and underground exploration drilling is an ongoing operation at the mine with the work undertaken by contractors. The nominal hole spacing of the underground diamond drilling is between 15 m and 25 m, with surface drilling averaging a spacing of less than 25 m within the Eagle deposit. Drilling at Eagle on the resource is restricted to diamond core using various size tools. Down hole surveys at Eagle are predominantly either north seeking (rate) gyros or normal gyro surveys in conjunction with a drill contractor FLEXIT tool.

In 2013, 3,357 m of drilling was completed from surface with 7 holes and 2,641 m was drilled from underground in 43 holes.

#### **4.4.1.4.8 Sampling and Analysis**

Industry standard exploration drill core splitting, sampling, insertion of QC samples and density measurement protocols and procedures are in place. Samples are prepared on-site and sent to ALS Minerals (ALS Chemex) laboratory in Vancouver, Canada for assay.

#### **4.4.1.4.9 Security of Samples**

Data and sample security procedures that conform to industry standards are in place at Eagle. All drill core is logged and photographed, and the cores and sampling splits are stored in secure facilities near Negaunee. Traceability records prevent errors of identification and ensure sample history can be followed.

#### **4.4.1.4.10 Mineral Resource and Reserve Estimates**

Mineral Resources at Eagle are estimated using 3D block modelling using Maptek Vulcan mining software. Ordinary Kriging is used for grade and density estimation.

Mineral Reserves are calculated from the resources by designing stopes and sill layouts using Vulcan software. An NSR cut-off is applied together with dilution and mining recovery factors.

Details of the June 2013 Mineral Resource and Reserve estimate for Eagle are included in Schedule A, attached to this AIF.

#### **4.4.1.4.11 Mining Operations**

Eagle is a relatively shallow underground mine with access gained via a surface ramp that will serve as the route for waste, ore and backfill haulage. The mine will employ transverse bench-and-fill stoping with mining in an up-dip primary secondary sequence. Backfilling will be undertaken using cemented and uncemented rockfill. Two ventilation shafts are in place, with the downcast shaft also equipped for emergency egress. Ore from the mine will be stored in a covered coarse ore stockpile facility prior to transport by road 105km to the Humbolt mill site.

The Humbolt mill is a former iron ore processing plant that is being converted for processing Eagle ore. From a further covered coarse ore storage facility, the ore will be processed using a conventional crush, grind and differential flotation process to produce separate nickel and copper concentrates. Tailings from the plant will be deposited sub-aqueously in the adjacent former Humbolt iron ore open pit.

Nickel and copper concentrates will be stored in a covered concentrate building on site. A rail spur in to the site will be used to transport the concentrate direct to smelter facilities within North America or to the ports of Quebec, Montreal or Vancouver for shipment to overseas smelters.

Current Mineral Reserves at Eagle are sufficient for a mine life of 8 years.

Both the mine and mill operate under a number of local, state and federal permits and all key permits are in place for the start of operations. The Eagle mine and Humbolt mill are currently under construction and first commercial concentrate production is scheduled for the fourth quarter of 2014.

Federal taxes for Eagle comprise the greater of a regular income tax of 35% or the alternative minimum tax ("AMT") of 20%. The state of Michigan imposes an additional severance tax of 2.75% on "taxable minerals". A combination of state and private royalties are payable at 7.0% and 2.5% respectively.

#### **4.4.1.4.12 Exploration and Development**

In 2014, exploration will continue to focus on near-mine extensions to the known Eagle deposit. Drilling will also be carried out to trace the feeder dyke below Eagle and further explore the currently uneconomic Eagle East intrusion.

## **4.4.2 OTHER PROPERTIES**

### **4.4.2.1 Aguablanca Mine**

The Aguablanca mine is a single open-pit mine and is located approximately 100 km north of Seville in the Extremadura region of southern Spain. The mine lies some 30 km south of the town of Monesterio.

Mining operations use a conventional drill and blast, and truck and shovel fleet. The pit is mined with 8 m benches and the final slopes are designed with a double bench configuration. Waste rock is stacked to the immediate north of the open pit and the waste dumps form the downstream wall of the tailings impoundment. Run-of-mine ore is stockpiled, blended and then primary crushed. The crushed ore is conveyor fed to a conventional grinding and flotation circuit to produce a bulk nickel-copper concentrate. The concentrate is thickened and filtered to produce a filter cake suitable for onward transport. The concentrate is truck hauled approximately 125 km to Huelva port from where it is shipped to customer smelter facilities. Tailings from the process plant are pumped to a fully lined tailings impoundment to the north of the plant site area. Decant water from the tailings dam is returned to the process plant.

Open pit instabilities occurred in the south wall of the open pit during the third quarter of 2012. Significant effort was expended during 2013 in stabilising the south wall of the open pit including further push backs, slope reinforcement, increased drainage and, prior to year end, the successful mining of two drainage tunnels beneath the affected slope. These initiatives have been successful and consistent open pit production was achieved throughout the year.

Mine production is now expected to continue until 2018 following the approval of the underground project. Open pit mining is planned to continue until the first quarter of 2015 when the pit will reach the 186 metre level. Development of the underground mine will commence in mid-2014 from the exploration decline that is already in place, with first stope production from the initial sub-level cave due to commence following cessation of the open pit. A deeper sub-level open stoping zone will also be developed and will enter into production in 2017.

All bulk nickel-copper concentrate produced from the Aguablanca operation is sold under a single, long-term contract. Principle payable metals are nickel and copper with by-product payments made for platinum, palladium, cobalt and gold, and the payment terms are typical of those for bulk nickel/copper sulphide concentrates.

The Aguablanca Mine operates under environmental permits granted by the Spanish Government. These permits include conditions covering environmental management systems, tailings and waste rock disposal, water and energy consumption, emissions to atmosphere, emissions to water courses and water treatment, noise, industrial waste disposal, emergency and closure planning. Key environmental issues include; the potential lack of water during drought periods; the dispersal of dust and noise from the mine site; and mine site rehabilitation.

The corporation tax rate in Spain is 30% and royalties of 2% of NSR apply.

Lundin Mining holds exploration rights over an area of 1,864 km<sup>2</sup>, largely to the north and west of Aguablanca, known as the Ossa Morena. Additional exploration potential exists for nickel-copper and copper-gold mineralization within this area.

#### **4.4.2.1.1 Mineral Resource and Reserve Estimates**

Mineral resources at Aguablanca were estimated at 30 June 2013 using three dimensional geological block modelling methods and specialized software (Datamine®). The Ordinary Kriging method of interpolation was used to estimate six metal grades (Ni, Cu, Pt, Pd, Co and Au) and the Inverse Distance Squared method was used for the density estimation.



Mineral Reserves for the open pit were estimated from the June 2013 Mineral Resource block model within a re-configured open pit shell originally produced by Golder Associates (using the specialized software Whittle® Four-X) in March 2011.

Mineral Reserves for the underground mine were estimated from designed sub-level caving and sub-level open stoping mining panels beneath the open pit, with appropriate allowances made for mining dilution and recovery.

Details of the June 2013 Mineral Resource and Reserve estimate for Aguablanca, including the underground Mineral Reserves, are included in Schedule A attached to this AIF.

#### **4.4.3. FREEPORT COBALT**

During 2013, Lundin Mining acquired, through a newly formed joint venture entity with Freeport, a large scale cobalt chemical refinery located in Kokkola, Finland and the related sales and marketing business. The acquisition provided direct end-market access for the cobalt hydroxide production from the Tenke Fungurume mine among other advantages. Lundin Mining holds an effective 24% ownership interest in the joint venture, with Freeport holding an effective 56% ownership interest and acting as operator of the joint venture and Gécamines holding a 20% interest. Initial consideration of \$348 million, excluding cash acquired, was paid at closing. Under the terms of the agreement, there is the potential for additional consideration of up to \$110 million payable over a period of three years from the acquisition date, contingent upon the achievement of revenue-based performance targets. Lundin Mining's share of the investment, including acquired cash, was \$116 million based on a 30/70% split with Freeport and will be repaid in full prior to any distributions.

The operations were re-branded Freeport Cobalt.

The refinery located on the Baltic Sea in Finland processes unrefined cobalt and related metals and manufactures advanced inorganic products for use in a variety of applications in fast-growing end use markets. Freeport Cobalt is one of the world's largest suppliers of cobalt chemicals and powders for use in batteries, chemicals and ceramics and powder metallurgy.

The Kokkola refinery has been in operation since 1968 and has an experienced management team, over 400 employees and global sales and marketing footprint that services approximately 500 customers in over 50 countries in Asia, Europe and the Americas.

#### **4.4.4 MINE CLOSURES**

The Galmoy mine in county Kilkenny, Ireland was acquired by Lundin Mining in 2005. The final mining of high-grade zinc lead ore for treatment at an adjacent mine was completed in October 2012, and milling of this ore was substantially completed during 2013. The approved closure plan for the mine is being followed with the mill dismantled and sold, the mine entrances sealed and capped, and rehabilitation of the tailings management facility well advanced. Closure activities are expected to be largely completed in 2014 and the restricted cash closure fund accumulated during the mine life will continue to be drawn down to meet the closure obligations.

Lundin Mining acquired the Vueltas del Rio gold mine in Honduras, as part of the acquisition of Rio Narcea in 2007. Reclamation of the property continued throughout 2013 in accordance with the mine closure plans approved by the local authorities. Completion of the closure plan is expected in early 2014 with an approved aftercare program then initiated.

Production ceased in 2008 at the Storliden zinc-copper mine in northern Sweden. A rehabilitation program has been completed in accordance with the approved closure plan. The site is now subject to a long-term monitoring program.

## **ITEM 5            RISKS AND UNCERTAINTIES**

### **5.1      Risks and Uncertainties**

The Company is subject to various risks and uncertainties, including but not limited to those listed below.

#### ***Metal Prices***

Metal prices, primarily copper, zinc, lead and nickel, are key performance drivers and fluctuations in the prices of these commodities can have a dramatic effect on the Company's reported financial results. Prices can fluctuate widely and are affected by numerous factors beyond the Company's control. The prices of metals are influenced by supply and demand, exchange rates, interest rates and interest rate expectations, inflation or deflation and expectations with respect to inflation or deflation, speculative activities, changes in global economies, and political, social and other factors. The supply of metals consists of a combination of new mine production, recycling and existing stocks held by governments, producers and consumers.

If the market prices for metals fall below the Company's full production costs and remain at such levels for any sustained period of time, the Company may, depending on hedging practices, experience losses and may decide to discontinue mining operations or development of a project at one or more of its properties. If the prices drop significantly, the economic prospects of the mines and projects in which the Company has an interest could be significantly reduced or rendered uneconomic. Low metal prices will affect the Company's liquidity, and if they persist for an extended period of time, the Company may have to look for other sources of cash flow to maintain liquidity until metal prices recover. The Company does not currently hedge metal prices.

#### ***Foreign Exchange Risk***

The Company's revenue from operations is received in United States dollars while most of its operating expenses will be incurred in Euro and SEK. Accordingly, foreign currency fluctuations may adversely affect the Company's financial position and operating results. The Company does not currently engage in foreign currency hedging activities.

#### ***Credit Risk***

The Company is exposed to various counterparty risks. The Company is subject to credit risk through its trade receivables. The Company manages this risk through evaluation and monitoring of industry and economic conditions and assessment of customer financial reports. The Company transacts with credit worthy customers to minimize credit risk and if necessary, employs pre-payment arrangements and the use of letters of credit, where appropriate, but cannot always be assured of the solvency of its customers. Credit risk relating to derivative contracts arises from the possibility that a counterparty to an instrument with which the Company has an unrealized gain fails to settle the contracts.

#### ***Derivative Instruments***

The Company does not currently have, but may, from time to time, manage exposure to fluctuations in metal prices, foreign exchange and interest rates by entering into derivative instruments approved by the Company's Board of Directors. The Company does not hold or issue derivative instruments for speculation or trading purposes. Such derivative instruments would be marked-to-market at the end of each period and may not necessarily be indicative of the amounts the Company might pay or receive as the contracts are settled and may result in a material adverse impact on the Company's reported financial results.

#### ***Competition***

There is competition within the mining industry for the discovery and acquisition of properties considered to have commercial potential. The Company competes with other mining companies, many of which have greater financial resources than the Company, for the acquisition of mineral claims, leases and other mineral interests as well as for the recruitment and retention of qualified employees and other personnel.

### ***Foreign Countries and Regulatory Requirements***

The Company's operations and development projects in Portugal, Sweden, Spain and the US are subject to various laws and environmental regulations. The implementation of new or the modification of existing laws and regulations affecting the mining and metals industry could have a material adverse impact on the Company.

The Company has a significant investment in mining operations located in the DRC. The carrying value of this investment and the Company's ability to advance development plans may be adversely affected by political instability and legal and economic uncertainty. The risks by which the Company's interest in the DRC may be adversely affected include, but are not limited to: political unrest, labour disputes, invalidation of governmental orders, permits, agreements or property rights, risk of corruption including violations under applicable foreign corrupt practices statutes, military repression, war, rebel group and civil disturbances, criminal and terrorist actions, arbitrary changes in laws, regulations, policies, taxation, price controls and exchange controls, delays in obtaining or the inability to obtain necessary permits, opposition to mining from environmental or other non-governmental organizations, limitations on foreign ownership, limitations on the repatriation of earnings, limitations on mineral exports, and high rates of inflation and increased financing costs. These risks may limit or disrupt the Company's operations and projects, restrict the movement of funds or result in the deprivation of contractual rights or the taking of property by nationalization, expropriation or other means without fair compensation. Africa's status as a developing continent may make it more difficult for the Company to obtain any required exploration, development and production financing for its projects.

There can be no assurance that industries which are deemed of national or strategic importance in countries in which the Company has operations or assets, including mineral exploration, production and development, will not be nationalized. The risk exists that further government limitations, restrictions or requirements, not presently foreseen, will be implemented. Changes in policy that alter laws regulating the mining industry could have a material adverse effect on the Company. There can be no assurance that the Company's assets in these countries will not be subject to nationalization, requisition or confiscation, whether legitimate or not, by an authority or body.

In addition, in the event of a dispute arising from foreign operations, the Company may be subject to the exclusive jurisdiction of foreign courts or may not be successful in subjecting foreign persons to the jurisdiction of courts in Canada. The Company also may be hindered or prevented from enforcing its rights with respect to a governmental instrumentality because of the doctrine of sovereign immunity. It is not possible for the Company to accurately predict such developments or changes in laws or policy or to what extent any such developments or changes may have a material adverse effect on the Company's operations.

### ***Mining and Processing***

The Company's business operations are subject to risks and hazards inherent in the mining industry, including, but not limited to, unanticipated variations in grade and other geological problems, water conditions, surface or underground conditions, metallurgical and other processing problems, mechanical equipment performance problems, the lack of availability of materials and equipment, the occurrence of rock or ramp collapses, labour force disruptions, force majeure factors, unanticipated transportation costs, and weather conditions, any of which can materially and adversely affect, among other things, the development of properties, production quantities and rates, costs and expenditures and production commencement dates.

The Company's processing facilities are dependent upon continuous mine feed to remain in operation. Insofar as the Company's mines may not maintain material stockpiles of ore or material in process, any significant disruption in either mine feed or processing throughput, whether due to equipment failures, adverse weather conditions, supply interruptions, labour force disruptions or other causes, may have an immediate adverse effect on results of operations of the Company.

The Company periodically reviews mining schedules, production levels and asset lives in its life of mine ("LOM") planning for all of its operating and development properties. Significant changes in the LOM plans can occur as a result of experience obtained in the course of carrying out mining activities, new ore

discoveries, changes in mining methods and rates, process changes, investments in new equipment and technology, foreign exchange and metal price assumptions, and other factors. Based on this analysis the Company reviews its accounting estimates and in the event of an impairment, may be required to write-down the carrying value of a mine or development property. This complex process continues for the economic life of every mine in which the Company has an interest.

### ***Infrastructure***

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges and power and water supplies are important determinants which affect capital and operating costs. Unusual or infrequent weather phenomena, sabotage or government or other interference in the maintenance or provision of such infrastructure could adversely affect the activities and profitability of the Company.

During recent years, the water supply has been the object of political debate between the region in which Aguablanca operates and the neighbouring region. The Company is continuing to advance its application with central and regional authorities to obtain all of the water licences required to satisfy all of its supply requirements.

### ***Energy Prices and Availability***

The Company's mining operations and facilities are intensive users of electricity and carbon based fuels. Energy prices can be affected by numerous factors beyond the Company's control, including global and regional supply and demand, political and economic conditions and applicable regulatory regimes. The availability of energy may be negatively impacted due to a variety of reasons including, fluctuations in climate, severe weather conditions, inadequate infrastructure capacity, equipment failure or the ability to extend supply contracts on economical terms. The prices and various sources of energy the Company relies on may be negatively impacted and any such change could have an adverse effect on profitability.

### ***Mine Development Risks***

The Company's ability to maintain, or increase, its annual production of copper, zinc, lead, nickel and other metals will be dependent in significant part upon its ability to bring new mines into production and to expand existing mines. Although the Company utilizes the operating history of its existing mines to derive estimates of future operating costs and capital requirements, such estimates may differ materially from actual operating results at new mines or at expansions of existing mines. The economic feasibility analysis with respect to any individual project is based upon, among other things, the interpretation of geological data obtained from drill holes and other sampling techniques, feasibility studies (which derive estimates of cash operating costs based upon anticipated tonnage and grades of ore to be mined and processed), and base metals price assumptions, the configuration of the orebody, expected recovery rates of metals from the ore, comparable facility and equipment costs, anticipated climatic conditions, estimates of labour, productivity, royalty or other ownership requirements and other factors. Some of the Company's development projects are also subject to the successful completion of final feasibility studies, issuance of necessary permits and other governmental approvals, sourcing suitable power and water requirements, confirming the availability of appropriate local area infrastructure, receipt of adequate financing and addressing local stakeholder concerns.

The capital expenditures and timeline needed to develop a new mine or expansion are considerable and the economics of and the ability to complete a project can be affected by many factors, including; inability to complete construction and related infrastructure in a timely manner, changes in the legal and regulatory environment, currency fluctuations, industrial disputes, availability of parts, machinery or operators, delays in the delivery of major process plant equipment, inability to obtain, renew or maintain the necessary permits, licences or approvals, unforeseen natural events and political and other factors. Factors such as changes to technical specifications, failure to enter into agreements with contractors or suppliers in a timely manner, and shortage of capital may also delay the completion of construction or commencement of production or require the expenditure of additional funds. Although the Company's feasibility studies are generally completed with the Company's knowledge of the operating history of similar orebodies in the region, the actual operating results of its development projects may differ materially from those anticipated, and uncertainties related to operations are even greater in the case of development projects. Many major mining projects constructed in the last several years, or under

construction currently, have experienced cost overruns that substantially exceeded the capital cost estimated during the basic engineering phase of those projects. There can be no assurance that the Company's development projects will be able to be developed successfully or economically or that they will not be subject to the other risks described in this section.

### ***Depletion of Reserves***

Subject to any future expansion or other development, production from existing operations at the Company's mines will typically decline over the life of mine. As a result, the ability to maintain or increase current production of base metals will depend significantly upon the Company's ability to discover or acquire new reserves at existing mines. Even if the Company identifies and acquires an economically viable orebody, several years may elapse from the initial stages of development. The Company may incur major expenses to locate and establish new mineral reserves, to develop metallurgical processes and to construct any additional mining and/or processing facilities required. As a result, the Company cannot provide assurance that its efforts will yield new mineral reserves to replace or expand current mineral reserves.

### ***Exploration Risk***

Exploration of mineral properties involves significant financial risk. Very few properties that are explored are later developed into operating mines. Whether a mineral deposit will be commercially viable depends on a number of factors, including; the particular attributes of the deposit, such as size, grade and proximity to infrastructure; metal prices, which are highly cyclical; and government regulation, including regulations relating to prices, taxes, royalties land tenure, land use, importing and exporting of minerals and environment protection. As a result, the Company cannot provide assurance that its exploration efforts will result in any new commercial mining operations or yield new mineral reserves.

### ***Community Relations***

The Company's relationships with the communities in which it operates and other stakeholders are critical to ensure the future success of its existing operations and the construction and development of its projects. There is an increasing level of public concern relating to the perceived effect of mining activities on the environment and on communities impacted by such activities. Publicity adverse to us, the Company's operations, or extractive industries generally, could have an adverse effect on the Company and may impact relationships with the communities in which the Company operates and other stakeholders. While the Company is committed to operating in a socially responsible manner, there can be no assurance that its efforts in this respect will mitigate this potential risk.

### ***Reclamation Funds and Mine Closure Costs***

As at December 31, 2013, the Company had \$53.1 million in a number of reclamation funds that will be used to fund future site reclamation and mine closure costs at the Company's various mine sites. The Company will continue to contribute to these funds as required, based on an estimate of the future site reclamation and mine closure costs as detailed in the closure plans. Changes in environmental laws and regulations can create uncertainty with regards to future reclamation costs and affect the funding requirements.

The Company has received regulatory approval for closure at its Galmoy mine and closure activities are ongoing. From time to time Galmoy may need to seek regulatory approval for amendments to its mine closure plan for necessary changes. Mining activity at Galmoy ceased in the fourth quarter of 2012 and all remnant high grade ore was transported to an adjacent mine for treatment during 2013 and 2014.

Rehabilitation programs at the Storliden mine were completed in 2012. The Company is currently studying water quality in the mine area and the site remains subject to an ongoing aftercare monitoring program until 2020. The Company also has closure programs in place associated with legacy mining operations previously carried on in Honduras under the ownership of a Lundin Mining subsidiary, which was acquired by the Company in 2007. The active closure phase at this former gold mine was nearing completion at the end of 2013 and will shortly move to a three year aftercare monitoring program.

Closing a mine can have significant impact on local communities and site remediation activities may not be supported by local stakeholders. The Company endeavours to mitigate this risk by reviewing and

updating closure plans regularly with external stakeholders over the life of the mine and considering where post-mining land use for mining affected areas has potential benefits to the communities.

In addition to immediate closure activities (including ground stabilization, infrastructure demolition and removal, top soil replacement, re-grading and re-vegetation), closed mining operations require long-term surveillance and monitoring.

Site closure plans have been developed and amounts accrued in the Company's financial statements to provide for mine closure obligations. Future remediation costs for inactive mines are estimated at the end of each period, including ongoing care, maintenance and monitoring costs. Changes in estimates at inactive mines are reflected in earnings in the period an estimate is revised. Actual costs realized in satisfaction of mine closure obligations may vary materially from management's estimates.

### ***Environmental and Other Regulatory Requirements***

All phases of mining and exploration operations are subject to government regulation including regulations pertaining to environmental protection. Environmental legislation is becoming stricter, with increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and heightened responsibility for companies and their officers, directors and employees. There can be no assurance that possible future changes in environmental regulation will not adversely affect the Company's operations. As well, environmental hazards may exist on a property in which the Company holds an interest, which were caused by previous or existing owners or operators of the properties and of which the Company is not aware at present. Operations at the Company's mines are subject to strict environmental and other regulatory requirements, including requirements relating to the production, handling and disposal of hazardous materials, pollution controls, health and safety and the protection of wildlife. The Company may be required to incur substantial capital expenditures in order to comply with these requirements. Any failure to comply with the requirements could result in substantial fines, delays in production, or the withdrawal of the Company's mining licences.

Government approvals and permits are required to be maintained in connection with the Company's mining and exploration activities. With the exception of certain Aguablanca water licences (see Infrastructure), the Company has all the required permits for its operations as currently conducted; however, there is no assurance that delays will not occur in connection with obtaining all necessary renewals of such permits for the existing operations or additional permits for any possible future changes to the Company's operations, including any proposed capital improvement programs. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions there under, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Parties engaged in mining operations may be required to compensate those suffering loss or damage by reason of the mining activities and may be liable for civil or criminal fines or penalties imposed for violations of applicable laws or regulations. Amendments to current laws, regulations and permitting requirements, or more stringent application of existing laws, may have a material adverse impact on the Company resulting in increased capital expenditures or production costs, reduced levels of production at producing properties or abandonment or delays in development of properties.

### ***Mineral Resource and Reserve Estimates***

The Company's reported Mineral Resources and Mineral Reserves are only estimates. No assurance can be given that the estimated Mineral Resources and Mineral Reserves will be recovered or that they will be recovered at the rates estimated. Mineral Resource and Mineral Reserve estimates are based on limited sampling, and, consequently, are uncertain because the samples may not be representative. Mineral Resource and Mineral Reserve estimates may require revision (either up or down) based on actual production experience. Market fluctuations in the price of metals, as well as increased production costs or reduced recovery rates, may render certain Mineral Resources and Mineral Reserves uneconomic and may ultimately result in a restatement of estimated resources and/or reserves. Moreover, short-term operating factors relating to the Mineral Resources and Mineral Reserves, such as the need for sequential development of ore bodies and the processing of new or different ore grades or types, may adversely affect the Company's profitability in any particular accounting period.

### ***Estimation of Asset Carrying Values***

The Company annually undertakes a detailed review of the LOM plans for its operating properties and an evaluation of the Company's portfolio of development projects, exploration projects and other assets. The recoverability of the Company's carrying values of its operating and development properties are assessed by comparing carrying values to estimated future net cash flows and/or market values for each property.

Factors which may affect the recoverability of carrying values include, but are not limited to, metal prices, foreign exchange rates, capital cost estimates, mining, processing and other operating costs, grade and metallurgical characteristics of ore, mine design and timing of production. In the event of a prolonged period of depressed prices, the Company may be required to take material write-downs of its operating and development properties.

### ***Funding Requirements and Economic Volatility***

The Company does not have unlimited financial resources and there is no assurance that sufficient additional funding or financing will be available to the Company or its direct and indirect subsidiaries on acceptable terms, or at all, for further exploration or development of its properties or to fulfill its obligations under any applicable agreements. Failure to obtain such additional funding could result in the delay or indefinite postponement of the exploration and development of the Company's properties.

Lundin Mining is a multinational company and relies on financial institutions worldwide to fund its corporate and project needs. Instability of large financial institutions may impact the ability of the Company to obtain equity or debt financing in the future and, if obtained, on terms favourable to the Company. Disruptions in the capital and credit markets as a result of uncertainty, changing or increased regulation of financial institutions, reduced alternatives or failures of significant financial institutions could adversely affect the Company's access to the liquidity needed for the business in the longer term.

The Company's access to funds under its credit facilities is dependent on the ability of the financial institutions that are parties to the facilities to meet their funding commitments. Those financial institutions may not be able to meet their funding requirements if they experience shortages of capital and liquidity or if they experience excessive volumes of borrowing requests within a short period of time. Moreover, the obligations of the financial institutions under the credit facilities are several and not joint and, as a result, a funding default by one or more institutions does not need to be made up by the others. Such disruptions could require the Company to take measures to conserve cash until the markets stabilize or until alternative credit or other funding arrangements for the Company's business needs can be obtained.

### ***Current Global Financial Conditions***

Recent events in global financial markets, including sovereign debt crises, have had a profound impact on the global economy and global financial conditions have been subject to volatility. Many industries, including the mining sector, are impacted by these market conditions. Some of the key impacts of the current financial market turmoil include contraction in credit markets resulting in a widening of credit risk, devaluations and high volatility in global equity, commodity, foreign exchange and base metals markets and a lack of market liquidity. A continuing slowdown in financial markets or other economic conditions, including, but not limited to, consumer spending, employment rates, business conditions, inflation, fuel and energy costs, consumer debt levels, lack of available credit, the state of financial markets, interest rates, and tax rates may adversely affect the Company's business, financial condition, results of operations and ability to grow.

### ***Uninsurable Risks***

Exploration, development and production operations on mineral properties involve numerous risks, including unexpected or unusual geological operating conditions, industrial accidents, work force health issues, contaminations, labour disputes, changes in regulatory environment, ground or slope failures, rock bursts, cave-ins, fires, floods, earthquakes and other environmental occurrences, as well as political and social instability. It is not always possible to obtain insurance against all such risks and the Company may decide not to insure against certain risks because of high premiums or other reasons. Should such liabilities arise, they could reduce or eliminate any further profitability and result in increasing costs and a

decline in the value of the securities of the Company. The Company does not maintain insurance against political risks.

#### ***No Assurance of Titles or Boundaries***

Although the Company has investigated the right to explore and exploit its various properties and obtained records from government offices with respect to all of the mineral claims comprising its properties, this should not be construed as a guarantee of title. Other parties may dispute the title to a property or the property may be subject to prior unregistered agreements and transfers or land claims by aboriginal, native, or indigenous peoples. The title may be affected by undetected encumbrances or defects or governmental actions. The Company has not conducted surveys of all of its properties, and the precise area and location of claims or the properties may be challenged.

#### ***Employee Relations***

Certain of the Company's employees and suppliers are employed under collective bargaining agreements. The Company cannot predict at this time whether future agreements with unionized workforces will be completed without a work stoppage. Further, relations with employees and suppliers may be affected by changes in the scheme of labour relations that may be introduced by the relevant governmental authorities in the jurisdictions in which the Company operates. Changes in such legislation or otherwise in the Company's relationship with its employees and suppliers may result in labour unrest or disruptions such as strikes, lockouts or other work stoppages and could have a material adverse effect on our business as a whole, financial condition, results of operations or share price.

#### ***Key Personnel***

The Company is dependent on a relatively small number of key employees, the loss of any of whom could have an adverse effect on the Company. The Company does not have key person insurance on these individuals. The success of the Company's operations depends in part on the ability to attract, motivate and retain geologists, engineers, metallurgists and other personnel with specialized skill and knowledge.

#### ***Tax***

The Company runs its business in different countries and strives to run its business in as tax efficient a manner as possible. The tax systems in certain of these countries are complicated and subject to changes. Any such changes in taxation law or reviews and assessments could result in higher taxes being payable by the Company which could adversely affect the Company's profitability. By this reason, future negative effects on the result of the Company due to changes in tax regulations cannot be excluded. Repatriation of earnings to Canada from other countries may be subject to withholding taxes. The Company has no control over changes in tax regulations and withholding tax rates.

#### ***Partner in the Tenke Fungurume Mine***

The operating partner in the Tenke Fungurume copper/cobalt project is Freeport-McMoRan Copper & Gold Inc. There may be risks associated with this partner of which the Company is not aware.

#### ***Litigation***

The Company is subject, from time to time, to litigation and may be involved in disputes with other parties in the future, which may result in litigation. The Company cannot accurately predict the outcome of any litigation. If the Company cannot resolve these disputes favourably, the Company's activities, financial condition, results of operations, future prospects and share price may be materially adversely affected.

#### ***Market Price of Common Shares***

The Company's share price may be significantly affected by short-term changes in commodity prices or in the Company's financial condition or results of operations. Other factors unrelated to the Company's performance that may also have an effect on the price of the Company's common shares include a lessening in trading volume and general market interest in the Company's securities and the size of its public float. As a result of any of these factors, the market price of the Company's common shares, at any given point in time, may not accurately reflect its long-term value. Securities class action litigation has been brought against companies following periods of volatility in the market price of their securities. The Company may in the future be the target of similar litigation.



## **Acquisition and Integration**

The strategic acquisition of a mining company, property or asset may change the scale of the Company's business and operation, exposing the Company to new geographic, political, operational and financial risks, many of which are inherent in our existing operations (as identified above). In addition, the Company may discover it has acquired a substantial undisclosed liability with little recourse against the seller. Such liabilities could have an adverse impact on the Company's business, financial condition, results of operations and cash flows. The Company's success in its acquisition activities depends on its ability to identify suitable acquisition candidates, complete effective due diligence activities, negotiate acceptable terms and efficiently and effectively integrate the acquired operations into the Company.

## **ITEM 6 DIVIDENDS AND DISTRIBUTIONS**

### **6.1 Dividends and Distributions**

The Company's ability to pay dividends and make other distributions is restricted in certain circumstances by covenants contained in the Company's credit agreement. The Company has not paid dividends on its common shares in the last five years and it has no present intentions of paying any dividends on its common shares, as it anticipates that all available funds will be invested to finance the growth of its business. The directors of the Company will determine if and when dividends should be declared and paid in the future, based on the Company's financial position at the relevant time.

## **ITEM 7 DESCRIPTION OF CAPITAL STRUCTURE**

### **7.1 General Description of Capital Structure**

The authorized share capital of the Company consists of an unlimited number of common shares without nominal or par value of which 584,643,063 common shares are issued and outstanding, and one special share without nominal or par value. The special share is not issued and outstanding at this time.

The holders of common shares are entitled to receive notice of and attend all meetings of shareholders with each common share held entitling the holder to one vote on any resolution to be passed at such shareholder meetings. The holders of common shares are entitled to dividends if, as and when declared by the board of directors of the Company. The common shares are entitled, upon liquidation, dissolution or winding up of the Company, to receive the remaining assets of the Company available for distribution to shareholders.

## **ITEM 8 MARKET FOR SECURITIES**

### **8.1 Exchange Listings**

The common shares of the Company are traded in Canada on the TSX under the symbol "LUN". In Sweden, the common shares are represented by Swedish Depository Receipts which trade on the NASDAQ OMX Nordic Exchange under the symbol "LUMI".

## 8.2 Trading Price and Volume

The following table provides information as to the monthly high and low closing prices of the Company's common shares during the 12 months of the most recently completed financial year, as well as the volume of shares traded for each month on the TSX:

Month	High (C\$)	Low (C\$)	Volume
January 2013	5.37	5.07	37,943,115
February 2013	5.30	4.59	57,470,855
March 2013	4.88	4.33	33,289,135
April 2013	4.61	3.69	61,185,435
May 2013	4.63	3.77	44,850,681
June 2013	4.47	3.68	41,414,748
July 2013	4.33	3.74	30,439,594
August 2013	4.80	3.99	33,740,156
September 2013	4.93	4.48	30,306,670
October 2013	4.94	4.29	36,862,085
November 2013	4.80	4.19	31,032,960
December 2013	4.64	4.03	26,716,219

## ITEM 9 ESCROWED SECURITIES

### 9.1 Escrowed Securities

There are no Lundin Mining securities in escrow.

## ITEM 10 DIRECTORS AND OFFICERS

### 10.1 Name, Address, Occupation and Security Holding of Directors and Officers

The Board of Directors of the Company is currently comprised of eight directors who are elected annually and whose term of office will expire at the Company's annual and special meeting scheduled to be held on or about May 9, 2014. Each director holds office until the next annual meeting of shareholders or until his successor is duly elected unless his office is earlier vacated in accordance with the by-laws of the Company. The names, provinces and countries of residence of each of the directors and officers of the Corporation as at the date of this AIF, their respective positions and offices held with the Company, their principal occupations within the preceding five years and the number of securities of the Company owned by them as at the date of this AIF is set forth in the following table:

Name, residence and current position(s) held in the Company	Principal occupations for last five years	Served as director since	Number of securities owned (directly or indirectly) or controlled at present <sup>(1)</sup>
<b>Lukas H. Lundin</b> Vaud, Switzerland <i>Chairman and Director</i>	Chairman and a director of the Company; chairman; president and/or director of a number of publicly traded resource-based companies which include Denison Mines	September 9, 1994	2,271,449 common shares

	Corp., Fortress Minerals Corp., Lucara Diamond Corp., Lundin Petroleum AB, and NEX Resources Inc.		
<b>Paul K. Conibear</b> British Columbia, Canada <i>President, Chief Executive Officer and Director</i>	President and Chief Executive Officer since June 30, 2011; Senior Vice President, Corporate Development since October 2009; Senior Vice President, Projects, of the Company from July 2007 to October 2009; President and Chief Executive Officer of Suramina Resources Inc. from June 11, 2007 to September 30, 2007; President and Chief Executive Officer of Tenke Mining Corporation from November 26, 2002 to July 13, 2007.	June 30, 2011	789,904 common shares <sup>(2)</sup>
<b>Donald K. Charter</b> Ontario, Canada <i>Director</i>	Corporate director with experience in executive leadership positions in mining and financial services; President and Chief Executive Officer of Corsa Coal Corp. from August 2010 to July 2013; President of 3Cs Corporation, his private consulting and investment company since January 2006.	October 31, 2006	42,424 common shares
<b>John H. Craig</b> Ontario, Canada <i>Director</i>	Lawyer, partner of Cassels Brock & Blackwell LLP.	June 11, 2003	213,849 common shares
<b>Brian D. Edgar</b> British Columbia, Canada <i>Director</i>	Chairman of Silver Bull Resources, Inc.; director of Rand Edgar Investment Corp. since October 1992; director of a number of publicly traded companies.	September 9, 1994	130,000 common shares
<b>Peter C. Jones</b> Alberta, Canada <i>Director</i>	Corporate director and retired executive with over 40 years of experience in the mining industry, including work in Europe, Africa, North and South America, Australia and Asia; Interim President and CEO of IAMGOLD Corporation from January 2010 to November 2010; President and Chief Operating Officer of Inco Ltd. from April 2001 to December 2006; President and Chief Executive Officer of Hudson Bay Mining & Smelting Co. from January 1990 to December 1996; director of a number of publicly traded companies.	September 20, 2013	22,070 common shares
<b>Dale C. Peniuk C.A.</b> British Columbia, Canada <i>Director</i>	Chartered Professional Accountant and corporate director; formerly an assurance partner with KPMG LLP, Chartered Accountants; director of a number of publicly traded companies.	October 31, 2006	50,000 common shares <sup>(3)</sup>
<b>William A. Rand</b> British Columbia, Canada <i>(Lead) Director</i>	President and director of Rand Edgar Investment Corp.; director of a number of publicly traded companies.	September 9, 1994	223,424 common shares

<b>Susan J. Boxall</b> United Kingdom <i>Vice President, Human Resources</i>	Vice President, Human Resources of the Company since August 2012; Group HR Director with De Beers from March 2010 to July 2012; Executive Director HR with Element Six from November 1990 to March 2010.	N/A	Nil
<b>Stephen T. Gatley</b> United Kingdom <i>Vice President, Technical Services</i>	Vice President, Technical Services of the Company since June 2012; Director, Technical Services of the Company from January 2006 to May 2012; General Manager Galmoy Mine from June 2001 to January 2006.	N/A	35,000 common shares
<b>James A. Ingram</b> Ontario, Canada <i>Corporate Secretary</i>	Corporate Secretary of the Corporation since February 2010; Vice President, Secretary and General Counsel with Hudson's Bay Company from March 1998 to July 2009.	N/A	Nil
<b>Marie Inkster</b> Ontario, Canada <i>Senior Vice President and Chief Financial Officer</i>	Chief Financial Officer of the Company since May 2009; Vice President, Finance of the Company from September 2008 to April 30, 2009.	N/A	130,200 common shares
<b>Julie A. Lee Harrs</b> Ontario, Canada <i>Senior Vice President, Corporate Development</i>	Senior Vice President, Corporate Development since November 2011; President and Chief Operating Officer, Energizer Resources Inc. from September 2009 to September 2011, Senior Vice President, General Counsel and Secretary, Sherritt International Corp. from May 2006 to October 2008.	N/A	125 common shares
<b>Jinhee Magie</b> Ontario, Canada <i>Vice President, Finance</i>	Vice President, Finance of the Company since May 2009; Director of Finance of the Company from September 2008 to April 2009; formerly, Director of Corporate Compliance, LionOre Mining International Ltd.	N/A	Nil
<b>Paul M. McRae</b> United Kingdom <i>Senior Vice President, Projects</i>	Senior Vice President, Projects of the Company since January 2012; Project Director, AMEC from June 2009 to December 2011; Project Director of the Company from February 2008 to May 2009; Project Director, AMEC from August 2003 to January 2008.	N/A	Nil
<b>Neil P. M. O'Brien</b> Ontario, Canada <i>Senior Vice President, Exploration and Business Development</i>	Senior Vice President, Exploration and New Business Development of the Company since March, 2007; Vice President, Exploration of the Company from September 2005 to February 2007.	N/A	122,000 common shares
<b>J. Mikael Schauman</b> Sweden <i>Vice President, Marketing</i>	Vice President, Marketing of the Company since February 2007.	N/A	Nil

(1) On a non-diluted basis. The information as to common shares beneficially owned has been provided by the directors and officers themselves.

(2) Includes 80,850 common shares registered in the name of Mr. Conibear's spouse.

(3) Includes 15,000 common shares registered in the name of Mr. Peniuk's spouse and 100 common shares registered in the name of Mr. Peniuk's child.

Certain directors of the Company have other business interests and do not devote all of their time to the affairs of the Company. See “Conflicts of Interest” below.

The directors and officers of the Company hold, as a group, a total of 4,030,445 common shares, representing 0.69% of the number of common shares of the Company issued and outstanding.

There are currently four standing committees of the board. These committees are the Audit Committee, the Corporate Governance and Nominating Committee, the Health, Safety, Environment and Community Committee and the Human Resources/Compensation Committee. The following table identifies the members of each of these Committees:

<b>Audit Committee</b>	<b>Human Resources and Compensation Committee</b>	<b>Corporate Governance and Nominating Committee</b>	<b>Health, Safety, Environment and Community Committee</b>
Dale C. Peniuk (Chair) Donald K. Charter William A. Rand	Donald K. Charter (Chair) Peter C. Jones William A. Rand	Brian D. Edgar (Chair) John H. Craig Dale C. Peniuk	Peter C. Jones (Chair) Paul K. Conibear Brian D. Edgar

## 10.2 Corporate Cease Trade Orders or Bankruptcies

Except as noted below, no director or executive officer of the Company is, as at the date of this AIF, or was within 10 years before the date of this AIF, a director, chief executive officer or chief financial officer of any company (including Lundin Mining), that:

- (a) was subject to: (i) a cease trade order; (ii) an order similar to a cease trade order; or (iii) 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 (collectively, 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.

Mr. Edgar and Mr. Rand were directors of New West Energy Services Inc. (formerly Lexacal Investment Corp.) (TSX-V) when, on September 5, 2006, a cease trade order was issued against that company by the British Columbia Securities Commission for failure to file its financial statements within the prescribed time. The default was rectified and the order was rescinded on November 9, 2006.

Except as noted below, no director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company to affect materially the control of the Company:

- a) is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director or executive officer of any company (including Lundin Mining) 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, state the fact; or
- b) has, within the 10 years before the date of this AIF, 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 the director, executive officer or shareholder.

Ms. Inkster was Vice President, Finance of GBS Gold International Inc. ("GBS") from September 2007 to June 2008. On September 15, 2008, GBS put its Australian group of subsidiaries into voluntary liquidation proceedings. In March 2009, GBS announced that it had agreed to transfer its remaining valued assets to the secured promissory note holders pursuant to the terms of a note indenture and general security deed entered into on May 27, 2008. The shares of GBS have been suspended from trading on the NEX board and it has effectively ceased business.

The foregoing information, not being within the knowledge of the Company, has been furnished by the respective directors, officers and any controlling shareholder of the Company individually.

### **10.3 Penalties or Sanctions**

No director or executive officer of the Company, or a shareholder holding a sufficient number of securities of the Company 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.

### **10.4 Conflicts of Interest**

The Company's directors and officers may serve as directors or officers of other companies or have significant shareholdings in other resource companies and, to the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that such a conflict of interest arises at a meeting of the Company's directors, a director who has such a conflict will abstain from voting for or against the approval of such participation or the terms of such participation. From time to time, several companies may participate in the acquisition, exploration and development of natural resource properties, thereby allowing for their participation in larger programs, the involvement in a greater number of programs or a reduction in financial exposure in respect of any one program. It may also occur that a particular company will assign all or a portion of its interest in a particular program to another of these companies due to the financial position of the company making the assignment. In accordance with the laws of Canada, the directors or the Company are required to act honestly, in good faith and in the best interests of the Company. In determining whether or not the Company will participate in a particular program and the interest therein to be acquired by it, the directors will primarily consider the degree of risk to which the Company may be exposed and the financial position at that time.

The directors and officers of the Company are aware of the existence of laws governing the accountability of directors and officers for corporate opportunity and requiring disclosure by the directors of conflicts of interest and the Company will rely upon such laws in respect of any directors' and officers' conflicts of interest or in respect of any breaches of duty by any of its directors and officers. All such conflicts will be disclosed by such directors or officers in accordance with the *Canada Business Corporations Act* and they will govern themselves in respect thereof to the best of their ability in accordance with the obligations imposed upon them by law. Other than as disclosed above, the directors and officers of the Company are not aware of any such conflicts of interest in any existing or contemplated contracts with or transactions involving the Company.

## ITEM 11      AUDIT COMMITTEE

### 11.1    Overview

The Audit Committee of the Company's board of directors is principally responsible for recommending to the Company's board of directors the external auditor to be nominated for election by the Company's shareholders at each annual meeting of shareholders and approving the compensation of such external auditor, overseeing the work of the external auditor, reviewing the Company's annual and interim financial statements, MD&A and press releases regarding earnings before they are reviewed and approved by the board of directors and publicly disseminated by the Company, and reviewing the Company's financial reporting procedures with respect to the public disclosure of financial information extracted or derived from its financial statements.

### 11.2    Audit Committee Mandate/Charter

The Company's board of directors has adopted an audit committee mandate (the "Mandate") which sets out the Audit Committee's purpose, procedures, organization, powers, roles and responsibilities. The complete Mandate is attached as Schedule B to this AIF.

### 11.3    Composition of the Audit Committee

Below are the details of each Audit Committee member, including his name, whether he is independent and financially literate as such terms are defined under National Instrument 52-110 and his education and experience as it relates to the performance of his duties as an Audit Committee member. The qualifications and independence of each member is discussed below and in the Company's Management Information Circular dated March 31, 2014, prepared in connection with the Company's annual and special meeting of shareholders to be held on or about May 9, 2014, a copy of which is available under the Company's profile on the SEDAR website at [www.sedar.com](http://www.sedar.com).

<b>Member Name</b>	<b>Independent<sup>(1)</sup></b>	<b>Financially Literate<sup>(2)</sup></b>	<b>Education and Experience Relevant to Performance of Audit Committee Duties</b>
Dale C. Peniuk (Chair)	Yes	Yes	Mr. Peniuk is a chartered professional accountant and a graduate of the University of British Columbia (B.Comm). Mr. Peniuk was an assurance partner with KPMG LLP Canada from 1996 to 2006 and was the leader of their British Columbia mining practice. In addition to Lundin Mining, he is presently a director and audit committee chair of Argonaut Gold Inc. and Capstone Mining Corp.
Donald K. Charter	Yes	Yes	Mr. Charter has both an Honours B.A. in economics and an LLB, both from McGill University. Mr. Charter has attained financial experience and exposure to accounting and financial issues in his current role as a director of several publically traded Canadian companies, and in his previous roles as Chairman and Chief Executive Officer of Dundee Securities Corporation and as Executive Vice President of Dundee Corporation and Dundee Wealth Management.
William A. Rand	Yes	Yes	Mr. Rand is a retired corporate and securities lawyer and mining executive with a B.Comm. from McGill University (Honours in Economics and Major in Accounting), who has been a member of a number of boards and audit committees of public companies for over 30 years. Through this education and experience, Mr. Rand has experience overseeing and assessing the performance of companies and public accountants with respect to the preparation, auditing and evaluation of financial statements.

- (1) A member of an audit committee is independent if the member has no direct or indirect material relationship with the Company which could, in the view of the board of directors, reasonably interfere with the exercise of a member's independent judgment, or is otherwise deemed to have a material relationship pursuant to NI 52-110.
- (2) An individual is financially literate if he has the ability to read and understand a set of financial statements that present a breadth of complexity of accounting issues that are generally comparable to the breadth and complexity of the issues and can reasonably be expected to be raised by the Company's financial statements.

#### 11.4 Audit Committee Oversight

Since the commencement of the Company's most recently completed financial year, there has not been a recommendation of the Audit Committee to nominate or compensate an external auditor which was not adopted by the Company's board.

#### 11.5 Pre-Approval Policies and Procedures

All audit and non-audit services performed by the external auditor are pre-approved by the Audit Committee.

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

The following table discloses the fees billed to the Company by its external auditors during the financial year ended December 31, 2013 and 2012. Services billed in C\$, SEK or € were translated using average exchange rates that prevailed during 2013 and 2012.

Fiscal Year Ending	Audit Fees <sup>(1)</sup>	Audit-Related Fees <sup>(2)</sup>	Tax Fees <sup>(3)</sup>	All other Fees <sup>(4)</sup>
December 31, 2013	\$860,258	\$92,716	\$50,933	\$85,852
December 31, 2012	\$816,470	\$125,694	\$10,495	\$17,866

- (1) Audit fees represent the aggregate fees billed by the Company's auditors for audit services.
- (2) Audit-related fees represent the aggregate fees billed for assurance and related services by the Company's auditors that are reasonably related to the performance of the audit or review of the Company's financial statements and not disclosed in the Audit Fees column.
- (3) Tax fees represent the aggregate fees billed for professional services rendered by the Company's external auditor for tax compliance, tax advice and tax planning.
- (4) All other fees represent the aggregate of fees billed for products and services provided by the Company's auditors other than services reported under clauses (1), (2) and (3) above.

PricewaterhouseCoopers LLP, Chartered Professional Accountants, Licensed Public Accountants, have prepared the Independent Auditors' Report dated February 20, 2014 in respect of the Company's consolidated financial statements as at December 31, 2013 and 2012 and for the years then ended, and February 21, 2013 in respect of consolidated financial statements as at December 31, 2012 and 2011 and for the years then ended.

### ITEM 12 LEGAL PROCEEDINGS AND REGULATORY ACTIONS

#### 12.1 Legal Proceedings

The Company is not currently a party to any material legal proceedings; however, from time to time, the Company may become party to routine litigation incidental to Lundin Mining's business.

#### 12.2 Regulatory Actions

No penalties or sanctions were imposed by a court relating to securities legislation or by a securities regulatory authority during the Company's recently completed financial year, nor were there any other penalties or sanctions imposed by a court or regulatory body against the Company that would likely be considered important to a reasonable investor in making an investment decision, nor were any settlement agreements entered into before a court relating to securities legislation or with a securities regulatory authority during the Company's recently completed financial year.



## **ITEM 13 INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

### **13.1 Interest of Management and Others in Material Transactions**

To the best of the Company's knowledge, none of the directors, officers or principal shareholders of the Company, and no associate or affiliate of any of them, has or has had any material interest in any transaction within the three most recently completed financial years or during the current financial year that has materially affected or will materially affect the Company.

## **ITEM 14 TRANSFER AGENTS AND REGISTRARS**

### **14.1 Transfer Agents and Registers**

The transfer agent and registrar for the common shares of the Company is Computershare Investor Services Inc. at its principal offices in Toronto, Ontario and Vancouver, British Columbia.

## **ITEM 15 MATERIAL CONTRACTS**

### **15.1 Material Contracts**

There were no other contracts, other than those entered into in the ordinary course of business, that were material to the Company and that were entered into between January 1, 2013 and up to the date of this AIF or that were entered into prior to January 1, 2013 and remain in effect during 2013, other than as follows:

- (a) Amended and Restated Credit Agreement dated September 1, 2010, as amended by a first amending agreement dated December 19, 2012, and a second amending agreement dated October 7, 2013, between the Company and a banking syndicate comprised of The Bank of Nova Scotia, ING Bank NV, Bank of Montreal, Export Development Canada, Bank of America, N.A., Société Générale and Skandinaviska Enskilda Banken AB. The second amending agreement, among other things, provided for a term loan in the amount of \$250 million together with the revolving credit facility in the amount of \$350 million, and extended the term of the facility to October 2017 from December 2015.
- (b) Membership interest purchase agreement dated June 12, 2013 between Lundin Mining Delaware Ltd. and Rio Tinto Nickel Company, in conjunction with the acquisition of the Eagle Project.

## **ITEM 16 INTERESTS OF EXPERTS**

### **16.1 Interests of Experts**

The Qualified Persons as defined by NI 43-101 who have supervised the preparation of the Company's Mineral Reserve and Mineral Resource estimates during 2013 or authored portions of the technical reports disclosed in this AIF are as follows:

- Messrs. John Nilsson, P.Eng., Nilsson Mine Services Ltd., and Ronald G. Simpson, P.Geo, GeoSim Services Inc. in respect of the Tenke Fungurume Mineral Resource and Mineral Reserve estimate;
- Messrs. John Nilsson, P.Eng., Nilsson Mine Services Ltd., Ronald G. Simpson, P.Geo, GeoSim Services Inc. and William McKenzie, P. Eng., Global Project Management Corporation in respect of the Tenke Fungurume technical report.

- Messrs. Nelson Pacheco, Chief Geologist, Neves-Corvo, and Michael Hulmes, Managing Director, Iberian Operations, Lundin Mining, in respect of the Neves-Corvo Mineral Resource and Mineral Reserve estimate;
- Mr. Graham Greenway, Group Resource Geologist, Lundin Mining, in respect of the Semblana Mineral Resource estimate.
- Dr. Lewis Meyer and Mr Mark Owen of Wardell Armstrong International Ltd., in respect of the Neves-Corvo technical report;
- Messrs. Graham Greenway, Group Resource Geologist, and David Allison, Group Mining Engineer, both employees of Lundin Mining, in respect of the Zinkgruvan Mineral Resource and Mineral Reserve estimate;
- Dr. Lewis Meyer and Mr Mark Owen of Wardell Armstrong International Ltd., in respect of the Zinkgruvan technical report;
- Messrs. Graham Greenway, Group Resource Geologist, and David Allison, Group Mining Engineer, both employees of Lundin Mining, in respect of the Aguablanca Mineral Resource and Mineral Reserve estimate;
- Messrs. Juan Alvarez, Sia Khosrowshahi and Juan Pablo Gonzalez of Golder Associates Global Iberica, S.L.U., and Mr. Stephen Gatley, Vice President Technical Services, Lundin Mining (author of the section entitled "Additional Requirements for Development and Production Properties") in respect of the Aguablanca technical report;
- Robert Mahin, Chief Geologist and Steve Kirsch, Mine Manager, respectively, both of whom are employees of Eagle mine in respect of the Eagle Mineral Resource and Mineral Reserve estimates; and
- Dr. Lewis Meyer and Mr Mark Owen of Wardell Armstrong International Ltd., in respect of the Eagle technical report.

The above noted qualified persons have reviewed and approved the summaries of the properties for which they have been involved and approve the related scientific and technical disclosure in this AIF, including the Mineral Resource and Mineral Reserve Table included in Schedule A.

PricewaterhouseCoopers LLP, Chartered Professional Accountants, Licensed Public Accountants, have advised the Company that they are independent in accordance with the rules of professional conduct of the Institute of Chartered Accountants of Ontario.

No person or company named or referred to under this Item beneficially owns, directly or indirectly, 1% or more of any class of the Corporation's outstanding securities.

## **ITEM 17            ADDITIONAL INFORMATION**

### **17.1    Additional Information**

Additional information regarding the Company is available on SEDAR website at [www.sedar.com](http://www.sedar.com). Additional information, including directors' and officers' remuneration and indebtedness, principal holders of the Company's securities, if any, and securities authorized for issuance under equity compensation plans is contained in the Company's Management Information Circular dated March 31, 2014 prepared in connection with the annual and special meeting of shareholders of the Company to be held on or about May 9, 2014. Additional financial information is provided in the consolidated financial statements of the Company as at December 31, 2013 and December 31, 2012 and for the years ended December 31, 2013 and 2012, together with auditors' report thereon and the notes thereto, and MD&A for the year ended December 31, 2013.

**RESOURCE AND RESERVE ESTIMATE - 2013**
**SCHEDULE A**
**Mineral Reserves**

Category	000's Tonnes	Cu %	Zn %	Pb %	Ag g/t	Ni %	Co %	Contained Metal 000's (Ounces millions)						
								Cu	Zn	Pb	Ag	Ni	Co	Lundin
								T	T	T	Oz	T	T	Interest
<b>Copper</b>														
Neves-Corvo	Proven	5,821	4.6	1.1	0.2	41			265	65	13	8		100%
	Probable	21,192	2.5	0.7	0.2	36			527	152	39	25		100%
	<b>Total</b>	<b>27,013</b>	<b>2.9</b>	<b>0.8</b>	<b>0.2</b>	<b>37</b>			<b>792</b>	<b>217</b>	<b>52</b>	<b>32</b>		<b>100%</b>
Zinkgruvan	Proven	3,798	2.2	0.4		31			84	15		4		100%
	Probable	77	2.1	0.5		35			2	-		-		100%
	<b>Total</b>	<b>3,875</b>	<b>2.2</b>	<b>0.4</b>		<b>31</b>			<b>85</b>	<b>16</b>		<b>4</b>		<b>100%</b>
Tenke	Proven	52,116	3.7				0.4		1,907				203	24%
Fungurume	Probable (Stockpile)	30,696	1.3				0.3		384				101	24%
	Probable	61,323	3.1				0.3		1,883				202	24%
	<b>Total</b>	<b>144,135</b>	<b>2.9</b>				<b>0.4</b>		<b>4,174</b>				<b>506</b>	<b>24%</b>
<b>Zinc</b>														
Neves-Corvo	Proven	10,700	0.3	8.4	2.1	74			32	899	224	25		100%
	Probable	12,578	0.4	6.6	1.6	67			49	834	199	27		100%
	<b>Total</b>	<b>23,278</b>	<b>0.4</b>	<b>7.4</b>	<b>1.8</b>	<b>70</b>			<b>82</b>	<b>1,733</b>	<b>424</b>	<b>53</b>		<b>100%</b>
Zinkgruvan	Proven	8,508		9.5	4.0	86				808	340	24		100%
	Probable	3,301		7.8	2.7	51				257	89	5		100%
	<b>Total</b>	<b>11,809</b>		<b>9.0</b>	<b>3.6</b>	<b>76</b>			<b>1,066</b>	<b>429</b>	<b>29</b>			<b>100%</b>
<b>Nickel</b>														
Aguablanca	Proven	2,636	0.4				0.6		12				16	100%
	Proven (Stockpile)	200	0.3				0.6		1				1	100%
	Probable	2	0.2				0.2		0				0	100%
	Probable (U'ground)	2,613	0.6				0.7		15				18	100%
	<b>Total</b>	<b>5,451</b>	<b>0.5</b>				<b>0.6</b>		<b>27</b>				<b>35</b>	<b>100%</b>
Eagle	Proven	1,649	3.4				4.2	0.1	55				69	2 100%
	Probable	3,677	2.1				2.5	0.1	78				93	3 100%
	<b>Total</b>	<b>5,326</b>	<b>2.5</b>				<b>3.1</b>	<b>0.1</b>	<b>134</b>				<b>163</b>	<b>4 100%</b>
Note: totals may not summate correctly due to rounding								<b>Lundin's share</b>	<b>2,121</b>	<b>3,031</b>	<b>905</b>	<b>118</b>	<b>197</b>	<b>126</b>

**Mineral Resources - inclusive of reserves**

Category	000's Tonnes	Cu %	Zn %	Pb %	Ag g/t	Ni %	Co %	Contained Metal 000's (Ounces millions)						
								Cu	Zn	Pb	Ag	Ni	Co	Lundin
								T	T	T	Oz	T	T	Interest
<b>Copper</b>														
Neves-Corvo	Measured	10,401	4.8	1.0	0.3	46			504	102	28	15		100%
	Indicated	44,867	2.5	1.0	0.3	46			1,123	468	156	67		100%
	Inferred	24,701	1.8	1.1	0.4	45			437	272	108	35		100%
Semblana	Inferred	7,776	2.9			26			223		7			100%
Zinkgruvan	Measured	5,020	2.2	0.4		30			110	20		5		100%
	Indicated	624	2.4	0.3		37			15	2		1		100%
	Inferred	616	1.8	0.5		34			11	3		1		100%
Tenke	Measured	160,748	3.0				0.3		4,785				501	24%
Fungurume	Indicated	418,511	2.4				0.3		9,945				1,072	24%
	Inferred	343,237	2.0				0.2		5,496				635	24%
<b>Zinc</b>														
Neves-Corvo	Measured	23,545	0.3	7.5	1.9	68			69	1,763	437	51		100%
	Indicated	67,313	0.3	5.5	1.3	58			224	3,698	850	126		100%
	Inferred	22,496	0.3	4.5	0.9	51			78	1,022	207	37		100%
Zinkgruvan	Measured	8,524		11.3	4.8	103				963	409	28		100%
	Indicated	6,426		9.3	4.2	93				598	270	19		100%
	Inferred	4,988		8.7	3.2	83				434	160	13		100%
<b>Nickel</b>														
Aguablanca	Measured	7,183	0.6				0.7		40				49	100%
	Indicated	243	0.3				0.5		1				1	100%
	Inferred	42	0.2				0.5		-				-	100%
Eagle	Measured	1,496	3.8				4.8	0.1	58				72	100%
	Indicated	3,315	2.5				3.1	0.1	84				102	3 100%
	Inferred	49	1.1				1.0		1				-	- 100%
Lundin's share not including Inferred Resources								<b>5,762</b>	<b>7,614</b>	<b>2,151</b>	<b>312</b>	<b>224</b>	<b>382</b>	

### **Notes on Mineral Reserves and Resources Table**

Mineral Reserves and Resources are shown on a 100 percent basis for each mine. Mineral Resources for all operations are inclusive of Reserves. All estimates, with the exception of Tenke Fungurume and the underground Mineral Reserves at Aguablanca, are prepared as at June 30, 2013. The Tenke Fungurume Mineral Resource and Reserve and Aguablanca underground Mineral Reserves estimates are dated December 31, 2013.

Estimates for all 100% owned operations are prepared by or under the supervision of a Qualified Person as defined in NI 43-101. Tenke Proven and Probable Mineral Reserves are estimated by the operator Freeport, are prepared to SEC standards and are reviewed by Lundin Mining's independent Qualified Persons.

Except as noted below, Mineral Reserves have been calculated using metal prices of US\$2.50/lb copper, US\$1.00/lb zinc, US\$1.00/lb lead, US\$8.50/lb nickel and exchange rates of EUR/USD 1.25 and USD/SEK 6.75.

### **Neves-Corvo**

The Mineral Resources are reported above cut-off grades of 1.0% for copper and 3.0% for zinc. The copper and zinc Mineral Reserves have been calculated using variable Net Smelter Return (NSR) values based on area and mining method. The NSR is calculated on a recovered payable basis taking in to account copper, lead, zinc and silver grades, metallurgical recoveries, prices and realization costs. The copper Mineral Reserves are reported above a site average cut-off grade equivalent to 1.6%. For zinc Mineral Reserves an average cut-off grade equivalent to 4.8% is used. Mineral Reserves and Resources for Neves-Corvo were estimated by the mine's geology and mine engineering departments under the guidance of Nelson Pacheco, Chief Geologist and Fernando Cartaxo, Chief Mine Planning Engineer. Qualified Persons are Nelson Pacheco and Michael Hulmes, Managing Director, Iberian Operations, Lundin Mining.

### **Semblana**

The Mineral Resources are reported above a cut-off grade of 1.0% copper. The Mineral Resource estimate was prepared by Graham Greenway, Group Resource Geologist, Lundin Mining.

### **Zinkgruvan**

The zinc Mineral Resources and Reserves are reported above a site average cut-off grade of 3.8% zinc equivalent for zinc. The copper Mineral Resources and Reserves are reported above cut-off grades of 1.0% and 1.5% respectively. The Mineral Reserves have been calculated using variable NSR values based on area and mining method. The NSR is calculated on a recovered payable basis taking in to account copper, lead, zinc and silver grades, metallurgical recoveries, prices and realization costs. The Zinkgruvan Mineral Resource and Reserve estimates are prepared by the mine's geology and mine engineering department under the guidance of Lars Malmström, Resource Manager, employed by Zinkgruvan mine. Qualified Persons are Graham Greenway and David Allison, Group Mining Engineer, Lundin Mining.

### **Aguablanca**

The Mineral Resources and Reserves within the open pit are reported above a 0.18% nickel cut-off, whereas the underground Mineral Resources and Mineral Reserves are reported above a 0.35% nickel cut-off. Mineral Resources and Reserves for Aguablanca were estimated by the mine's geology and mine engineering departments under the guidance of César Martinez and Carlos Moreira. Qualified Persons are Graham Greenway and David Allison.

### **Eagle**

The Mineral Resources and Mineral Reserves are reported above a fixed NSR cut-off of US\$118/t. The NSR is calculated on a recovered payable basis taking in to account nickel, copper, cobalt, gold and PGM grades, metallurgical recoveries, prices and realization costs. The Qualified Persons responsible for the Eagle Mineral

Resource and Reserve estimates are Robert Mahin, Chief Geologist and Steve Kirsch, Mine Manager, respectively, both of whom are employees of Eagle mine.

### **Tenke Fungurume**

The Mineral Resources are an estimate of what is mineralized material in the ground based on a cut-off of 1.3% copper equivalent and a cobalt to copper factor of 4.0 without assigning economic probability. The 2013 Mineral Reserves are based on smoothed pit designs for Measured and Indicated Resources using metal prices of US\$2.00/lb copper and US\$10.00/lb cobalt which result in a cut off grade of approximately 1.33% copper equivalent. The Mineral Resources (not reported by Tenke operator Freeport) and Reserve estimates (reported under United States SEC guidelines) for Tenke have been prepared by Freeport staff and reviewed by independent consultants and Qualified Persons John Nilsson, P.Eng. of Nilsson Mine Services Ltd and Ron Simpson P.Geo. of GeoSim Services Inc., on behalf of Lundin Mining.

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**A. PURPOSE**

The overall purpose of the Audit Committee (the "Committee") is to ensure that the Corporation's management has designed and implemented an effective system of internal financial controls, to review and report on the integrity of the consolidated financial statements of the Corporation and to review the Corporation's compliance with regulatory and statutory requirements as they relate to financial statements, taxation matters and disclosure of material facts.

**B. COMPOSITION, PROCEDURES AND ORGANIZATION**

1. The Committee shall consist of at least three members of the Board of Directors (the "Board"), all of whom shall be "independent directors", as that term is defined in Multilateral Instrument 52-110, "Audit Committees".
2. All of the members of the Committee shall be "financially literate" (i.e. able to read and understand a set of financial statements that present a breadth and level of complexity of the issues that can reasonably be expected to be raised by the Corporation's financial statements).
3. At least one member of the Committee shall have accounting or related financial expertise (i.e. able to analyze and interpret a full set of financial statements, including the notes thereto, in accordance with generally accepted accounting principles).
4. The Board, at its organizational meeting held in conjunction with each annual general meeting of the shareholders, shall appoint the members of the Committee for the ensuing year. The Board may at any time remove or replace any member of the Committee and may fill any vacancy in the Committee.
5. Unless the Board shall have appointed a chair of the Committee or in the event of the absence of the chair, the members of the Committee shall elect a chair from among their number.
6. The secretary of the Committee shall be designated from time to time from one of the members of the Committee or, failing that, shall be the Corporation's Corporate Secretary, unless otherwise determined by the Committee.
7. The quorum for meetings shall be a majority of the members of the Committee, present in person or by telephone or other telecommunication device that permits all persons participating in the meeting to speak and to hear each other.
8. The Committee shall have access to such officers and employees of the Corporation and to the Corporation's external auditors, and to such information respecting the Corporation, as it considers to be necessary or advisable in order to perform its duties and responsibilities.
9. Meetings of the Committee shall be conducted as follows:
  - (a) the Committee shall meet at least four times annually at such times and at such locations as may be requested by the Chair of the Committee. The external auditors or any member of the Committee may request a meeting of the Committee;
  - (b) the external auditors shall receive notice of and have the right to attend all meetings of the Committee;
  - (c) the Chair of the Committee shall be responsible for developing and setting the agenda for Committee meetings and determining the time and place of such meetings;
  - (d) the following management representatives shall be invited to attend all meetings, except executive sessions and private sessions with the external auditors:
    - (i) Chief Executive Officer; and
    - (ii) Chief Financial Officer.

- (e) other management representatives shall be invited to attend as necessary; and
  - (f) notice of the time and place of every meeting of the Committee shall be given in writing to each member of the Committee a reasonable time before the meeting.
10. The internal auditors and the external auditors shall have a direct line of communication to the Committee through its chair and may bypass management if deemed necessary. The Committee, through its Chair, may contact directly any employee in the Corporation as it deems necessary, and any employee may bring before the Committee any matter involving questionable, illegal or improper financial practices or transactions.
11. The Committee shall have authority to engage independent counsel and other advisors as it determines necessary to carry out its duties, to set and pay the compensation for any advisors employed by the Audit Committee and to communicate directly with the internal and external auditors.

### **C. ROLES AND RESPONSIBILITIES**

1. The overall duties and responsibilities of the Committee shall be as follows:
- (a) to assist the Board in the discharge of its responsibilities relating to the Corporation's accounting principles, reporting practices and internal controls and its approval of the Corporation's annual and quarterly consolidated financial statements;
  - (b) to establish and maintain a direct line of communication with the Corporation's internal and external auditors and assess their performance;
  - (c) to ensure that the management of the Corporation has designed, implemented and is maintaining an effective system of internal financial controls; and
  - (d) to report regularly to the Board on the fulfilment of its duties and responsibilities.
2. The duties and responsibilities of the Committee as they relate to the external auditors shall be as follows:
- (a) to recommend to the Board a firm of external auditors to be engaged by the Corporation, and to verify the independence of such external auditors;
  - (b) to review and approve the fee, scope and timing of the audit and other related services rendered by the external auditors;
  - (c) review the audit plan of the external auditors prior to the commencement of the audit;
  - (d) to review with the external auditors, upon completion of their audit:
    - (i) contents of their report;
    - (ii) scope and quality of the audit work performed;
    - (iii) adequacy of the Corporation's financial and auditing personnel;
    - (iv) co-operation received from the Corporation's personnel during the audit;
    - (v) internal resources used;
    - (vi) significant transactions outside of the normal business of the Corporation;
    - (vii) significant proposed adjustments and recommendations for improving internal accounting controls, accounting principles or management systems; and
    - (viii) the non-audit services provided by the external auditors;
  - (e) to discuss with the external auditors the quality and not just the acceptability of the Corporation's accounting principles; and
  - (f) to implement structures and procedures to ensure that the Committee meets the external auditors on a regular basis in the absence of management.
3. The duties and responsibilities of the Committee as they relate to the Corporation's internal auditors are to:

- (a) periodically review the internal audit function with respect to the organization, staffing and effectiveness of the internal audit department;
  - (b) review and approve the internal audit plan; and
  - (c) review significant internal audit findings and recommendations, and management's response thereto.
4. The duties and responsibilities of the Committee as they relate to the internal control procedures of the Corporation are to:
- (a) review the appropriateness and effectiveness of the Corporation's policies and business practices which impact on the financial integrity of the Corporation, including those relating to internal auditing, insurance, accounting, information services and systems and financial controls, management reporting and risk management;
  - (b) review compliance under the Corporation's Business Conduct Policy and to periodically review this policy and recommend to the Board changes which the Committee may deem appropriate;
  - (c) review any unresolved issues between management and the external auditors that could affect the financial reporting or internal controls of the Corporation; and
  - (d) periodically review the Corporation's financial and auditing procedures and the extent to which recommendations made by the internal audit staff or by the external auditors have been implemented.
5. The Committee is also charged with the responsibility to:
- (a) review the Corporation's quarterly statements of earnings, including the impact of unusual items and changes in accounting principles and estimates and report to the Board with respect thereto;
  - (b) review and recommend to the Board for approval of the financial sections of:
    - (i) the annual report to shareholders;
    - (ii) the annual information form;
    - (iii) prospectuses; and
    - (iv) other public reports requiring approval by the Board,
 and report to the Board with respect thereto;
  - (c) review regulatory filings and decisions as they relate to the Corporation's consolidated financial statements;
  - (d) review the appropriateness of the policies and procedures used in the preparation of the Corporation's consolidated financial statements and other required disclosure documents, and consider recommendations for any material change to such policies;
  - (e) review and report on the integrity of the Corporation's consolidated financial statements;
  - (f) review the minutes of any audit committee meeting of subsidiary companies;
  - (g) review with management, the external auditors and, if necessary, with legal counsel, any litigation, claim or other contingency, including tax assessments that could have a material effect upon the financial position or operating results of the Corporation and the manner in which such matters have been disclosed in the consolidated financial statements;
  - (h) review the Corporation's compliance with regulatory and statutory requirements as they relate to financial statements, tax matters and disclosure of material facts;
  - (i) develop a calendar of activities to be undertaken by the Committee for each ensuing year and to submit the calendar in the appropriate format to the Board of Directors following each annual general meeting of shareholders; and
  - (j) establish procedures for:



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