# lundin mining

Annual Information Form For the Year Ended December 31, 2014

March 31, 2015



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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.

**Aguablanca** or **Aguablanca Mine** means the Aguablanca nickel and copper mine which is a single openpit and underground mine located approximately 100 km north of Seville in the Extremadura region of southern Spain.

Au means gold.

BHPB means BHP Copper Inc. (now BHP Billiton).

**Board of Directors** means the board of directors of the Company.

C\$ means Canadian dollars.

**CCAA** means Companies' Creditors Arrangement Act.

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

**CIM Standards** means the definitions adopted by CIM Council on May 10, 2014, which are utilized by the Canadian Securities Administrators in NI 43-101.

CLP means Chilean Peso.

Co means cobalt.

**Credit Agreement** means the amended and restated credit agreement dated October 7, 2013, as amended by a first amending agreement dated October 27, 2014, and a second amending agreement dated January 13, 2015, 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.

Cu means copper.

Candelaria or Candelaria Mine means the open pit and underground mines located near Copiapó in the Atacama Province, Region III of Chile owned by Compañía Contractual Minera Candelaria ("CCMC") and Compañía Contractual Minera Ojos del Salado ("CCMO").

**Candelaria Report** means the NI 43-101 technical report entitled "Technical Report for the Compañía Minera Candelaria and Compañía Minera Ojos del Salado Copper Projects, Atacama Province, Region III, Chile" dated October 6, 2014 prepared for Lundin Mining by Jean-François Couture, PGeo, Glen Cole, PGeo, Gary Poxleitner, PEng, John Nilsson, PEng, Adrian Dance, PEng, and Cameron C. Scott, PEng, who are Qualified Persons.

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

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

€ means the Euro.

**Eagle** or **Eagle Mine** or **Eagle Project** means the Eagle nickel and copper mine located in the Upper Peninsula of Michigan, USA, in Michigamme Township, Marquette County.

**Eagle Report** means the NI 43-101 technical report entitled "NI 43-101 Technical Report on the Eagle Mine, Upper Peninsula of Michigan, USA" 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, who are Qualified Persons.

**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 Inc., a U.S. based natural resource company with a portfolio of mineral and oil and gas assets, who owns the majority interest in TF Holdings and Freeport Cobalt and is indirectly the majority owner and operator of TFM and where applicable, includes its subsidiaries.

**FMC** means Freeport-McMoran Corporation, a wholly-owned subsidiary of Freeport, formally called Phelps Dodge Corporation.

Franco-Nevada means Franco-Nevada Corporation.

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

Galmoy or Galmoy Mine means the former Galmoy mine located in County Kilkenny, Ireland.

GBS means GBS Gold International Inc.

**Gécamines** means La Générale des Carrières et des Mines, the government of the DRC state mining company.

gpm means gallons per minute.

ha means hectare.

**HSEC** means health, safety, environment and community.

IFC means International Finance Corporation.

**IFRS** means International Financial Reporting Standards.

**Indenture** means the indenture dated October 27, 2014 between the Company and U.S. Bank National Association, as trustee.

**IPPC** means Integrated Pollution Prevention and Control Licence.

km means kilometre.

Lakota means Lakota Resources Inc.

LOM means life of mine.

**Lundin Mining** or the **Company** means Lundin Mining Corporation, and where applicable, includes its subsidiaries.

m means metre.

Mandate means the audit committee mandate.

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, 2014, dated February 18, 2015.

Mineral Reserves are as defined by the CIM and contained in the CIM Standards.

**Mineral Resources** are as defined by the CIM and contained in the CIM Standards.

**Moody** means Moody's Investors Service.

mtpa means million tonnes per annum.

**MW** means megawatts.

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

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

Ni means nickel.

NSR means Net Smelter Return.

**Neves-Corvo** or **Neves-Corvo Mine** the copper and zinc mine situated approximately 220 km southeast of Lisbon in the Alentejo district of southern Portugal.

**Neves-Corvo Report** means the NI 43-101 technical report entitled "NI 43-101 Technical Report for Neves-Corvo Mine and Semblana Deposit, Portugal" dated January 18, 2013 prepared for Lundin Mining by Mark Owen, BSc, MSc (MCSM), CGeol, EurGeol, FGS and Lewis Meyer, ACSM, MCSM, BEng, MSc, PhD, CEng, FIMMM, who are Qualified Persons.

North Australia means North Limited of Australia.

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

**Order** means (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.

Oz means ounces.

PAC means Pedro Aguirre Cerde.

Pb means lead.

Pd means palladium.

**Phelps Dodge** means Phelps Dodge Corporation, a copper mining company which was acquired by Freeport in 2007.

Pt means platinum.

**Purchase and Sale Agreement** means the purchase and sale agreement dated October 6, 2014 between the Company, LMC Bermuda Ltd., Franco-Nevada and Franco-Nevada (Barbados) Corporation.

Qualified Person means a qualified person as defined in NI 43-101.

**RBI** means RB Energy Inc.

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

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

**S&P** means Standard & Poor's Ratings Services.

**SAG** means semi-autogenous grinding.

**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., which was acquired by Silver Wheaton in 2009.

Silver Wheaton means Silver Wheaton Corp.

**Sirocco** means Sirocco Mining Inc.

SNEL means La Société Nationale d'Electricité.

**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.

**Stock Purchase Agreement** means the definitive stock purchase agreement dated October 6, 2014 between subsidiaries of the Company and Freeport.

**Sumitomo** means Sumitomo Metal Mining Co., Ltd and Sumitomo Corporation and where applicable, includes its subsidiaries.

**SXEW** means solvent extraction and electro-winning.

**Technical Reports** means the Candelaria Report, Eagle Report, Neves-Corvo Report, Tenke Report and Zinkgruvan Report.

**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** or **Tenke Fungurume Mine** means the Tenke copper and cobalt mine located in Katanga Province, DRC.

**Tenke Report** means the NI 43-101 technical report entitled "Technical Report Resource and Reserve Update for the Tenke Fungurume Mine, Katanga Province, Democratic Republic of Congo" dated July 21, 2014 prepared for Lundin Mining by John Nilsson, PEng and Ronald G. Simpson, PGeo, who are Qualified Persons.

TSF means tailings storage facility.

TSX means the Toronto Stock Exchange.

US means the United States.

**Zinkgruvan** or **Zinkgruvan Mine** means the Zinkgruvan zinc and copper mine located approximately 250 km south west of Stockholm in south-central Sweden.

**Zinkgruvan Report** means the NI 43-101 technical report entitled "NI 43-101 Technical Report for the Zinkgruvan Mine, Central Sweden" dated January 18, 2013 prepared for Lundin Mining by Mark Owen, BSc, MSc (MCSM), CGeol, EurGeol, FGS and Lewis Meyer, ACSM, MCSM, BEng, MSc, PhD, CEng, FIMMM, who are Qualified Persons.

**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 applicable Canadian securities laws. Forward-looking information and statements other than statements of historical facts included in this Annual Information Form, including statements regarding the prospects of the industry and the Company's prospects, plans, and business strategy constitute forwardlooking information. These forward-looking statements are based on current expectations, estimates, forecasts and projections about the industries in which the Company operates as well as beliefs and assumptions made by the Company's management. Such statements include, in particular, statements about the Company's plans, prospects, position, results, and business strategies; mineral resources and reserve estimates: the Company's ability to comply with contractual and regulatory requirements; the Company's intentions with respect to exploration and development activities at its projects and expectations regarding the results of operations at the Company's projects. Words such as "may," "will," "should," "expect," "continue," "intend," "aim," "estimate," "target," "anticipate," "plan," "foresee," "believe," or "seek" or the negatives of these terms or variations of them or similar terminology are intended to identify such forward-looking statements. Although the Company believes that the expectations reflected in these forward-looking statements are reasonable, these statements, by their nature, involve risks and uncertainties and are not guarantees of future performance. Forward-looking information and 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 prices for copper, zinc, lead and nickel; foreign currency fluctuations: counterparty and credit risks: the use of derivative instruments: risks inherent in mining including environmental hazards, industrial accidents, unusual or unexpected geological formations, ground control problems, flooding and reclamation obligations; risks associated with the estimation of mineral resources and reserves and the geology, grade and continuity of mineral deposits; competition; risks associated with operation in foreign countries; the possibility that future exploration, development or mining results will not be consistent with the Company's expectations; risks associated with business arrangements over which the Company does not have full control; estimated operating and cash costs; the potential for and effects of labour disputes or other unanticipated difficulties with or shortages of labour or interruptions in production; the price and availability of energy and key operating supplies or services; actual ore mined varying from estimates of grade, tonnage, dilution and metallurgical and other characteristics: the inherent uncertainty of exploration efforts as well as production and cost estimates and the potential for unexpected costs and expenses; commodity price fluctuations; community relations; uncertain political and economic environments; changes in laws or policies, foreign taxation, delays or the inability to obtain necessary governmental permits; the estimation of asset carrying values; funding requirements, indebtedness and volatility; uninsurable risks; changes in the Company's share price; litigation; taxation; availability of infrastructure; risks associated with acquisitions; the retention of key personnel; and other risks and uncertainties, including those described under Risk and Uncertainties in this Annual Information Form and in each management's discussion and analysis. Forward-looking information is in addition based on various assumptions including, without limitation, the expectations and beliefs of management, 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 forward-looking information and statements. Accordingly, readers are advised not to place undue reliance on forward-looking information and statements. Each of these forward-looking statements and the information speaks only as of the date of this Annual Information Form. The Company will not update this information or statements unless required under applicable securities laws.

### ITEM 1 INTRODUCTION

### 1.1. Date of Information

All information in this AIF is as of December 31, 2014 unless otherwise indicated.

### 1.2. Currency

The Company reports its financial results and prepares its financial statements in 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	2014	2013	2012
Canadian dollar (C\$) Euro (€)	1.1601 0.8237	1.0636 0.7251	0.9949 0.7579
Swedish krona (SEK)	7.8117	6.5084	6.5156

# 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.

### 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.

Imperial Measure	=	Metric Unit	Metric Unit	=	<u>Imperial</u> <u>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 Standards. 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

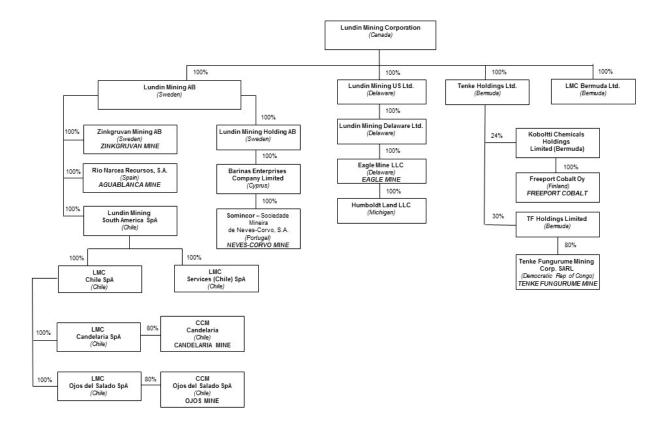
Lundin Mining Corporation was incorporated by Articles of Incorporation on September 9, 1994, under the *Canada Business Corporations Act* as South Atlantic Diamonds Corp. and subsequently changed its name to South Atlantic Resources Ltd. on July 30, 1996, and to South Atlantic Ventures Ltd. on March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

The Company's registered and records office and corporate head office is 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, 2014, 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 base metals mining company with operations in Chile, Portugal, Sweden, Spain and the United States, producing copper, zinc, lead and nickel. In addition, Lundin Mining holds a 24% equity stake in the world-class Tenke Fungurume Mine in the Democratic Republic of Congo and in the Freeport Cobalt business, which includes a cobalt refinery located in Kokkola, Finland.

# 3.1. Three Year History

### 2014

- On July 30, 2014, the Company filed an updated NI 43-101 technical report for the Tenke Fungurume Mine.
- On September 4, 2014, the Company reported its Mineral Reserve and Resource estimates as at June 30, 2014 on SEDAR (www.sedar.com).
- On September 23, 2014, the Company announced that concentrate production had commenced at the Eagle Mine. On November 24, 2014, the Company announced the achievement of commercial production at the Eagle Mine.
- On October 6, 2014, the Company announced that it had entered into the Stock Purchase Agreement to purchase an 80% ownership interest in Candelaria and supporting infrastructure for cash consideration of \$1.8 billion, plus customary adjustments. In addition, contingent consideration of up to \$200 million in aggregate is payable, calculated as 5% of net copper revenues in any annual period over five years if the realized copper price exceeds \$4 per pound.

The Company also announced that it had entered into the Purchase and Sale Agreement to sell to Franco-Nevada a gold and silver stream from Candelaria for an upfront deposit of \$648 million, subject to expected post closing adjustments. In addition to the upfront deposit, Franco-Nevada will make ongoing payments upon delivery of the stream.

The Company concurrently announced that it had agreed to a bought-deal equity financing in the amount of C\$674 million and that it had obtained a senior secured bridge loan commitment of up to \$1 billion which would only be utilized if the Company could not complete a private offering of fixed rate permanent debt securities.

In conjuction with the October 6, 2014 news release, the Company filed the Candelaria Report on SEDAR (www.sedar.com).

- On October 23, 2014, the Company announced that it had completed the bought deal equity financing to raise gross proceeds of approximately \$600 million (C\$674 million). The Company issued a total of 132,157,000 subscription receipts at a price of C\$5.10 per subscription receipt. Each subscription receipt represented the right to acquire, without payment of additional consideration or further action, one common share of Lundin Mining upon closing of the acquisition of an 80% ownership stake in Candelaria from Freeport and the approval and registration with the Swedish Financial Supervisory Authority of a prospectus regarding the listing of the corresponding Swedish Depository Receipts relating to the common shares on conversion of the subscription receipts. The subscription receipts converted to common shares on or about November 27, 2014.
- On October 27, 2014, the Company completed its offering of \$1.0 billion of senior secured notes in two tranches, \$550 million of 7.5% Senior Secured Notes due 2020 and \$450 million of 7.875% Senior Secured Notes due 2022 pursuant to the Indenture.

On November 3, 2014, the Company announced the closing of its acquisition of an 80% ownership stake in Candelaria and supporting infrastructure from Freeport. Total cash consideration of \$1,852 million was paid, consisting of a \$1,800 million base purchase price plus \$52 million for cash and non-cash working capital and other agreed adjustments.

The remaining 20% ownership stake in Candelaria continues to be held by Sumitomo. Pursuant to a shareholders' agreements with Sumitomo, the Company is the operator of Candelaria.

The Company also announced the completion of the sale of a gold and silver stream to Franco-Nevada.

The Company also repaid its \$250 million term loan and executed an amendment to its \$350 million revolving credit facility which remains in place under pre-existing terms.

### 2013

- 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 has 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, with Freeport holding an effective 56% ownership interest and acting as operator 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.
- In late January 2013, Lundin Mining filed updated independent NI 43-101 technical reports on the Neves-Corvo Mine and the Zinkgruvan Mine which were filed on SEDAR (www.sedar.com).
- In March 2013, the Company announced amendments to its by-laws to include an advance notice 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 "Act"). The amended by-laws 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.
- 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 Eagle Project. On July 17, 2013, the Company completed the acquisition of the Eagle Project. 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.
- In July 2013, Lundin Mining filed an independent NI 43-101 technical report for Eagle Mine which was filed on SEDAR (www.sedar.com).
- 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.

- On September 25, 2013, the Company announced the appointment of Mr. Jones to the Company's Board of Directors, replacing Mr. Benner who stepped down for personal reasons in July 2013.
- 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 provided funding in excess of that which was required to complete the construction of the Eagle Project.

### 2012

- On January 23, 2012, Lundin Mining released a summary of the results of the initial Future Underground Materials Handling 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.
- 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.
- On April 11, 2012, the Company announced that it had entered into a purchase 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. 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.
- At the end of August 2012, Aguablanca restarted production ahead of schedule after a pit slope failure in 2010.
- 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.

# ITEM 4 SIGNIFICANT ACQUISITIONS

On November 3, 2014, Lundin Mining completed its acquisition of an 80% ownership stake in Candelaria and supporting infrastructure. A Business Acquisition Report dated November 3, 2014 is available on the Company's SEDAR profile at www.sedar.com.

Candelaria produced a total of approximately 155 kilotonnes of copper with attractive gold (99,000 ounces) and silver (1.9 million ounces) by-products in 2014. Annual average life of mine production based on current reserves is expected to be approximately 126 kilotonnes of copper, 77,000 ounces of gold and 1.4 million ounces of silver on a 100% basis. Since Candelaria's open-pit production commenced in the mid 1990's, the operations have produced approximately 3.6 million tonnes of copper.

See "Description of Business – Description of Properties – Candelaria Mine" below for further details. Reference can also be made to the Company's final short form prospectus dated October 17, 2014, and the Candelaria Report, both of which are filed on the Company's SEDAR profile at <a href="https://www.sedar.com">www.sedar.com</a>.

### ITEM 5 DESCRIPTION OF THE BUSINESS

Lundin Mining is a diversified Canadian base metals mining company with operations in Chile, Portugal, Sweden, Spain and the United States, producing copper, zinc, nickel and lead. In addition, Lundin Mining holds a 24% equity stake in the world-class Tenke Fungurume Mine in the Democratic Republic of Congo and in the Freeport Cobalt business, which includes a cobalt refinery located in Kokkola, Finland.

# 5.1 Principal Products and Operations

Lundin Mining's principal products and sources of sales are copper, zinc, lead and nickel concentrates from Candelaria, Eagle, 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, 2014 and the MD&A discusses each operation that is separately defined as a segment. Both of these documents are filed on the Company's SEDAR profile at www.sedar.com.

Production from operations was as follows:

(tonnes)	2014	2013	2012
Copper (1)	137,636	116,592	101,983
Zinc	145,091	124,748	122,204
Nickel	12,931	7,574	2,398
Lead	35,555	34,370	38,464

<sup>(1)</sup> The Company's attributable share of copper production reflects its 80% interest in Candelaria, effective November 3, 2014 and 24% interest in the Tenke Fungurume Mine (24.75% prior to March 26, 2012).

### 5.2 Employees

As of December 31, 2014, Lundin Mining had a total of approximately 3,300 employees and 4,600 contract employees located in Canada, Chile, Ireland, Portugal, Spain, Sweden, United Kingdom and the United States, for total equivalent full time employment of 7,900 people.

# 5.3 Health, Safety, Environment and Community

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

As part of its business planning processes the Company assesses the potential HSEC impacts of its activities and integrates these considerations into its operational decisions and processes.

The Company designs, develops and operates its facilities to minimize the environmental impact of its operations; efficiently using energy, water and other resources; reducing or preventing pollution; and managing waste 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 management 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 system for joint ventures. The HSEC management system describes how the Company's operations and projects will comply with the Company's corporate values and commitments.

The HSEC management system exists to:

- a) Ensure that sound management practices and processes are in place in sites across the Company.
- b) Describe and formalize the expectations of the Company with respect to health, safety, environment and community management.
- c) Provide a systematic approach to the identification of health, safety, environment and community issues and ensure that a system of risk identification and risk management is in place.
- d) Provide a framework for health, safety, environment and community responsibility and a systematic approach for attaining corporate health, safety, environment and community objectives.
- e) Provide a structure to drive continuing improvement of health, safety, environment and community programs and performance.

In applying the health, safety, environment and community system, the Company engages its employees, contractors, the community, regulators and other interested parties to ensure that stakeholder concerns are considered in managing the business activities.

The Company strives for continuous improvement in its health, safety, environment and community performance through the development of objectives and targets. To achieve this, the Company advises and trains employees and contractors as necessary to meet health, safety, environment and community undertakings and the operations establish clear accountabilities for employees, and especially managers, with respect to their health, safety, environment and community 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 health, safety, environment and community information please consult Lundin Mining's most recent Sustainability Report which is available on the Company's website at http://www.lundinmining.com.

# 5.4 Description of Properties

The summaries below have been prepared by Mr. Stephen Gatley, Vice President, Technical Services and Mr. Graham Greenway, Group Resource Geologist of the Company and both of whom are Qualified Persons.

# **5.4.1 MATERIAL PROPERTIES**

The following descriptions of Lundin Mining's material operating properties, being Candelaria, Eagle, Neves-Corvo and Zinkgruvan, as well as Tenke Fungurume are based on filed Technical Reports, the most recent Mineral 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.

### **5.4.1.1 CANDELARIA MINE**

The following information has been based on, in part, the Candelaria Report. The Candelaria Report is available under Lundin Mining's SEDAR profile at www.sedar.com.

# 5.4.1.1.1 Project Description and Location

Candelaria produces copper concentrates from an open pit and underground mines. CCMC consists of an open pit mine and an underground mine providing copper ore to an on-site concentrator with a capacity of 75,000 tonnes per day. CCMO comprises two underground mines, Santos and Alcaparrosa. The Santos mine provides copper ore to an on-site concentrator with a capacity of 3,800 tonnes per day, while ore from the Alcaparrosa mine is treated at the Candelaria concentrator.

CCMC and CCMO and surrounding tenements are located in Chile's Atacama Province, Region III, at an elevation of approximately 650 metres above sea level, 20 km south of the city of Copiapó and 650 km north of Santiago.

The Candelaria property comprises of 249 mining exploitation concessions (6,182 ha) and 51 mining exploration concessions (6,605 ha). The Ojos property comprises of 195 mining exploitation concessions (8,809 ha) and 37 mining exploration concessions (6,522 ha). The tenements are free of mortgages, encumbrances, prohibitions, injunctions, and litigation. The tenements containing the active and future mining activities are not affected by royalties.

# 5.4.1.1.2 Accessibility, Climate, Local Resource, Infrastructure and Physiography

The properties are easily accessed using the public road system. Personnel employed by CCMC and CCMO come primarily from the Copiapó region. Copiapó is a modern city with all regular services and a population of approximately 160,000. Copiapó regional airport is serviced by regional flights from Santiago and other destinations on a daily basis.

CCMC and CCMO receive electrical power through long-term contracts with AES Gener S.A., a local energy company. The main water supply comes from a desalination plant, which was commissioned in 2013 and is located adjacent to the Punta Padrones port facility. Local treated sewage water is also used by the mines. Copper concentrate is shipped from the Punta Padrones port facility at the port of Caldera. Both the desalination plant and the Punta Padrones port are owned by CCMC.

Copiapó has a desert climate with mild temperatures year round. Winters are mild with warm temperatures; midwinter maximums in July reach approximately 20 degrees Celsius. Winter night-time temperatures average approximately 7 degrees Celsius. Summers are warm with a January average of 22 degrees Celsius. Annual precipitation is approximately 17 mm, of which the majority falls in the winter months. Exploration and mining can occur year round.

The project area is mountainous with a relief varying between 200 and 1,000 metres. Vegetation is minimal outside of inhabited valleys where irrigation is used to support vegetation that is capable of withstanding the desert environment. The mines are located in an active seismic zone.

# 5.4.1.1.3 History

The Candelaria deposit was discovered by Phelps Dodge in 1987. A feasibility study was completed in 1990, and following approval by the Chilean government construction started in October 1992. Sumitomo acquired a 20% stake in the property in 1992. Production commenced in early 1995. In 1996, Phelps Dodge announced plans to expand concentrator throughput with the installation of a second SAG mill. The expansion included additional mining facilities and new and expanded concentrator facilities. This upgrade was completed in 1997.

In 2007, property ownership changed when Freeport acquired Phelps Dodge.

In the middle of 2011, Freeport announced the completion of a pipeline to bring water from a nearby sewage water treatment facility to the Candelaria Mine. A desalination plant at the port of Caldera was built and commissioned in 2013 at a capacity of 500 litres per second to remove the need for continued ground water extraction from the sensitive Copiapó aquifer.

The Santos underground mine has been in production since 1929, with processing taking place at the PAC plant. Phelps Dodge became sole owner of CCMO and the Santos mine and PAC plant in 1985. The PAC plant has been expanded several times to its current capacity of 3,800 tonnes per day. Sumitomo acquired its 20% interest in CCMO in 2005.

In early 1996, production from the Alcaparrosa underground mine commenced.

CCMC and CCMO have been significant producers of copper since the mid-1990s. In the last 3 years, Freeport have reported payable copper and gold metal in concentrate varying between 147 and 191 kilotonnes and 83,000 and 101,000 ounces respectively.

In November 2014, Lundin Mining acquired an 80% ownership stake in CCMC and CCMO from Freeport.

# 5.4.1.1.4 Geological Setting

The Candelaria deposit is located at the boundary between the Coastal Cordillera and the Copiapó Precordillera. The Coastal Cordillera of Chañaral and Copiapó is composed of Permian to Lower Cretaceous intrusions within a basement of metasedimentary rocks of Devonian to Carboniferous age. Volcanic, volcaniclastic, and marine carbonate rocks represent intra- and back-arc sequences that were deposited during Early to Mid-Cretaceous period.

The Candelaria, Santos, and Alcaparrosa mines are located in the district of Punta del Cobre. The polymetallic sulphide deposits are hosted in volcanic rocks of the Punta del Cobre Formation. Polymetallic sulphide deposits in the Punta del Cobre district are located to the east of the main branches of the Atacama fault zone, a subduction-linked strike-slip fault system stretching over 1,000 km along the Chilean coast and active at least since the Jurassic period. The dominant structural elements of the Punta del Cobre area are the northeast-trending Tierra Amarilla Anticlinorium, a southeast verging fold-and-thrust system and a series of north-northwest- to northwest-trending high-angle faults.

### **5.4.1.1.5** Exploration

Ongoing exploration is conducted by CCMC and CCMO with the primary purpose of supporting mining and increasing Mineral Resources and Mineral Reserves available for mining. Exploration is focused on the known mantos, veins, and breccia masses in proximity to existing underground infrastructure. Historically, this strategy has proven very effective in defining new Mineral Resources available for underground mining. Much of the exploration is conducted from underground, requiring significant underground development to provide adequate drilling stations. Regional exploration is also undertaken on the large properties surrounding the mines to identify targets and define new Mineral Resource areas.

From 2010 to 2014, CCMC and CCMO invested more than \$120 million in exploration to expand Mineral Resources primarily below the open pit mine, to the north and south, and at the three underground mines. At CCMC, new discoveries were made beneath the eastern and southern portions of the open pit (the Susana and Damiana orebodies) and as well at the existing Candelaria Norte underground operations (Wendy Norte orebody). These new discoveries are expected to extend the mine life at Candelaria and potentially allow future increases in production. Initial Mineral Resource and Reserve estimates for these new discoveries will be completed and published in 2015.

At CCMO, new discoveries at Santos (Melendez Central) and at Alcaparrosa (Southeast) will also extend the mine life of these two underground operations. Initial Mineral Resource and Reserve estimates are being prepared and will be completed and published in 2015.

### 5.4.1.1.6 Mineralization

The copper-gold sulphide mineralization at Candelaria is generally referred to as iron oxide copper gold mineralization. The sulphide mineralization occurs in breccias, stockwork veinlets, disseminations in andesite and an internal tuff unit. There are also some localized controls to mineralization in the form of faults, breccias, veins and foliation.

The mineralization assemblage at the Candelaria Mine consists of chalcopyrite, magnetite, pyrite, pyrrhotite, and sphalerite. Biotite, calc-silicate minerals, and potassium feldspar constitute the gangue minerals. Pervasive potassic alteration is associated with the mineralization.

Chalcopyrite is the only primary copper sulphide present in the Santos mine. Additionally to copper mineralization, there are economic values of gold. Most frequent gangue minerals are pyrite, magnetite, actinolite, k-feldspar, chlorite, biotite and hematite.

Ore and gangue mineralogy at the Alcaparrosa mine consists of chalcopyrite, pyrite, and magnetite, with trace pyrrhotite, molybdenite, and arsenopyrite.

### 5.4.1.1.7 Drilling

Mineral Resources are estimated from drilling information drilled from the surface or from underground. Between 1991 and the end of 2014, Phelps Dodge and Freeport have drilled over 2,500 core and percussion boreholes in and around the open pit mine. In the Santos mine, approximately 375 core boreholes were drilled between 1993 and 2014 in the Mantos and Melendez Sur sectors. In the Alcaparrosa mine, the borehole database contains information from 655 core boreholes. The drilling and sampling procedures used are consistent with generally recognized industry best practices.

# 5.4.1.1.8 Sampling and Analysis

Analytical samples informing the Candelaria Mineral Resources were prepared and assayed at the Candelaria Mine laboratory that is accredited to ISO17025 for the analyses of copper, iron, zinc, and silver. Analytical samples informing the Ojos Mineral Resources were prepared and assayed by Intertek (formerly Vigalab). Conventional preparation and assaying procedures are used. Copper is analyzed by multi acid digestion and atomic absorption spectroscopy. Gold and silver are assayed using a fire assay procedure. Specific gravity is systematically measured on core samples.

# 5.4.1.1.9 Security of Samples

Since 2007, all drilling assay samples have been collected by company personnel or under the direct supervision of company personnel. Samples from Candelaria are processed and analyzed entirely at the mine site. Samples from Ojos are shipped directly from the property to the Intertek laboratory.

Assay samples are collected by appropriately qualified staff at the laboratories. Sample security involves two aspects: maintaining the chain of custody of samples to prevent inadvertent contamination or mixing of samples and rendering active tampering as difficult as possible.

The sampling preparation, security, and analytical procedures used are consistent with generally accepted industry best practices.

### 5.4.1.1.10 Mineral Resource and Reserve Estimates

The Mineral Resources at CCMC and CCMO are estimated from core drilling information and were evaluated using geostatistical block modelling methodologies.

The open pit Mineral Reserve estimate is based on a mine plan and open pit designs developed using modifying parameters including metal prices, metal recovery based on performance of the processing plant,

actual operating and sustaining capital cost estimates based on the production schedule and equipment requirements. Open pit optimisations are carried out using MineSight and Datamine software.

Underground Mineral Reserves at Candelaria Norte, Alcaparrosa and Santos are based on mine plans and designs developed using modifying parameters including metal prices, metal recovery based on performance of the processing plant), actual operating and sustaining capital cost estimates based on the production schedule and equipment requirements. Stope layouts and development plans are developed in MineSight software with CAE Mine Stope Optimizer used for stope design.

Details of the December 2013 Mineral Resource and Reserve estimate for CCMC and CCMO are included in Schedule A. attached to this AIF.

# 5.4.1.1.11 Mining Operations

The open pit mine operates with an overall mining rate of approximately 270,000 tonnes per day including 66,000 tonnes per day of ore sent to the Candelaria concentrator. The average grade of the ore mined from the open pit over the remaining life of mine is 0.57% copper while stockpiled work in progress material averages 0.36% copper.

The open pit was designed to be mined in several phases of development. As of December 2013, five phases of development remain in the life of mine plan (Phases 8 to 12). The overall strip ratio is 2.9:1 excluding stockpiles. The total in-pit waste is 752.0 million tonnes and the overall life of the open pit mine is 14 years.

The Candelaria Norte underground mine produces 6,000 tonnes per day. The Alcaparrosa underground mine produces 4,000 tonnes per day of ore and Santos produces 3,800 tonnes per day. The mining method in all three underground mines is sublevel open stoping.

CCMC and CCMO operate their own processing plants. The Candelaria processing plant receives ore from the open pit and Candelaria Norte and Alcaparrosa underground mines. It has a nominal capacity of 75,000 tonnes per day. The PAC processing plant receives ore from the Santos underground mine and has a design capacity of 3,800 tonnes per day.

The Candelaria processing plant flowsheet is conventional comprising two parallel process lines for grinding and flotation, final concentrate filtration, and shipping of bulk copper concentrates. Run of mine ore is trucked to a primary gyratory crusher. Grinding takes place in a multi-stage closed circuit using SAG mills, ball mills, and pebble crushing. A multi-stage flotation circuit using an arrangement of mechanical cells, regrind mills, and column cells produces copper concentrate. Final flotation copper concentrate with gold and silver by-product metals is thickened, filtered, and stored on site. Final flotation tails are conventionally thickened and disposed of in a rockfill embankment tailings storage facility.

The PAC concentrator has been in operation since 1929. The PAC concentrator flowsheet comprises a closed-circuit crushing plant including a primary jaw crusher, a secondary cone crusher, and two tertiary cone crushers. The grinding circuit has three ball mills operating in parallel and in direct closed-circuit with hydro-cyclone classification. The flotation plant uses conventional multi-stage, mechanical, self-aspired and forced-air flotation cells, regrind milling, and column cells for the final concentrate cleaning stage. Final concentrate is thickened and filtered using a ceramic disc filter. Final flotation tailings from the PAC plant are pumped to the main Candelaria tailings storage facility.

Copper concentrates containing precious metals are trucked to the Punta Padrones port, near Caldera.

CCMC has an agreement with a third party company to process Candelaria's flotation tailings to produce a magnetite concentrate and this produces an additional source of by-product revenue.

The remaining tailings storage capacity is sufficient to receive tailings until the middle of 2017 at the current production throughput. A new tailings management facility, Los Diques, located to the west of the open pit and plant, is proposed to replace the existing tailings facility when it reaches completion. The site has a

total available tailings capacity of 600 million tonnes, exceeding what is required by the current mine life. The Los Diques tailings management facilities were a key part of the "Candelaria 2030 - Project Operational Continuity" Environmental Impact Assessment that was submitted to the environmental authorities in September 2013 and is currently under review.

# **5.4.1.1.12** Exploration and Development

An ongoing multi-year exploration programme is planned for the Candelaria Mine. In 2015, 1,240 metres of development and 106,000 metres of diamond core drilling are planned. Drilling will continue to target lateral extensions of the mineralization, with the objective of generating additional Mineral Resources and Reserves. This will contribute to extending the underground mine lives. A district exploration programme will also commence with the establishment of a district-wide database and a 3D model.

### **5.4.1.2 EAGLE MINE**

The following information has been based on, in part, the Eagle Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining and exploration 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.

### 5.4.1.2.1 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 River.

The closest community to the mine site is Big Bay, 24 km from the property by road. Big Bay is an unincorporated community within Powell Township, Marquette County and has limited services. The closest full service community is Marquette, approximately 53 km 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 approximately 61 km west of Marquette, Michigan. The facility is located in the township of Humboldt, Marquette County, Michigan.

Ore from the Eagle Mine is trucked approximately 105 km to the Humboldt mill for processing.

# 5.4.1.2.2 Accessibility, Climate, Local Resource, Infrastructure and Physiography

Road access to the mine property is by means of paved roads from the communities of Big Bay to the east, 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 105 km long.

Eagle Mine and Humboldt mill sites are located in a temperate region. The area's weather is characterized 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 304-355 cm. 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 aguifers.

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.

# 5.4.1.2.3 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 project from Rio Tinto and accelerated construction activities. Construction was completed in mid 2014 and commercial production of nickel and copper concentrates was achieved in November of 2014.

### 5.4.1.2.4 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.

### **5.4.1.2.5 Exploration**

Exploration work within the mining concession in 2014 has concentrated primarily on searching for an extension of the known orebody and tracing the feeder dykes to both Eagle and Eagle East by underground and surface drilling. A 3D seismic survey was also completed over the mine area.

# 5.4.1.2.6 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.

### 5.4.1.2.7 **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 2014, 4,482 meters of drilling was completed from surface with 10 holes and wedges. Underground, 8,500 m was drilled in 20 exploration and 45 delineation holes.

# 5.4.1.2.8 Sampling and Analysis

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

### 5.4.1.2.9 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, Michigan. Traceability records prevent errors of identification and ensure sample history can be followed.

### 5.4.1.2.10 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 2014 Mineral Resource and Reserve estimate for Eagle are included in Schedule A, attached to this AIF.

# 5.4.1.2.11 Mining Operations

Eagle is a relatively shallow underground mine with access gained via a surface ramp that also serves as the route for waste, ore and backfill haulage. The mine employs transverse bench-and-fill stoping with mining in an up-dip primary secondary sequence. Backfilling is 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 is stored in a covered coarse ore stockpile facility prior to transport by road 105km to the Humboldt mill site.

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

Nickel and copper concentrates are stored in a covered concentrate building on site prior to being transported via rail car direct to smelter facilities within North America or to ports for shipment overseas.

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 operation.

Federal taxes for Eagle comprise the greater of a regular income tax of 35% or the alternative minimum tax of 20%. The state of Michigan imposes an additional severance tax of 2.75% on "taxable minerals". Eagle Mine has obligations under state and private royalty agreements ranging from 1.0% to 7.0%.

# 5.4.1.2.12 Exploration and Development

In 2015, 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 the Eagle orebody and further explore the Eagle East intrusion. A total of 8,500 m is planned for surface exploration drilling with a further 1,300 m of underground delineation drilling.

### 5.4.1.3 NEVES-CORVO MINE

The following information has been based on, in part, the Neves-Corvo Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining and exploration 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.

# 5.4.1.3.1 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 km², 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. On July 1, 2014 an Addendum to the mining concession contract was concluded between the State and Somincor, adding 15.4 km² to the initial area, providing the rights to exploit the new Semblana deposit.

This mining concession was in turn surrounded by the Castro Verde exploration concession, signed in 2006, covering an area of 294 km<sup>2</sup>. This concession, which contained the Semblana mineralisation, expired in May 2014. A new exploration concession of 140.6 km<sup>2</sup> that surrounds the whole combined Neves-Corvo mining concession and exploration targets in the district has been requested.

The mine is operated under an IPPC licence granted by the Portuguese Environmental Agency in 2008.

# 5.4.1.3.2 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.

# 5.4.1.3.3 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 State owned company 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, within the limits of the orginal concession, 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. In July 2014 an Addendum to the Neves Corvo mining concession was granted that now includes the Semblana orebody.

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 reached full production in 2014 and now provides high grade feed to the existing 1.0 mtpa zinc plant. A new feasibility study has been started that contemplates the mining of the deeper Lombador zinc mineralisation and expansion of the surface zinc plant and infrastructure facilities. This study is due for completion in mid-year 2015.

# 5.4.1.3.4 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.

# **5.4.1.3.5 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.

Further discoveries by surface drilling included the Semblana deposit in 2010, for which a separate Mineral Resource has been estimated, and the Monte Branco deposit in 2011. In 2014 exploration programmes were reduced and are now focused on underground programmes only.

### 5.4.1.3.6 Mineralization

Seven 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), Semblana and Monte Branco. 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.

### 5.4.1.3.7 **Drilling**

Underground exploration drilling is an ongoing operation at the mine. The nominal hole spacing for 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 a Reflex EZ-Shot tool at 30 m intervals, which provides an accurate location of the drill intersections.

In 2014, 33,165 m of exploration drilling was carried out from underground in 169 holes.

# 5.4.1.3.8 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.

### 5.4.1.3.9 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.

### 5.4.1.3.10 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. Stoping 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 2014 Mineral Resource and Reserve estimates for Neves-Corvo and Semblana are included in Schedule A, attached to this AIF.

### 5.4.1.3.11 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 for the original Neves-Corvo mining concession are either a profit-related royalty of 10%, or a revenue-based royalty of 1% (at the State's discretion). Royalties on the new mining concession covering Semblana are a 4% revenue based royalty for copper and associated payable metals and 3.5% for zinc and associated payable metals. The payments may be reduced by between 2 and 6% of Somincor expenditure on mining related research, social projects and the granting of scholarships etc.

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 area is now in full production providing high grade zinc feed to the processing plant. Feasibility studies continue on low capital cost expansion opportunities to exploit the large remaining copper and zinc Mineral Resource and Reserves particularly in the deeper Lombador South and North orebodies.

# 5.4.1.3.12 Exploration and Development

Surface exploration drilling has been curtailed for 2015 with all drilling planned from underground. A total of 43,500 m is planned focussing primarily on upgrading the Lombador North and South orebodies together with Lower Corvo, Zambujal and Neves North and South.

### **5.4.1.4 ZINKGRUVAN MINE**

The following information has been based on, in part, the Zinkgruvan Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining and exploration 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.

### **5.4.1.4.1** 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 2,762 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.

### 5.4.1.4.2 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 an 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.

### 5.4.1.4.3 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. 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, Belgian Vieille Montagne Company merged with Union Miniere, and in 1995, North Australia acquired the Zinkgruvan Mine. In August 2000, Rio Tinto became the owner of the mine following its acquisition of North Australia. 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.

# 5.4.1.4.4 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 1,650 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.

# 5.4.1.4.5 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 mostly 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.

### 5.4.1.4.6 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.

# 5.4.1.4.7 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 2014, 21,910 m of drilling was completed from underground and from surface 3,052 m was completed into the Dalby area.

### 5.4.1.4.8 Sampling and Analysis

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

### 5.4.1.4.9 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.

### 5.4.1.4.10 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, 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 2014 Mineral Resource and Reserve estimate for Zinkgruvan are included in Schedule A, attached to this AIF.

# 5.4.1.4.11 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, and sublevel benching in the

Nygruvan area and in the Cecilia area. Recently underhand panel stoping has been introduced to the lower sections of the Burkland and Nygruvan orebodies. 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. 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 programs 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.

### 5.4.1.4.12 Exploration and Development

Exploration activities in 2015 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 Resource areas. Exploration drives on the Dalby 1,130 m and Mellanby 650 m levels will continue to be developed in order to establish underground drill platforms to allow drilling of deeper extensions of these known orebodies. Drilling of approximately 4,200 m from surface to explore the Dalby, Högmon and Flaxen areas are also planned in 2015.

### **5.4.1.5 TENKE FUNGURUME MINE**

The following information has been based on, in part, the Tenke Report. Updates to Mineral Reserve and Mineral Resource estimates are due to mining and exploration 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.

### 5.4.1.5.1 Property Description and Location

Tenke Fungurume's copper-cobalt deposits are believed to be one of the world's largest known copper-cobalt resources. The deposits are located on contiguous concessions which total approximately 1,500 km². 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 phase 2 expansion of the plant was completed

in 2014, which has increased nameplate capacity to 195,000 tpa of copper cathode and 15,000 tpa cobalt hydroxide.

The phase 2 expansion was one of several stages of development contemplated with the objective of ultimately producing up to 500,000 tpa of copper by mining multiple deposits concession-wide.

# 5.4.1.5.2 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 medium sized aircraft. The copper and cobalt product and bulk mine consumables are primarily transported by truck between Tenke Fungurume and ports in South Africa via a transport hub located at Ndola in Zambia.

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.

The TSF is located to the north west of the process plant site. The entire impoundment area is lined with a high density polyethylene liner. The current location and configuration will provide containments sufficient for the full known reserves. Further expansions of the existing TSF are planned by raising and extending the dam walls and advancing the placement basis to the north of the current footprint. Conceptual location studies over the concession area have also been carried out to identify future tailings sites to meet potentially expanded production scenarios.

Electrical power is provided from the national grid. The power supply to the plant site is provided via a high voltage overhead line from the Fungurume substation to the switchyard at the plant site. The Fungurume substation has been upgraded to provide a reliable power supply to TFM. SNEL is the state owned electric utility company serving the region. TFM has signed a long term contract with SNEL for supply of electricity from SNEL's Nseke hydro-electric power station located west of the Tenke Fungurume concessions towards Kolwezi. The total power committed to TFM under the long-term contract with SNEL is in excess of 200 MW. Current TFM operations utilize approximately 100 MW.

Under a separate contract, TFM has lent to SNEL the funds required to recondition the Nseke hydro-electric power station and increase generating capacity from three to four 65 megawatt units, as well as to construct new local transmission lines to service the mine and neighbouring communities. The initial phase of reconditioning the power station and construction of power lines was completed during the second quarter of 2009. The first and second generating unit refurbishments have been completed, with the remaining two units to be refurbished in sequence with full completion expected in 2015. As well, in 2014 TFM took over responsibility from SNEL for the oversight and project management of this project.

There have been ongoing issues with power supply interruptions that occasionally limits production capability of the processing facility. Foreign investments in new and refurbishment of power generation and associated infrastructure in Katanga and DRC have increased in recent years and this trend is expected to continue. Katanga also draws power from neighbouring Zambia.

Water supply is available within a reasonable distance of the mine site and plant. Appropriately spaced wells sustain the mining and plant processes, with standby capacity. Additional process water requirements come from a combination of water from the TSF supernatant return water and potentially impacted run-off stormwater collected from the waste rock stockpiles and plant site. Potable water is supplied to, and reticulated throughout, the permanent village located north of Fungurume.

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.

# 5.4.1.5.3 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 no 1981 and mining concession no 1992 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.

In December 1998, Tenke Mining concluded an option agreement with BHPB which established a formal structure for BHPB to acquire, directly or indirectly, a controlling interest in the Tenke Fungurume. 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 were formally transferred to Phelps Dodge.

As a result of the DRC's new 2002 World Bank sponsored mining code and other developments in the DRC, an extensive renegotiation process commenced upon formation of the transitional government in 2003, which successfully concluded with amended agreements related to Tenke Fungurume in late 2005. Pursuant to the terms agreed in the amended agreements, the single purpose joint venture company, TF Holdings (then controlled 70:30% by FMC and Tenke Mining), agreed to pay Gécamines an additional \$50 million in stages based on pre-agreed development-related milestones. In accordance with shareholding agreements finalized between FMC and Tenke Mining in January 2004, FMC funded \$42.5 million, 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 were due 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. All such payments have now been paid in full.

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.

<sup>&</sup>lt;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>&</sup>lt;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 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 the 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 distributed by the government of the DRC 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 concessions, 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 were in good standing and acknowledged the rights and benefits granted under those contracts.

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 from 17.5% to the current 20.0%, resulting in a decrease of Freeport's effective ownership interest from 57.75% to the current 56% and Lundin Mining's effective ownership interest from 24.75% to the current 24%.

Further, TFM also made the following commitments: 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 Freeport; additional payments totalling \$30 million to be paid by TFM to Gécamines in six equal installments of \$5 million upon reaching certain production milestones, which payments have been paid in full; a conversion of \$50 million in intercompany loans from the TFM shareholders to TFM to equity; a payment from TFM to Gécamines of approximately \$5 million for surface area fees, which amount has been paid in full, ongoing surface area fees of approximately \$0.8 million annually; incorporation of clarifying language stating that TFM's rights and obligations are governed by the amended and restated mining convention dated September 28, 2005; 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%.

The aforementioned changes in Lundin Mining's ownership interest in TFM and the conversion of intercompany loans to equity became effective on March 26, 2012.

# 5.4.1.5.4 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 Neoproterozic, approximately 650 to 600 million years before present (Ma). Rocks in the arc are exposed in a series of tightly folded and thrusted 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 Lifilian 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.

# **5.4.1.5.5 Exploration**

The mineral concessions have been subject to multiple phases of exploration over time. Exploration in 2014 continued the focus on finding additional high-grade oxide resources and the investigation of deeper mixed and sulphide mineralization. A total of 87,034 m of diamond drilling was completed during 2014 in 611 individual holes.

Underground development for bulk metallurgical sampling of mixed oxide-sulphide mineralisation was started at Fungurume in 2012 and Kwatebala in 2013. The first samples were taken from the Fungurume tunnel in 2014 and are awaiting shipment for testing. Bulk samples are expected from the Kwatebala tunnel in 2015.

### 5.4.1.5.6 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.

The main economic minerals present are malachite, chrysocolla, bornite, and hetrogenite. 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.

# 5.4.1.5.7 **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. Société Minière de Tenke Fungurume carried out exploration and core drilling from 1971-1976. TFM carried out additional core drilling in 1997. Reverse circulation drilling was used locally to drill through unmineralized waste.

In 2015, 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 24,400 m for exploration, 1,425 m for metallurgical sampling, 15,405 m for infill, 3,170 m for condemnation and 7,930 m for geotechnical holes.

# 5.4.1.5.8 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.

# 5.4.1.5.9 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.

### 5.4.1.5.10 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 VI/VI Extension, Katuto (L3K), 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 techniques to account for the narrow and complex nature of the orebodies.

The open-pit designs were optimized for all of the 14 deposits listed above were evaluated using Minesight® software. In each case, a Lerch Grossman algorithm was used to maximize the gross value of the pit. Pits were designed with variable slope angles dependent on rock type, depth and local lithological dip based on experience gained in mining and recommendations of consultants. Input parameters to the open-pit optimizations were updated in 2014 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 Mineral Resource and Reserve models have block dimensions of 5 m by 2.5 m by 2.5 m. For mine planning purposes, Mineral 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 2014 Mineral Resource and Reserve estimate for Tenke Fungurume are included in Schedule A, attached to this AIF.

# 5.4.1.5.11 Mining Operations

Tenke Fungurume mines copper-cobalt oxide ores by open-pit mining techniques. Drill and blast is employed in the both the ore and 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 2014, production was sourced from the Kwatebala, Fwaulu, Tenke, Fungurume and Mwandinkomba 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, 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, including to Freeport Cobalt.

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 approximately 200,000 tpa.

The phase 2 expansion of Tenke Fungurume was completed in 2014 increasing annual copper production by 50% to a nameplate of 195,000 tonnes copper cathode and 15,000 tonnes cobalt hydroxide. The expansion included additional mining equipment, mill upgrades, acid plant expansion and a doubling of the existing tank house capacity. Since 2011, there have been a number of test scale campaigns on heap leach pads 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 so as to more fully utilize the excess electrowinning 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.

## 5.4.1.5.12 Environmental and Social Aspects

The Tenke Fungurume Mine 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 2014, TFM employed approximately 3,500 full time personnel and 4,500 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.

#### **5.4.2 OTHER PROPERTIES**

## **5.4.2.1 AGUABLANCA MINE**

The Aguablanca Mine is a single open-pit and underground 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 mining is planned to continue until the first quarter of 2015. A small underground mine was approved in late 2013 and development commenced in mid-2014 from the exploration decline that was

already in place. First stope production from the initial sub-level cave is 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. The anticipated underground mine life is until 2018.

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 km², 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.

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

Mineral Resources at Aguablanca were estimated at 30 June 2014 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 2014 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 2014 Mineral Resource and Reserve estimate for Aguablanca, including the underground Mineral Reserves, are included in Schedule A attached to this AIF.

# 5.4.2.1.2 Exploration

A limited diamond drill exploration programme is planned for 2015 to explore for possible extensions to the underground mineralisation and increase the Mineral Resources and Reserves.

## 5.4.3 FREEPORT COBALT

During 2013, Lundin Mining acquired, through a newly formed 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, with Freeport holding an effective 56% ownership interest and acting as operator 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, pigments 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.

## 5.4.4 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 completed in early 2014. 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 and the establishment of a wetland well advanced. Closure activities are expected to be fully completed in 2015 and thereafter, the site fully in the aftercare phase. The restricted cash closure fund accumulated during the mine life will continue to be drawn down as closure obligations are completed.

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 was finalised in 2014 in accordance with the mine closure plans approved by the local authorities, and the site has now moved to an approved aftercare program.

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 6 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 results of operations. 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, intermediaries 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 US dollars while most of its operating expenses are incurred in CLP, 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, particularly credit risk, associated with trade receivables. The Company manages this risk through evaluation and monitoring of industry and economic conditions and assessment of customers' 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, but cannot always be assured of the solvency of its customers.

#### Derivative Instruments

The Company does not currently, 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.

#### Reclamation Funds and Mine Closure Costs

As at December 31, 2014, the Company had \$48.5 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, regulations and standards can create uncertainty with regards to future reclamation costs and affect the funding requirements.

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 postmining 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.

The Company has received regulatory approval for closure at the Galmoy Mine and closure activities are nearing completion. Active mine closure will be followed by a 30 year aftercare program. From time to time the Company may need to seek regulatory approval for amendments to its mine closure plan and its environmental licenses. 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 substantially completed in 2012. The Company has recently carried out further work on the surface water management system and additional re-vegetation. 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. The active closure phase at this former gold mine was completed in early 2014 and has moved to a three year aftercare monitoring program.

The Company also retains responsibility for a legacy processing and tailing site at Ammeberg that was a part of the historic Zinkgruvan operations which date from 1857. The area has been rehabilitated and is

currently used as a golf course and marina facility. A human and environmental risk assessment was submitted to the Swedish authorities in 2013 following the identification of locally elevated zinc concentrations near the old mill site. It is anticipated that a final remediation target will be set by the local authority in the near future.

## 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, among other things: the acquisition of mineral claims, leases and other mineral interests; the recruitment and retention of qualified employees and other personnel and specialized equipment used in its operations.

# Foreign Countries and Regulatory Requirements

The Company has operations in Chile, the US, Portugal, Sweden and Spain and exploration projects in various countries, including Chile and Peru. Accordingly these operations and projects are subject to political, economic and social uncertainties and 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 and Chile. Africa and South America's status as largely developing continents may make it more difficult for the Company to obtain any required exploration, development and production financing for its projects. In addition, the carrying value of these investments 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 interests in mining operations located in the DRC or Chile may be adversely affected include, but are not limited to: political unrest; labour disputes; nationalization and expropriation of assets; renegotiation or invalidation of concessions, licenses, 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; changing political conditions; 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 production or foreign ownership; limitations on foreign exchange and 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.

The legal and regulatory requirements in foreign countries with respect to conducting mineral exploration and mining activities and banking systems and controls may differ from those in Canada. In such countries, the officers and directors of the Company will rely, to a great extent, on the Company's local legal counsel and local consultants and advisors in respect of legal, banking, financing and tax matters in order to ensure compliance with material legal, regulatory and governmental developments as they pertain to and affect the Company's operations in such countries, and to assist the Company with its governmental relations. The Company will also need to rely, to some extent, on those members of management and the Board of Directors who have previous experience working and conducting business in such countries. The failure to comply with all material legal and regulatory requirements may lead to the revocation of certain rights, penalties or fees, which may have an adverse effect on the Company.

In addition, operations may be affected in varying degrees by changes to government regulations relating to, among other things, foreign ownership or investment and take-overs, mandatory government participation, requirements to confer domestic benefits through local contract awards, local hiring practices and purchase of parts and supplies, or other changes to the mining regime in respect of mineral right applications, tenure, maintenance of claims, environmental legislation, land use, land claims of local people, water use and mine safety. These risks may limit or disrupt the Company's operations, which may adversely affect the viability and profitability of 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.

## **Business Arrangements**

The Company has entered into a number of business arrangements where it does not have full control, such as Candelaria, Tenke Fungurume and Freeport Cobalt and a number of exploration projects. There may be risks associated with our partners in these arrangements which include, but are not limited to: disagreement on how to develop, operate or finance projects; differences between partners in economic or business goals; lack of compliance with agreements; insolvency of a partner; limits placed on our power to control decision-making and possible limitations in our ability to sell our interest in a particular project.

#### 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, accidents, labour force disruptions, seismic activity, 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 LOM planning for all of its operating and development properties. Significant changes in 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 and development property in which the Company has an interest.

# Price and Availability of Energy and Key Operating Supplies/Services

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.

Key operating supplies, such as: explosives, reagents, tires and spare parts are necessary for the ongoing operations of the mines and mills. If these supplies become unavailable or their costs increases significantly, the profitability of the Company's operations would be negatively impacted.

Concentrate treatment and transportation costs are also a significant component of costs. Transportation costs have been volatile in recent years due to a number of factors, including changes in fuel prices, changes in the global economy and a shortage of ocean vessels or rail cars available to ship concentrate. Treatment and refining costs have also been volatile in recent years. Increases in these rates or lack of available ocean vessels or rail cars may have a significant adverse impact on results of operations, cash flows and financial position.

# 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 on 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 time 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, licenses 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.

# **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 the Company, 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.

## **Environmental Laws and Regulations**

All phases of mining and exploration operations are subject to extensive environmental regulation. These regulations mandate, among other things, the preparation of environmental assessments before commencing certain operations, the maintenance of air and water quality standards and land reclamation. They also set forth limitations on the generation, transportation, storage and disposal of solid and hazardous waste. Some laws and regulations may impose strict as well as joint and several liability for environmental contamination, which could subject the Company to liability for the conduct of others or for its own actions that were in compliance with all applicable laws at the time such actions were taken. Environmental legislation is evolving in a manner that will require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees. Any future changes in environmental regulation could adversely affect the Company's ability to conduct its operations. Moreover, public interest in environmental protection has increased over the years and environmental organizations have opposed, with some degree of success, certain mining operations.

In addition, environmental conditions may exist on properties in which the Company holds, or will hold, an interest that are unknown and/or have been caused by previous or existing owners or operators of such properties, but the remediation of which may be the Company's responsibility. The Company may also acquire properties with environmental risks, and indemnification proceeds, if any, may not be adequate to pay all the fines, penalties and costs (such as clean-up and restoration costs) incurred related to such properties. Some of the Company's properties also have been used for mining and related operations for many years before they were acquired and were acquired as is or with assumed environmental liabilities from previous owners or operators. The Company has been required to address contamination at its properties in the past and may need to address contamination at its properties in the future, either for existing environmental conditions or for leaks or discharges that may arise from ongoing operations or other contingencies. Contamination from hazardous substances, either at the Company's properties or other locations for which the Company may be responsible, may subject it to liability for the investigation or remediation of contamination, as well as for claims seeking to recover for related property damage, personal injury or damage to natural resources. The occurrence of any of these adverse events could have a material adverse effect on the Company's future growth, results of operations, cash flows and financial position.

Production at certain of the Company's mines involves the use of various chemicals, including certain chemicals that are designated as hazardous substances. Should such chemicals leak or otherwise be discharged from the containment system, the Company may become subject to liability for cleanup work that may not be insured.

The failure of the Company to comply with applicable laws, regulations and permitting requirements may result in enforcement actions, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed or causing the withdrawal of mining licenses, and may include corrective measures requiring capital expenditures, installation of additional equipment, or remedial actions. Compensation may be required for those suffering loss or damage and may have civil or criminal fines or penalties imposed for violations of applicable laws or regulations.

# Government Approvals, Licenses and Permits

The Company's mining and exploration activities require a number of licenses, permits and approvals from various governmental authorities. With the exception of certain of Aguablanca's water licenses (see *Infrastructure*), the Company is presently complying in all material respects with all necessary licenses and

permits under applicable laws and regulations to conduct our current operations. However, such licenses and permits are subject to change in various circumstances, and certain permits and approvals are required to be renewed from time to time. Additional permits or permit renewals will need to be obtained in the future. The granting, renewal and continued effectiveness of these permits and approvals are, in most cases, subject to some level of discretion by the applicable regulatory authority. Certain governmental approval and permitting processes are subject to public comment and can be appealed by project opponents, which may result in significant delays or in approvals being withheld or withdrawn. There can be no assurance that the Company will be able to obtain or maintain all necessary licenses and permits as are required to explore and develop its properties, commence construction or operation of mining facilities and properties under exploration or development or to maintain continued operations that economically justify the cost. Any of these factors could have a material adverse effect on the Company's results of operations and financial position.

## 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, 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, Indebtedness and 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.

The Company has a significant amount of indebtedness. Subject to the limits contained its credit facilities and any limits under the Company's other debt instruments, the Company may be able to incur substantial additional debt from time to time to finance working capital, capital expenditures, investments or acquisitions or for other purposes. If the Company does so, the risks related to the Company's high level of indebtedness could have important consequences to securityholders, due to the following factors affecting the Company: (i) increased difficulty in satisfying obligations with respect to indebtedness; (ii) limitations on the ability to obtain additional financing to fund future working capital, capital expenditures, acquisitions or other general corporate requirements, or requiring the Company to make non-strategic divestitures; (iii) requirements that a substantial portion of the Company's cash flows be dedicated to debt service payments instead of other purposes, thereby reducing the amount of cash flows available for working capital, capital expenditures, acquisitions and other general corporate purposes; (iv) increased vulnerability to general adverse economic and industry conditions; (v) exposure to the risk of increased interest rates as borrowings under the credit facilities would be at variable

rates of interest; (vi) decreased flexibility in planning for and reacting to changes in the industry in which it competes; (vii) placing the Company at a disadvantage compared to other, less leveraged competitors; and (viii) increased cost of borrowing.

In addition, the credit facilities and other agreements contain restrictive covenants that limit the Company's ability to engage in activities that may be in the Company's long-term best interest. The Company's failure to comply with those covenants could result in an event of default which, if not cured or waived, could result in the acceleration of all the Company's debt.

The Company's ability to make scheduled payments on or refinance its debt obligations, depends on the Company's financial condition and operating performance, which are subject to prevailing economic and competitive conditions and to certain financial, business, legislative, regulatory and other factors beyond its control. The Company may be unable to generate or maintain a level of sufficient cash flows from operating activities to satisfy its debt obligations or to refinance its indebtedness on commercially reasonable terms or at all, which would have a material and adverse effect on the Company's financial condition and results of operations. The Company is a holding company and a substantial portion of its assets are the capital stock of its subsidiaries. As a holding company, the Company conducts substantially all of its business through its subsidiaries, which generate substantially all of the Company's revenues. Consequently, the Company's cash flow and ability to service its debt obligations are dependent upon the cash flow of its subsidiaries and the distribution of such cash flow to the Company, or upon loans, advances or other payments made by these entities to the Company. The ability of these entities to pay dividends or make loans, advances or payments to the Company will depend upon their operating results and will be subject to applicable laws and contractual restrictions contained in the instruments governing their debt. The ability of the Company's subsidiaries to generate sufficient cash flow from operations to allow the Company to make scheduled payments on its debt obligations will depend on their future financial performance, which will be affected by a range of economic, competitive and business factors as well as structural changes, many of which are outside of the Company's or their control. The Company can provide no assurance that the cash flow and earnings of its operating subsidiaries and the amount that they are able to distribute to the Company, as dividends or otherwise, will be sufficient for the Company to satisfy its debt obligations. If cash flows and capital resources are insufficient to fund debt service obligations, the Company could face substantial liquidity problems and could be forced to reduce or delay investments and capital expenditures or to dispose of material assets or operations, seek additional debt or equity capital or restructure or refinance indebtedness. If the Company cannot make scheduled payments on its debt, the Company will be in default and holders of any indebtedness could declare all outstanding principal and interest to be due and payable, enabling lenders under the credit facilities to cancel their commitments to lend and causing a cross-acceleration or cross-default under certain of our other debt agreements, if any. The Company's other creditors could foreclose against the collateral securing the Company's obligations and the Company could be forced into bankruptcy or liquidation.

# Uninsurable Risks

Exploration, development and production operations on mineral properties involve numerous risks, including unexpected or unusual geological operating conditions, work force health issues, contaminations, labour disputes, changes in regulatory environment, rock bursts, cave-ins, fires, floods, earthquakes and other environmental occurrences, as well as political and social instability. There can be no assurance that such insurance will continue to be available, will be available at economically acceptable premiums or will be adequate to cover any resulting liability. In addition, it is not always possible to obtain insurance against all such risks. Insurance against certain environmental risks, including potential liability for pollution or other hazards as a result of the disposal of waste products occurring from production, is not generally available to mining companies. The Company may decide not to insure against certain risks because of high premiums compared to the benefit offered by such insurance or other reasons and 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. Title insurance is generally not available for mineral properties.

## 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 may also have an effect on the price of the Company's common shares. The market price of the Company's common shares, at any given point in time, may not accurately reflect its long-term value.

# 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.

In particular, Eagle has been the subject of various legal proceedings, both prior to and after the Company's acquisition in July 2013 regarding permits granted or required under applicable state law, and is currently the subject of a proceeding regarding the mine and groundwater discharge permits issued by the Michigan Department of Environmental Quality. An ultimate adverse decision could lead to Eagle having to file new or amended permit applications, or/and result in a suspension of Eagle's operations.

#### 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. By this reason, future negative effects on the result of the Company due to changes in tax regulations cannot be excluded. Any such changes in taxation laws or reviews and assessments could result in higher taxes being payable by the Company which could adversely affect the Company's profitability. 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.

#### Employee Relations

A prolonged labour disruption by employees or suppliers at any of the Company's mining operations or distribution channels could have a material adverse effect on the Company's ability to achieve its objectives with respect to such properties and its operations as a whole.

## 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 licenses required to satisfy all of its supply requirements.

#### 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.

The Company's recent acquisition of Candelaria is subject to the acquisition and integration risks, as noted above, in addition to many, if not all, of the other risk factors identified in this section.

# Key Personnel

It is crucial that that the Company motivates, retains and attracts highly skilled employees, but there can be no assurance that the Company will successfully retain current key personnel or attract additional qualified personnel to manage the Company's current or future needs.

## ITEM 7 DIVIDENDS AND DISTRIBUTIONS

The Company's ability to pay dividends and make other distributions is restricted in certain circumstances by covenants contained in the Credit Agreement and Indenture. The Company has not paid dividends on its common shares in the last five years. 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 8 DESCRIPTION OF CAPITAL STRUCTURE

As at December 31, 2014, the authorized share capital of the Company consisted of an unlimited number of common shares without nominal or par value of which 718,168,193 common shares were 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. 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 9 RATINGS

The following table sets out the ratings of the Company's corporate debt by the rating agencies indicated as at December 31, 2014:

Standard & Poor's	Moody's Investors Service
B1	Ba2

S&P's credit ratings are on a rating scale that ranges from AAA to D, which represents the range from highest to lowest quality. Ratings AAA to BBB- are considered investment grade, and BB+ to D are considered speculative grade. The ratings from AA to CCC may be modified by the addition of a plus (+) or minus (–) sign to show relative standing within the major rating categories. S&P's rating outlook assesses the potential direction of a long-term credit rating over the intermediate term (typically six months to two years). In determining a rating outlook, consideration is given to any changes in the economic and/or fundamental business conditions. When an event, unexpected change or criteria change occurs that is likely to cause a ratings change in the near term, S&P places the rating on CreditWatch, which replaces the outlook on that rating. CreditWatch highlights the potential direction of a short- or long-term rating. It focuses on identifiable events and short-term trends that may cause ratings to be placed under special surveillance by S&P. These may include mergers, recapitalizations, voter referendums, regulatory action, performance deterioration of securitized assets, or anticipated operating developments.

Moody's credit ratings are on a rating scale that ranges from Aaa to C, which represents the range from highest to lowest quality. Moody's appends numerical modifiers 1, 2 and 3 to each generic rating classification from Aa through Caa. The modifier 1 indicates that the obligation ranks in the higher end of its generic rating category; the modifier 2 indicates a mid-range ranking; and the modifier 3 indicates a ranking in the lower end of that generic category.

Lundin Mining understands that the ratings are based on, among other things, information furnished to the above ratings agencies by Lundin Mining and information obtained by the ratings agencies from publicly

available sources. The credit ratings given to Lundin Mining's corporate debt by the rating agencies are not recommendations to buy, hold or sell debt instruments since such ratings do not comment as to market price or suitability for a particular investor. There is no assurance that any rating will remain in effect for any given period of time or that any rating will not be revised or withdrawn entirely by a rating agency in the future if, in its judgment, circumstances so warrant. Credit ratings are intended to provide investors with (i) an independent measure of the credit quality of an issue of securities; (ii) an indication of the likelihood of repayment for an issue of securities; and (iii) an indication of the capacity and willingness of the issuer to meet its financial obligations in accordance with the terms of those securities. Credit ratings accorded to Lundin Mining's corporate debt may not reflect the potential impact of all risks on the value of debt instruments, including risks related to market or other factors discussed in this annual information form. See also "Risk Factors".

#### ITEM 10 MARKET FOR SECURITIES

## 10.1 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".

# 10.2 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 2014	5.11	4.63	54,160,000
February 2014	5.35	4.70	42,600,000
March 2014	5.31	4.86	30,690,000
April 2014	5.67	5.09	45,770,000
May 2014	5.99	5.44	40,950,000
June 2014	5.91	5.53	31,710,000
July 2014	6.41	6.09	57,410,000
August 2014	6.42	5.80	26,140,000
September 2014	6.02	5.50	26,700,000
October 2014	5.58	4.89	66,770,000
November 2014	5.84	5.04	42,930,000
December 2014	5.75	5.02	47,290,000

## ITEM 11 DIRECTORS AND OFFICERS

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

The Board of Directors currently comprises eight directors who are elected annually and whose term of office will expire at the Company's annual shareholders' meeting scheduled to be held on or about May 8, 2015. 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 executive officers of the Company 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 (1)
Lukas H. Lundin Vaud, Switzerland Chairman and Director	Chairman and Director of the Company since September 1994; chairman, president and/or director of a number of publicly traded resource-based companies. President of Namdo Management Services Ltd., a private corporation from 1995 to June 2013.	September 9, 1994	2,271,449 common shares
Paul K. Conibear British Columbia, Canada President, Chief Executive Officer and Director	President and Chief Executive Officer of the Company since June 30, 2011; Senior Vice President, Corporate Development of the Company from October 2009 to June 2011; Senior Vice President, Projects, of the Company from July 2007 to October 2009.	June 30, 2011	789,904 common shares
Donald K. Charter Ontario, Canada <i>Director</i>	Corporate director with experience in executive leadership positions in mining and financial services as well as mergers and acquisitions and finance. Most recently, President and Chief Executive Officer of Corsa Coal Corp. from August 2010 to July 2013 and a corporate director and consultant since January 2006.	October 31, 2006	42,424 common shares
John H. Craig Ontario, Canada <i>Director</i>	Lawyer, partner of Cassels Brock & Blackwell LLP; director of a number of publicly traded companies.	June 11, 2003	213,849 common shares
Brian D. Edgar British Columbia, Canada <i>Director</i>	Chairman of Silver Bull Resources, Inc.; director of a number of publicly traded companies.	September 9, 1994	130,000 common shares
Peter C. Jones Alberta, Canada <i>Director</i>	Corporate director and retired executive with over 40 years of experience in the global mining industry. Mr. Jones served as Interim President and CEO of IAMGOLD Corporation, President and Chief Operating Officer of Inco Ltd., and President and Chief Executive Officer of Hudson Bay Mining & Smelting Co. Mr. Jones has been a director of public companies for over 20 years.	September 20, 2013	22,070 common shares

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 (1)
Dale C. Peniuk CPA CA British Columbia, Canada Director	Chartered Professional Accountant (CPA CA) and corporate director; formerly an assurance partner with KPMG LLP; director of a number of publicly traded companies.	October 31, 2006	50,000 common shares
William A. Rand British Columbia, Canada (Lead) Director	President and Director of Rand Investments Ltd. since July 1986; director of a number of publicly traded companies.	September 9, 1994	223,424 common shares
Susan J. Boxall United Kingdom Vice President, Human Resources	Vice President, Human Resources of the Company since August 2012; Group Human Resources 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
Stephen T. Gatley United Kingdom Vice President, Technical Services	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
Marie Inkster Ontario, Canada Senior Vice President and Chief Financial Officer	Senior Vice President and 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
Julie A. Lee Harrs Ontario, Canada Senior Vice President, Corporate Development	Senior Vice President, Corporate Development of the Company 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
Jinhee Magie Ontario, Canada Vice President, Finance	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
Paul M. McRae United Kingdom Senior Vice President, Projects	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

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 (1)
Neil P. M. O'Brien Ontario, Canada Senior Vice President, Exploration and Business Development	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
Derek Riehm Santiago, Chile Vice President, Environment	Vice President, Environment of the Company since January 1, 2015; Vice President, Approvals & Permitting of Barrick Gold Corporation from 2011 to 2014; Senior Director, Project Approvals of Barrick Gold from 2008 to 2010.	N/A	Nil
J. Mikael Schauman Sweden Vice President, Marketing	Vice President, Marketing of the Company since February 2007.	N/A	Nil

<sup>(1)</sup> The number of common shares beneficially owned, or controlled or directed, directly or indirectly.

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 0.56% of the number of common shares of the Company issued and outstanding as of the date of this AIF.

There are currently four standing committees of the Board of Directors. 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:

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

# 11.2 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 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. Jones was a director of Lakota between September 2008 and October 2009. In May and August 2009, cease trade orders were issued against Lakota for failure to file financial statements on July 13, 2009. The company was deleted from the TSX-V for failure to maintain listing requirements. The cease trade order was revoked in 2011.

Messrs. Rand and Edgar were directors of New West Energy Services Inc. 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.

On November 8, 2013, Mr. Craig resigned as a director of Sirocco and on January 31, 2014, Mr. Conibear resigned as a director of Sirocco, at which time Sirocco was financially solvent. Pursuant to a plan of arrangement completed on January 31, 2014, Canadian Lithium Corp. acquired Sirocco. The final step in the plan of arrangement transaction was the amalgamation of Canadian Lithium Corp. and Sirocco to form RBI. On October 13, 2014, RBI announced that, among other things, the board of directors of RBI has approved a filing on October 14, 2014, for an Initial Order to commence proceedings under the CCAA. Please refer to the paragraph below for further information regarding RBI and the CCAA proceedings.

On October 13, 2014, RBI, a company pursuant to which Messrs. Craig and Conibear were former directors, announced that, among other things, the board of directors of RBI has approved a filing on October 14, 2014, for an Initial Order to commence proceedings under the CCAA from the Quebec Superior Court. On October 15, 2014, RBI further announced that the Quebec Superior Court has issued an Amended and Restated Initial Order in respect of RBI and certain of its subsidiaries under the CCAA. RBI is now under the protection of the Court. KPMG LLP has been appointed monitor under the Court Order. The TSX delisted RBI's common shares effective at the close of business on November 24, 2014 for failure to meet the continued listing requirements of the TSX. Since that time, RBI's common shares have been suspended from trading.

Ms. Inkster was Vice President, Finance of 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 were suspended from trading on the NEX board and it 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.

## 11.3 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:

- 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.

#### 11.4 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 of 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 and officers 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 12 AUDIT COMMITTEE

# 12.1 Overview

The Audit Committee of the Board of Directors is principally responsible for recommending to the 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.

#### 12.2 Audit Committee Mandate/Charter

The Board of Directors has adopted 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.

# 12.3 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 NI 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.

Member Name	Independent <sup>(1)</sup>	Financially Literate <sup>(2)</sup>	Education and Experience Relevant to Performance of Audit Committee Duties
Dale C. Peniuk (Chair)	Yes	Yes	Mr. Peniuk is a chartered professional accountant (CPA CA) and was formerly an audit/assurance partner of KPMG LLP and lead KPMG Vancouver, Mining industry 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; Executive Vice President of Dundee Corporation and Dundee Wealth Management and Chief Executive Officer of Corsa Coal, a Candian public company.
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.

<sup>(1)</sup> 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.

# 12.4 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 Board of Directors.

## 12.5 Pre-Approval Policies and Procedures

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

<sup>(2)</sup> 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.

# 12.6 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, 2014 and 2013. Services billed in C\$, SEK or € were translated using average exchange rates that prevailed during 2014 and 2013.

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, 2014	\$ 1,024,800	\$ 571,274	\$ 305,690	\$ 29,326
December 31, 2013	\$ 887,833	\$ 61,773	\$ 92,975	\$ 16,235

- (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 related services by the Company's auditors that are not disclosed in the Audit Fees column, including fees in connection with the Company's equity private placement and debt offering memorandums.
- (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 Auditor's Report dated February 18, 2015 in respect of the Company's consolidated financial statements as at December 31, 2014 and 2013 and for the years then ended, and February 20, 2014 in respect of consolidated financial statements as at December 31, 2013 and 2012 and for the years then ended.

#### ITEM 13 LEGAL PROCEEDINGS AND REGULATORY ACTIONS

## 13.1 Legal Proceedings

Other than legal proceedings disclosed elsewhere in this document, 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.

# 13.2 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 14 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 15 TRANSFER AGENTS AND REGISTRARS

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

## ITEM 16 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, 2014 and up to the date of this AIF or that were entered into prior to January 1, 2014 and remain in effect during 2014, other than as follows:

- (a) The Credit Agreement. The Credit Agreement provides for a credit facility for borrowing up to \$350 million. As at December 31, 2014, the Company had no amount drawn under the Credit Agreement.
- (b) The Stock Purchase Agreement. See "General Development of Business Three Year History" above for additional details.
- (c) Purchase and Sale Agreement. See "General Development of Business Three Year History" above for additional details.
- (d) The Indenture. Pursuant to the Indenture, the Company completed its offering of \$1.0 billion of senior secured notes in two tranches, \$550 million of 7.5% Senior Secured Notes due 2020 and \$450 million of 7.875% Senior Secured Notes due 2022. The Company may, at its option, redeem the notes due in 2020 at any time on or after November 1, 2017, or the notes due in 2022 at any time on or after November 1, 2018, in each case in whole or in part at stated redemption prices which are dependent on the applicable redemption date. In addition, the Company may, at its option, redeem up to 35% of the notes due in 2020 and/or up to 35% of the notes in 2022 prior to November 1, 2017, in each case with the net cash proceeds from certain equity offerings. The Company may, at its option, redeem the notes due in 2020 prior to November 1, 2017, or the notes in 2022 prior to November 1, 2018, in each case in whole or in part, by paying a price equal to 100% of the aggregate principal amount of notes to be redeemed, plus a specified "makewhole premium". In addition, the Company may be required to make an offer to purchase the notes upon the sale of certain assets and upon a change of control.

## ITEM 17 INTERESTS OF EXPERTS

The Qualified Persons who have supervised the preparation of the Company's Mineral Reserve and Mineral Resource estimates during 2014 or authored portions of the technical reports disclosed in this AIF are as follows:

- Messrs. Jean-Francois Couture, P.Geo., Glen Cole, P.Geo., Gary Poxleitner, P.Eng., Adrian Dance, P.Eng., and Cam Scott, P.Eng., from SRK Consulting (Canada) Inc. and John Nilsson, P.Eng., from Nilsson Mine Services Ltd in respect of the Candelaria Mineral Resource and Mineral Reserve estimates and the Candelaria Report;
- 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 and the Tenke 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 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 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;
- Robert Mahin, Chief Geologist, Eagle Mine and Steve Kirsch, former Mine Manager, Eagle Mine.
   Both were employees of Eagle Mine in respect of the Eagle Mineral Resource and Mineral Reserve estimates at the time it was reported and Mr. Mahin continues to be an employee of Eagle Mine; and
- Dr. Lewis Meyer and Mr Mark Owen of Wardell Armstrong International Ltd., in respect of the Eagle Report.

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 Chartered Professional 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 Company's outstanding securities.

## ITEM 18 ADDITIONAL INFORMATION

Additional information regarding the Company is available on SEDAR at 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 held on May 9, 2014. The Management Information Circular for the 2015 shareholders' meeting to be held for the purposes of, among other things, the election of directors, will be available on SEDAR in accordance with the time prescribed by law. Additional financial information is provided in the consolidated financial statements of the Company as at December 31, 2014 and December 31, 2013 and for the years ended December 31, 2014 and 2013, together with auditors' report thereon and the notes thereto, and MD&A for the year ended December 31, 2014.

# SCHEDULE A

# Mineral Reserves And Resources - 2014

Mineral R	eserves												Metal 000'	s (Ounce		s)	
	Category	000's	Cu	Zn	Pb	Au	Ag	Ni	Co	Cu	Zn	Pb	Au	Ag	Ni	Со	Lundin
		Tonnes	%	%	%	g/t	g/t	%	%	T	T	T	Oz	Oz	Т	Т	Interes
Copper																	
Candelaria	Proven	266,725	0.6			0.1	2.1			1,533			1.14	18			80%
Open Pit	Proven (Stockpile)	92,025	0.4			0.1	1.5			336			0.26	4			80%
	Probable	9,182	0.5			0.1	2.0			50			0.04	1			80%
	Total	367,932	0.5			0.1	1.9			1,919			1.45	23			80%
Underground	Proven	7,897	1.1			0.2	4.6			85			0.06	1			80%
_	Probable	4,591	1.0			0.2	4.4			46			0.03	1			80%
	Total	12,487	1.1			0.2	4.5			132			0.10	2			80%
Neves-Corvo	Proven	4,907	4.2	0.9	0.2		38.8			206	45	11		6			100%
	Probable	20,478	2.4	0.7	0.2		36.1			501	139	39		24			100%
	Total	25,385	2.8	0.7	0.2		36.6			707	183	50		30			100%
Zinkgruvan	Proven	3,328	2.2	0.3			35.0			73	10			4			100%
ū	Probable	65	2.1	0.6			35.0			1	-			-			100%
	Total	3,393	2.2	0.3			35.0			75	10			4			100%
Tenke	Proven	46,721	3.6						0.4	1,662						199	24%
Fungurume	Probable (Stockpile)	38.409	1.3						0.3	483						122	24%
· ugu. uo	Probable	50,990	3.0						0.3	1,536						173	24%
	Total	136,120	2.7						0.4	3,681						494	24%
Zinc		•															
Neves-Corvo	Proven	10,371	0.4	8.5	2.1		73.1			40	884	218		24			100%
	Probable	10,232	0.4	6.4	1.5		66.9			39	657	155		22			100%
	Total	20,603	0.4	7.5	1.8		70.0			79	1,541	372		46			100%
Zinkgruvan	Proven	7,354		9.1	3.8		87.0				669	279		21			100%
ū	Probable	4,196		7.5	2.6		51.0				315	109		7			100%
	Total	11,550		8.5	3.4		73.9				984	389		27			100%
Nickel																	
Aguablanca	Proven	1,132	0.5					0.6		5					7		100%
<b>3</b>	Proven (Stockpile)	88	0.4					0.5		0					0		100%
	Probable																100%
	Probable (U'ground))	3.196	0.5					0.6		17					20		100%
	Total	4,416	0.5					0.6		22					28		100%
Eagle	Proven	1,953	3.4					4.2	0.1	67					83	2	100%
	Probable	3,212	2.0					2.4	0.1	66					78	2	100%
	Total	5,212	2.6					3.1	0.1	132					161	4	100%
		0,104															10070
Note: totals may not s	ummate correctly due to rounding						L	undin's	share	3,539	2,719	811	1.2	127	189	123	

Mineral Ro										Contained Metal 000's (Ounces millions)							
	Category	000's Tonnes	Cu %	Zn %	Pb %	Au g/t	Ag g/t	Ni %	Co %	Cu	Zn T	Pb T	Au Oz	Ag Oz	Ni T	Co	Lundin
Cannar		Torries	70	70	70	g/ι	y/ι	70	70				U2	UZ_			interes
Copper Candelaria	Measured	359.400	0.5			0.1	1.9			1.914			1.44	22			80%
	WIP	92.025	0.5			0.1	1.5			336			0.26	4			80%
Open Pit	Indicated	15.800	0.4			0.1	1.8			77			0.26	1			80%
	Indicated	7,643	0.5			0.1	1.0			25			0.06	0			80%
	Measured	19.837	1.1			0.1	5.1			221			0.02	3			80%
Underground							5.1 5.6										
	Indicated	13,922	1.1			0.3				151			0.12	3			80%
	Inferred	3,690	1.1			0.3	6.2			42			0.03	1			80%
Neves-Corvo	Measured	10,471	4.9	1.0	0.3		45.0			512	103	27		15			100%
	Indicated	45,314	2.5	1.0	0.3		45.2			1,112	458	146		66			100%
	Inferred	25,076	1.8	1.1	0.4		43.5			441	270	100		35			100%
Semblana	Inferred	7,807	2.9				25.1			223				6			100%
Zinkgruvan	Measured	4,495	2.3	0.3			32.0			103	13			5			100%
	Indicated	462	2.4	0.4			39.0			11	2			1			100%
	Inferred	505	2.0	0.3			34.0			10	2			1			100%
Tenke	Measured	170,209	2.9						0.3	4,966						548	24%
Fungurume	Indicated	427,936	2.4						0.3	10,298						1,088	24%
_	Inferred	392,750	2.0						0.2	8,004						916	24%
Zinc																	
Neves-Corvo	Measured	24,027	0.3	7.6	1.8		66.7			70	1,816	438		52			100%
	Indicated	70.014	0.3	5.6	1.2		57.7			231	3,908	848		130			100%
	Inferred	21,369	0.3	4.6	0.9		48.9			71	981	201		34			100%
Zinkgruvan	Measured	8,603		10.7	4.2		95.0				921	361		26			100%
	Indicated	8,399		9.2	4.0		87.0				773	336		23			100%
	Inferred	6,109		8.3	2.7		75.0				507	165		15			100%
Nickel		-,															
Aguablanca	Measured	6.654	0.5					0.6		35					41		100%
- дааыа тоа	Indicated	250	0.3					0.5		1					1		100%
	Inferred	40	0.2					0.5									100%
Eagle	Measured	1,774	3.9					4.8	0.1	69					86	2	100%
Lagio	Indicated	2,845	2.5					3.0	0.1	71					86	2	100%
	Inferred	2,043	1.2					1.2	0.1	, ,					-	_	100%
	micheu	0	1.4					1.4									100/0

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

Mineral Reserves and Resources are shown on a 100 percent basis for each mine. The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Mineral Reserves. All estimates, with the exception of Tenke Fungurume and Candelaria, are prepared as at June 30, 2014. The Tenke Fungurume estimates are dated December 31, 2014 and Candelaria estimates are dated December 31, 2013.

Estimates for all 100% owned operations are prepared by or under the supervision of a Qualified Person. Tenke Fungurume Proven and Probable Mineral Reserves are estimated by the operator Freeport, and are prepared to SEC standards and are reviewed by Lundin Mining's independent Qualified Persons. Mineral Reserves and Resources for Candelaria were estimated by Freeport and audited by independent Qualified Persons on behalf of Lundin Mining.

Except as noted below, Mineral Reserves have been calculated using metal prices of \$2.50/lb copper, \$1.00/lb zinc, \$1.00/lb lead, \$8.50/lb nickel and exchange rates of EUR/USD 1.30 and USD/SEK 6.50.

#### Candolaria

Open pit Mineral Resources are reported within a conceptual pit shell based on metal prices of \$2.20/lb copper and \$1,000/oz gold. Open pit Mineral Resources are reported at a cutoff grade of 0.2% copper. Underground Mineral Resources are reported at a cut-off grade of 0.6% copper. Mineral Reserves have been prepared using \$2.00/lb copper, \$1,000/oz gold and \$15.00/oz silver. Mineral Reserves for open pit, underground and stockpiles/work-in-progress for the Candelaria property are reported at cut-off grades of 0.25%, 0.81% and 0.24% copper, respectively. Underground Mineral Reserves for the Ojos property (Santos and Alcaparrosa) are reported at cut off grades of 0.84% and 0.75% copper, respectively. Mineral Reserves and Resources for Candelaria were estimated by Freeport and audited by SRK Consulting (Canada) Inc. Qualified Persons are Jean-Francois Couture, P.Geo., Glen Cole, P.Geo., Gary Poxleitner, P.Eng., Adrian Dance, P.Eng., and Cam Scott, P.Eng., from SRK Consulting (Canada) Inc. and John Nilsson, P.Eng., from Nilsson Mine Services Ltd.

#### **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 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 3.98% zinc equivalent. 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. The underground Mineral Resources are reported above a 0.35% nickel cut-off. Mineral Reserves for the underground mine were estimated from designed sub-level caving and sub-level open stoping mining

panels beneath the open pit using a 0.5% nickel cut-off, with appropriate allowances made for mining dilution and recovery. Mineral Resources and Reserves for Aguablanca were estimated by the mine's geology and mine engineering departments under the guidance of César Martinez, Chief Geologist, and Carlos Moreira, Mine Manager. Qualified Persons are Graham Greenway and David Allison.

## Eagle

The Mineral Resources and Mineral Reserves are reported above a fixed NSR cut-off of \$131/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, former Mine Manager. Both of whom were employees of Eagle Mine in respect of the Eagle Mineral Resource and Mineral Reserve estimates at the time it was reported and Mr. Mahin continues to be an employee 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 2014 Mineral Reserves are based on smoothed pit designs for Measured and Indicated Resources using metal prices of \$2.00/lb copper and \$10.00/lb cobalt which result in a cut off grade of approximately 1.31% copper equivalent. The Mineral Resources (not reported by Tenke Fungurume operator Freeport) and Reserve estimates (reported under United States SEC guidelines) for Tenke Fungurume 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.

#### 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:
  - 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 regarding questionable accounting or auditing matters.	of the	Corporation	of	concerns

# lundin mining