

EMC METALS CORP.  
Form 10-K  
March 25, 2014

**UNITED STATES**

**SECURITIES AND EXCHANGE COMMISSION**

**Washington, D.C. 20549**

**FORM 10-K**

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

**For the fiscal year ended December 31, 2013**

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

**000-54416**

(Commission File Number)

**EMC METALS CORP.**

(Exact Name of Registrant as specified in its charter)

**British Columbia, Canada**

(State or other Jurisdiction of Incorporation or organization)

**98-1009717**

(I.R.S. Employer)

Identification No.)

**1430 Greg Street, Suite 501**

**Sparks, Nevada**

**89431**

(Address of Principal Executive Offices) (Zip Code)

Registrant's Telephone Number, including area code: **(775) 355-9500**

Securities registered pursuant to Section 12(b) of the Act: **None**

Securities to be registered pursuant to Section 12(g) of the Act: **Common Shares without par value**

(Title of class)

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ [X]  
No ☐ [ ]

Indicate by check mark if disclosure of delinquent filers in response to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒ [X]

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act (Check one):

Large Accelerated Filer ☐ Accelerated Filer ☐  
Non-Accelerated Filer ☐  
Smaller Reporting Company ☒ x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ [ ] No ☒ [X]

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter: \$4,960,750 as at June 30, 2013.

Indicate the number of shares outstanding of each of the registrant's classes of common equity, as of the latest practicable date: 165,358,337 common shares as at March 18, 2014.

DOCUMENTS INCORPORATED BY REFERENCE

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Portions of the registrant's Proxy Statement for the Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K, which Proxy Statement is to be filed within 120 days after the end of the registrant's fiscal year ended December 31, 2013.

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## PART I

### Note about Forward-Looking Statements

Certain statements contained in this registration statement constitute "forward-looking statements". Forward-looking statements may include, but are not limited to, statements with respect to the future price of commodities, the estimation of mineral resources, the realization of mineral resource estimates, the timing and amount of estimated future production, costs of production, capital expenditures, costs and timing of the development of new deposits, success of exploration activities, our ability to fund property acquisition costs, our ability to reach targeted time frames for establishing feasibility, permitting time lines, currency fluctuations, requirements for additional capital, government regulation of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims, the completion of financings and regulatory approvals. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "scheduled", "estimates", "intends", "anticipates" or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would" or "will be taken", "occur" or "be achieved". Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward looking statements. Such factors may include, among others, risks related to our joint venture operations; actual results of current exploration activities or production technologies that we are currently testing; actual results of reclamation activities; future metal prices; accidents, labour disputes and other risks of the mining industry; delays in obtaining governmental or regulatory approvals or financing or in the completion of development activities, as well as those factors discussed in the section entitled "Risk Factors" and elsewhere in this registration statement. Although we have attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. The "Company", "EMC", "we", "us", "our" and words of similar meaning refer to EMC Metals Corp.

### Glossary of Terms

**Alteration** Usually referring to chemical reactions in a rock mass resulting from the passage of hydrothermal fluids.

**Assay** An analysis to determine the presence, absence or quantity of one or more components, elements or minerals.

**Base metal** Any non-precious metal (e.g. copper, lead, zinc, nickel, etc.).

**Chalcopyrite** A yellow crystalline mineral consisting of a sulphide of copper and iron. It is the principal ore of copper.

**Concession** A grant of a tract of land made by a government or other controlling authority in return for stipulated services or a promise that the land will be used for a specific purpose.

**Core** The long cylindrical piece of a rock, up to several inches in diameter, brought to the surface by Diamond drilling.

**Diamond drilling** A drilling method in which the cutting is done by abrasion using diamonds embedded in a matrix rather than by percussion. The drill cuts a core of rock, which is recovered in long cylindrical sections.

**Dip** The angle at which a vein, structure or rock bed is inclined from the horizontal as measured at right angles to the Strike; may also apply to the angle of inclination for a drill hole.

**Epithermal** A hydrothermal mineral deposit formed within about one kilometer of the earth's surface and in the temperature range of 50 – 200 degrees Celsius. Also used to denote the environment of deposition.

**Fractures** Breaks in a rock, usually due to intensive folding or faulting.

**Grade** The concentration of a valuable mineral within an Ore.

**Hydrothermal** Hot fluids, usually water, which may, or may not carry metals and other compounds in solution to the site of mineral deposition or wall rock alteration.

**Igneous** A rock formed by the cooling of molten silicate material.

**Intrusion** A general term for a body of igneous rock formed below the surface of the earth.

**Intrusive** A body of igneous rock formed by the consolidation of magma intruded into other rocks, in contrast to lavas, which are extruded upon the surface.

**Kg** Kilogram which is equivalent to approximately 2.20 pounds.

**Km** Kilometer which is equivalent to approximately 0.62 miles.

**Kt** Thousand tonnes.

**Lode** A deposit of metallic ore filling a fissure in the surrounding rock.

**Mineralization** A term used to describe the presence of minerals of possible economic value. Also used to describe the process by which concentration of economic minerals occurs.

**Mlbs**

Million pounds.

**Net Smelter Returns Royalty** A share of the net revenues generated from the sale of metal produced by a mine.

**NI 43-101** National Instrument 43-101 – *Standards for Disclosure of Mineral Projects*, being the regulation adopted by Canadian securities regulators that governs the public disclosure of technical and scientific information concerning a mineral property.

**Ore** A naturally occurring solid material from which a metal or valuable mineral can be profitably extracted.

**Outcrop**

An exposure of rock at the earth's surface.

**Pegmatite** Coarse-grained igneous rocks that often occur as wide veins cutting across other types of rock.

**Porphyry** Igneous rock of any composition that contains conspicuous crystals in a fine grained groundmass.

**ppb and ppm** Parts per billion and parts per million, respectively.

**Pyrite** Iron sulphide mineral. The most common and abundant sulphide mineral and often found in association with copper and gold.

**Qualified Person** Means a Qualified Person as defined in National Instrument 43-101, including an engineer or geoscientist in good standing with their professional association, with at least five years of relevant experience.

**Quartz** The second most common rock forming mineral in the earth's crust.  $\text{SiO}_2$ .

**Resource** Means any of a measured, indicated or inferred resource as used in NI 43-101, and having the following meanings:

**“measured resource”** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

**“indicated resource”** is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

**“inferred resource”** is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

For the purposes of the above a “**mineral resource**” means a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

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(Please refer to “Item 3. Property - Cautionary Note To U.S. Investors Regarding Resource Estimates” in regards to the use of the above terms in this registration statement.)

**Rhyolite** The fine grained equivalent of a granite.

**Sulphide** A class of minerals characterized by the linkage of sulphur with a metal (such as Pyrite (FeS<sub>2</sub>)).

**tpd** Tonnes per day.

**Tonnes** A metric ton which is equivalent to approximately 2,204 pounds.

**Tuff** A Volcanic rock formed through the compaction of volcanic crystals and/or rock fragments generally smaller than 4 mm in diameter.

**Sedimentary** A rock formed from cemented or compacted Sediments.

**Sediments** The debris resulting from the weathering and breakup of other rocks that have been deposited by or carried by runoff, streams and rivers, or left over from glacial erosion or sometimes from wind action.

**Strike** The direction or bearing from true north of a vein, rock formation or structure measured on a horizontal surface.

**Vein** A geological feature comprised of minerals (usually dominated by quartz) that are found filling openings in rocks created by faults or replacing rocks on either side of faults or Fractures.

**Volcanic rock** A finely crystalline or glassy Igneous rock resulting from volcanic actions at or near the earth’s surface.

## **ITEM 1. BUSINESS**

### **General**

We were incorporated on July 17, 2006 under the laws of British Columbia, Canada under the name Golden Predator Mines Inc. We were incorporated as a wholly owned subsidiary of Energy Metals Corp. for the purpose of holding precious metals and certain specialty metals assets. In order to focus on specialty metals, during February 2009 we transferred most of our precious mineral assets to our then wholly-owned subsidiary Golden Predator Corp. and on March 6, 2009 we completed a spin-out of Golden Predator Corp. to our shareholders. Effective March 12, 2009, we changed our name to EMC Metals Corp.

We are a reporting issuer in the Canadian Provinces of British Columbia, Alberta and Ontario and our common shares are listed for trading on the Toronto Stock Exchange under the trading symbol “EMC”.

Our head office is located at 1430 Greg Street, Suite 501, Sparks, Nevada 89431. The address of our registered office is 1200 - 750 West Pender Street, Vancouver, British Columbia, Canada, V6C 2T8.

Our primary asset during 2013 was our Springer tungsten mill and mine which we acquired from General Electric Company in 2006, and which has been on care and maintenance since acquisition. In September 2013 we entered into an agreement with Americas Bullion Royalty Corp. to sell the Springer assets, along with the legal entity Springer Mining Company, and certain other mineral properties. That sale transaction was finalized and closed on December 31, 2013, for \$5 million cash. Our ongoing focus of operations is the exploration and development of our specialty metals assets, specifically the development of the Nyngan Scandium project located in New South Wales, Australia and exploration on the Tørdal scandium/rare earth minerals property in Norway.

### **Intercorporate Relationships**

The chart below illustrates our corporate structure, including our subsidiaries, the jurisdictions of incorporation, and the percentage of voting securities held. During 2013, we sold our wholly owned subsidiary Springer Mining Company, which no longer appears in the chart as of year-end 2013.



## Recent History

### Sale of Springer Mining Company, Plus Other Nevada Mineral Assets

EMC entered into an agreement on September 13, 2013 with Americas Bullion Royalty Corp (Ticker: AMB.To) to sell 100% of the Springer Mining Company, including all its mine, mill, water, and tungsten resource assets for US\$ 5 million. The sale also included the Carlin Vanadium property resource and the Copper King Tungsten property, all located in Nevada, USA. The sale agreement included an immediate \$3.1 million payoff of a matured loan secured by the Springer assets, and a subsequent cash payment of \$1.9 million, made November 25<sup>th</sup> 2013. Formal transfer of ownership and closing documents were executed on December 31, 2013.

As a result of this transaction, EMC has no further mineral assets in Nevada, or in the USA.

### Nyngan Scandium Project Acquisition

On February 5, 2010, EMC entered into an Exploration Joint Venture Agreement (“JV Agreement”) with Jervois Mining Limited (“Jervois”) to co-develop the Nyngan scandium property in New South Wales, Australia, which is commonly referred to as the Nyngan Scandium Project (“Nyngan”). The JV Agreement, as amended, gave us the right to earn a 50% interest in a joint venture with Jervois, for the purpose of holding and developing Nyngan, provided EMC did the following

1. We spent a minimum of AUD\$500,000 in exploration and metallurgical test-work on the project within the first six months after signing, later extended to June 2011.
2. We delivered an independently prepared feasibility study (as defined in the JV Agreement) by February 28, 2012; and
3. We made a cash payment of AUD\$1,300,000 plus taxes to Jervois, within 5 business days of the delivery of the feasibility study.

EMC met the minimum spending threshold (#1) within the specified and revised 2011 timeframe, and on February 24, 2012, delivered to Jervois both the feasibility study (#2) and the final cash payment (#3), required to complete the earn-in to the JV. Feasibility study delivery included extensive discussion and presentation of results to the Jervois Board and management.

On February 27, 2012, Jervois formally rejected EMC's claim to have met the earn-in conditions specified in the JV, based on inadequacy of the feasibility study, and returned the cash payment received. The parties discussed possible resolutions to the dispute for several months until Jervois formally filed a lawsuit demanding EMC relinquish all claims to the Project. EMC vigorously defended its position with respect to the JV Agreement, and in February 2013 the parties reached an out of court settlement that resolved all issues in dispute.

The terms of the settlement transferred 100% ownership and control of the Nyngan Scandium project to EMC, in return for AUD\$2.6 million in future cash payments and a sales royalty, payable to Jervois. Exploration tenements formally transfer on final cash payment in 2014, but EMC secured the right to proceed with development and implementation of the project immediately. Jervois retains a production royalty on the Nyngan project of 1.7% of sales price for products produced from the site for a term of 12 years from first production date. A minimum annual royalty applies, based on 10 tpa scandium production.

The binding settlement entered into with Jervois brings to an end all court actions, claims and counterclaims, including claims for damages and legal and other costs. The settlement was subject to Australian FIRB approval of EMC's 100% ownership, and that approval has been received.

#### Acquisition of The Technology Store, Inc.

We entered into a stock purchase agreement dated November 19, 2009, with Willem P. Duyvesteyn and Irene G. Duyvesteyn, pursuant to which we acquired all of the issued and outstanding common shares of The Technology Store, Inc. ("TTS"), a Nevada corporation. In exchange, we issued to the shareholders of TTS, 19,037,386 of our common shares, paid USD\$802,358 in cash, issued a promissory note in the amount of USD\$500,000 with an amended maturity date of June 30, 2012, and agreed to pay certain U.S. federal income taxes payable in connection with the transaction. The acquisition of TTS completed with an effective date of December 16, 2009.

TTS conducts research and development of commercial extractive metallurgical processes. TTS specializes in the development of specialty metals extractive technologies, with emphasis on improving recoveries in the extraction of scandium, tungsten, boron, lithium, titanium, and nickel and a host of other emerging and unusual metals. As a condition of the stock purchase agreement, Willem D. Duyvesteyn, the principal of TTS, was appointed to our board of directors on December 16, 2009.

#### Spin-out of Golden Predator Corp.

Pursuant to a reorganization agreement dated February 5, 2009 between us and our then wholly-owned subsidiary Golden Predator Corp., we transferred most of our precious metals assets to Golden Predator in order to focus on our specialty metals assets and pursue additional specialty assets opportunities.

Concurrently with the reorganization, we completed a spin-out of Golden Predator to our shareholders. The spin out was completed on March 6, 2009, at which time we changed our name to EMC Metals Corp. As a result of the spin-out, Golden Predator became a reporting issuer in Canada and subsequently listed on the TSX Venture Exchange and then the Toronto Stock Exchange.

In connection with the reorganization and spin-out, we granted Golden Predator certain participation and acquisition rights to gold projects that were held by our subsidiary Great American Minerals, Inc. We subsequently sold Great

American Minerals to Golden Predator in November of 2010 in consideration for a reduction in inter-corporate amounts owing due to adjustments from the spin-out and other adjustments. We however retained our interest in the non-gold properties including the Carlin Vanadium property. Carlin Vanadium was sold to AMB during 2013.

Pursuant to a Mine Facility Agreement dated October 25, 2010, we granted Golden Predator access and use rights to a parcel of property on a corner of the Springer Mill property, a refurbished and permitted mill located in Nevada. The access rights provide Golden Predator with a suitable site to develop an independent gold milling facility. The Springer Mill property was sold to AMB during 2013.

NOTE: The comments above regarding the Carlin property and the Mine Facility Agreement have been superseded by the sale agreement related to Springer and Carlin to AMB, which is the parent company of Golden Predator.

## **Business Operations**

### Company Summary

We are a mineral exploration and development company that is focused on the development of scandium, rare earth minerals, and other specialty metals, including nickel, cobalt, boron, manganese, tantalum, titanium and zirconium.

Our principal properties and projects include 100% ownership of the Nyngan Scandium Project in Australia, and 100% of the Tørdal Scandium/REE Project in Norway.

### Corporate Objective and Strategy

Our corporate focus is to produce and sell scandium and scandium-based products. Neither of our current properties has advanced to the development or production stage and we are currently an exploration stage company. In addition we do not currently have reserves on any of our properties. We are, however, conducting technical and assessment work on the Nyngan scandium property located in Australia, for the purpose of preparing a pre-feasibility study on the development of the scandium resource. Subject to a successful pre-feasibility study, we intend to develop the Nyngan resource for production, with a view to supplying the anticipated future demand for scandium oxide and scandium-content materials. For further information on the Nyngan Project, please refer to “*Item 3. Properties - Description of Properties – Nyngan Scandium Project*” and “*Item 1A. Risk Factors*”.

Concurrently with our analysis of the Nyngan Project, we are developing and testing unique mineral recovery techniques as well as techniques to produce high quality finished scandium metals. If effective at a commercial level, these recovery and finishing techniques will provide increased economic margins and returns on capital on any future scandium production. Presently our recovery and finishing technology is in the testing phase, and there is no guarantee that we will be able to benefit from the commercial application of such techniques or that we will have scandium production in the future.

### Global Scandium Production and Market

Scandium is the 31<sup>st</sup> most abundant element in the earth's crust (average 33 ppm), which makes it more common than lead, mercury and precious metals, but less common than copper. Scandium has characteristics that are similar to rare earth elements, and it is often classified as a member of that group, although it is technically a light transition metal. Scandium occurs in nature as an oxide, rarely occurs in concentrated quantities because it does not selectively combine with the common ore-forming anions, and it is very difficult to reduce to a pure metal state. Scandium is typically produced and sold as scandium oxide ( $\text{Sc}_2\text{O}_3$ ).

Global annual production estimates of scandium range from 10 tonnes to 15 tonnes, but accurate statistics are not available due to the lack of public information from countries in which scandium is currently being produced. There are three known production sources globally today: stockpiles from the former Zhovti Voty uranium mine in Ukraine, the rare earth mine at Bayan Obo in China, and mines on the Kola Peninsula in Russia.

There is no reliable pricing data on scandium oxide trading. The U.S. Geological Survey in its latest report (January 2013) documents the price of scandium oxide (99.9% grade) at USD\$3,700/kg for the two previous years, however small quantities of scandium oxide are currently offered on the internet by traders for prices significantly above this level. Scandium oxide prices vary based on purity and quantity. Small sale quantities tend to command premium prices, and large quantities (over one tonne) are simply not available to price.

Principal uses for scandium are in high-strength aluminum alloys, high-intensity metal halide lamps, electronics, and laser research. Recently developed applications include welding wire and fuel cells which are expected to be in future demand. Approximately 15 different commercial scandium-aluminum alloys have been developed, and some of them are used for aerospace applications. In Europe and the U.S., scandium containing alloys have been evaluated for use in structural parts in commercial airplanes, high stress parts in automobile engines and brake systems, and high tension electrical wires. Military and aerospace applications are known to be of interest, although with less specificity. The combination of high strength and light weight makes scandium-aluminum alloys generally suitable for a number of applications where existing aluminum alloys made with other metals are used today.

### Competitive Conditions

We compete with numerous other companies and individuals in the search for and the acquisition or control of attractive rare earth and specialty metals mineral properties. Our ability to acquire further properties will depend not only on our ability to operate and develop our properties but also on our ability to select and acquire suitable properties or prospects for development or mineral exploration.

In regards to our plan to produce scandium, there are a limited number of scandium producers presently. If we are successful at becoming a producer of scandium, our ability to be competitive will require that we establish a reliable supply of scandium to the market, delivered at purity levels demanded by various applications, and that our operating costs generate margins at prices that will be set by customers and competitors in a market yet to mature.

### Governmental Regulations and Environmental Laws

The development of any of our properties, specifically the Nyngan Scandium Project, will require numerous local and national government approvals and environmental permits. For further information about governmental approvals and permitting requirements, please refer to “*Item 1A. Risk Factors*”.

For detailed information about permitting on the Nyngan property, please see the report, titled, “*NI 43-101 Technical Report on the Nyngan Gilgai Scandium Project, Jervois Mining Limited, Nyngan, New South Wales, Australia*” available for public review at [www.sedar.com](http://www.sedar.com).

### Employees

As at January 1, 2014, we have 3 full and part time employees and 3 individual working on a consulting basis. Our operations are managed by our officers with input from our directors. We engage geological, metallurgical, and engineering consultants from time to time as required to assist in evaluating our property interests and recommending and conducting work programs.

#### ITEM 1A. RISK FACTORS

In addition to the factors discussed elsewhere in this registration statement, the following are certain material risks and uncertainties that are specific to our industry and properties that could materially adversely affect our business, financial condition and results of operations.

## **Risks Associated with the Nyngan Project**

***If we are not able to complete acquisition of the Nyngan Project our share price may decline.*** We are subject to payment requirements pursuant to our settlement agreement with Jervois. There is no assurance that we will meet our payment obligations, and if we are unable to meet the obligations then the project will revert to Jervois. The loss of this project would likely significantly reduce the market price of our shares.

***There are technical challenges to scandium production that may render the project not economic.*** There is no assurance that we will demonstrate economic viability on the Nyngan resource. The economics of scandium recovery are known to be challenging. There are very few facilities producing scandium and the existing scandium producers are secretive in their techniques for recovery. In addition, the recovery of scandium product from laterite resources, such as at the Nyngan deposit, has not been demonstrated at an operating facility. The Nyngan processing facility design, if constructed, will be the first of its kind for scandium production. These factors increase the possibility that we will encounter unknown or unanticipated production and processing risks. Should any of these risks become actual, they could increase the cost of production thereby reducing margins on the project or rendering the project uneconomic.

***There is no guarantee that we will be able to finance the Nyngan Project for production.*** Any decision to proceed with production on the Nyngan Project will require significant production financing. Scandium projects are very rare and economic and production uncertainty may limit our ability to attract the required amount of capital to put the project into production. If we are unable to source production financing on commercially viable terms, we may not be able to proceed with the project and may have to write off our investment in the project.

***If we are successful at achieving production, we may have difficulty selling Scandium.*** Scandium is characterized by unreliable supply, resulting in limited development of markets for scandium oxide. Markets may take longer to develop than anticipated, and Nyngan and other potential scandium producers may have to wait for products and applications to create adequate demand. Certain applications may require lengthy certification processes that could delay usage or acceptance. In addition certain scandium applications require very high purity scandium product, which is much more difficult to produce than lower Grade product. If we commence production, our inability to supply scandium in sufficient quantities, in a reliable and timely manner, and in the correct quality, could reduce the demand for any scandium produced from our projects and possibly render the project uneconomic.

## **General Risks Associated with our Mining Activities and Company**

***We may not receive permits necessary to proceed with the development of a mining project.*** The development of any of our properties, including the Nyngan Project, will require numerous local and national government approvals,

include environmental permits. Our ability to secure all necessary permits required to develop any of our projects is unknown until we make application for such permits. If we cannot obtain all necessary permits, the project cannot be developed, and our investment in the project will likely be lost. Our future market value will likely be significantly reduced to the extent one or more of our projects cannot proceed to the development or production stage due to an inability to secure all required permits.

***Mineral Resource Estimates on our properties are subject to uncertainty and may not reflect what may be economically extracted.*** Resource estimates included for scandium, tungsten and other minerals on our Nyngan, Springer and Carlin properties are estimates only and no assurances can be given that the estimated levels of tungsten and other minerals will actually be produced or that we will receive the tungsten and other metal prices assumed in determining our resources.

Such estimates are expressions of judgment based on knowledge, mining experience, analysis of drilling and exploration results and industry practices. Estimates made at any given time may significantly change when new information becomes available or when parameters that were used for such estimates change. By their nature resource estimates are imprecise and depend, to a certain extent, upon statistical inferences which may ultimately prove unreliable. Furthermore, market price fluctuations in scandium, tungsten and other metals, as well as increased capital or production costs or reduced recovery rates, may limit our ability to establish reserves on any of our properties. The extent to which resources may ultimately be reclassified as proven or probable reserves is dependent upon the demonstration of their profitable recovery. The evaluation of reserves or resources is always influenced by economic and technological factors, which may change over time. Accordingly, current resource estimates on our material properties may never be converted into reserves, or be economically extracted, and we may have to write off such properties or incur a loss on sale of our interest on such properties, which will likely reduce the value of our shares.

***Our potential for a competitive advantage in specialty and rare metals production depends on the availability of our technical processing abilities, as currently provided by our Chief Technology Officer.*** We are dependent upon the personal efforts and commitment of Willem Duyvesteyn, our CTO, a director and significant shareholder of our company, for the continued development of new extractive technologies related to scandium and other rare and specialty metals production. The loss of the services of Mr. Duyvesteyn will likely limit our ability to use or continue the development of such technologies, which would remove the potential competitive and economic benefit of such technologies.

***Our operations are subject to losses due to exchange rate fluctuation.*** We maintain accounts in Canadian and U.S. currency. Our equity financings have to date been priced in Canadian dollars, however all of our material projects and non-cash assets are located outside of both Canada and the USA, and require regular currency conversions to local currencies where such projects and assets are located. Our operations are accordingly subject to foreign currency fluctuations and such fluctuations may materially affect our financial position and results. We do not engage in currency hedging activities.

***We do not currently earn any revenue and without additional funding, we will not be able to carry out our business plan, and if we raise additional funding existing security holders may experience dilution.*** As an exploration stage mining company, none of our principal properties are in operation and we do not currently earn any revenue. In order to continue our exploration activities and to meet our obligations on the Nyngan Scandium Project, we will need to raise additional funds. Recently, we have relied entirely on the sale of our securities to raise funds for operations. Our ability to continue to raise funds from the sale of our securities is subject to significant uncertainty due to volatility in the mineral exploration marketplace. If we are able to raise funds from the sale of our securities, existing security holders may experience significant dilution of their ownership interests and possibly to the value of their existing securities.

## **ITEM 2. PROPERTIES**

**Cautionary Note to U.S. Investors Regarding Resource Estimates**

Certain terms used in this section are those used in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of U.S. securities laws. Canadian requirements, including NI 43-101, differ significantly from the requirements of the SEC, and resource information contained herein may not be comparable to similar information disclosed by U.S. companies.

In particular, and without limiting the generality of the foregoing, the term “resource” does not equate to the term “reserves”. The requirements of NI 43-101 for identification of “reserves” are not the same as those of the SEC, and reserves reported in compliance with NI 43-101 may not qualify as “reserves” under SEC standards. Under U.S. standards, mineralization may not be classified as a “reserve” unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made.

The SEC's disclosure standards normally do not recognize information concerning "measured mineral resources", "indicated mineral resources" or "inferred mineral resources" or other descriptions of the amount of mineralization in mineral deposits that do not constitute "reserves" by U.S. standards, in documents filed with the SEC. In addition, resources that are classified as "inferred mineral resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an "inferred mineral resource" will ever be upgraded to a higher category. Under Canadian rules, estimated "inferred mineral resources" may not generally form the basis of feasibility or pre-feasibility studies. Investors are cautioned not to assume that all or any part of an "inferred mineral resource" exists or is economically or legally mineable.

Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations, however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in-place tonnage and grade without reference to unit measures.

Accordingly, information concerning mineral deposits set forth herein may not be comparable with information presented by companies using only U.S. standards in their public disclosure.

## **Description of Mineral Projects**

### **Nyngan Scandium Project**

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

The Nyngan scandium resource is located approximately 500 kilometers northwest of Sydney, Australia. The property consists of two exploration licenses, controlled by Jervois, which encompass over 9,000 hectares. Nyngan is classified as an Australia Property for purposes of financial statement segment information.

The scandium resource is hosted within the lateritic zone of the Gilgai Intrusion, one of several Alaskan-type mafic and ultramafic bodies which intrude Cambrian-Ordovician metasediments collectively called the Girilambone Group. The laterite zone, locally up to 40 meters thick, is layered with hematitic clay at the surface followed by limonitic clay, saprolitic clay, weathered bedrock and finally fresh bedrock. The scandium mineralization is concentrated within the hematitic, limonitic, and saprolitic zones with values up to 350 ppm scandium.

The location of the property is provided in Figure 2 below. The location of the exploration licenses that we may earn an interest in are provided in Figure 3 below.

Figure 2: Location of Nyngan Project

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Figure 3: Location of the Exploration Licenses

***Mineral Resource***

In March of 2010 a NI 43-101 technical report which outlined a resources estimate on the Nyngan Scandium Project was completed. The report, titled, “*NI 43-101 Technical Report on the Nyngan Gilgai Scandium Project, Jervois Mining Limited, Nyngan, New South Wales, Australia*”, was prepared by or under the supervision of Max Rangott (BSc). The resource estimate is summarized in Table 2 below.

**Table 2****Nyngan Gilgai Scandium Project Resource Estimation**

<b>Resource Category</b>	<b>Cut off Sc Total Tonnes Grade Sc</b>			<b>Overburden Ratio</b>
	<b>(ppm)</b>	<b>(kt)</b>	<b>(ppm)</b>	
Measured	100	2,718	274	0.81:1
Indicated	100	9,294	258	1.40:1
Total	100	12,012	261	1.10:1

### ***Current Program - Overview***

In February of 2010, the Company entered into a joint venture agreement (the “JV”) with Jervois Mining Limited (“Jervois”) of Melbourne, Australia to develop the Nyngan scandium property. The terms of the JV require EMC to earn in to a 50% position through a two stage work program.

- the first stage required EMC to spend a minimum of A\$500,000 on project exploration and metallurgical test work by mid December 2010, and
- the second stage required the delivery of a feasibility study in the first quarter of 2012.

The stage I work timeframe were extended into 2011 and those first stage requirements were met during the second quarter of 2011. Second stage feasibility study work, was initiated in June 2011. To this end, we engaged SNC-Lavalin Inc. (Brisbane, Australia) to prepare a feasibility study for the partners on the economics of the project. To support process design, costing, and production level assumptions, the results of metallurgical test work done by Hazen Research Inc. together with previous test-work by the CSIRO and METCON Laboratories, were used directly by SNC-Lavalin Inc. in compiling their report.

On February 24, 2012, EMC delivered to Jervois the feasibility study for consideration of the earn-in requirement in our agreement as independently prepared by SNC-Lavalin.

No further technical work was accomplished during 2012 due to legal dispute proceedings with Jervois. Subsequent to our settlement of legal dispute with Jervois in February 2013, we are assessing near and mid-term technical work programs and project schedule. For further information on the legal dispute with Jervois, please refer to “Item 1. Business - Recent History - Nyngan Project

### **Metallurgy Development**

The first work phase of the metallurgy development program consisted of detailed metallurgical bench scale testing, and was intended to refine and enhance the Company’s existing material process flow sheet to extract scandium from the resource material. This existing flow sheet, developed by Jervois and external consultants, formed the basis of a preliminary, conceptual engineering report for the processing elements of the project that was completed by Roberts & Schaefer of Salt Lake City, Utah.

The Roberts & Schaefer report included capital and operating cost estimates, based on process flow sheets and technical reports done for Jervois or EMC on various metallurgical aspects of the resource. These technical/process reports were done by METCON Laboratories of Sydney, Australia, the Commonwealth Scientific and Industrial Organization (CSIRO), Australia's national science agency, or by other research work, proprietary to or sourced by Jervois or EMC. The bulk of the process applied by Roberts & Schaefer in their Report was defined by bench scale as well as small scale pilot plant work results compiled by others, and a preliminary flow sheet compiled by the CSIRO. This work was carried forward into the later metallurgical test work conducted by Hazen Research and the design work utilized in the SNC feasibility study presented to management in 2012.

*Note that mineral resources that are not mineral reserves do not have demonstrated economic viability. The above estimates of capital and operating costs are a component of a number of factors required to complete a preliminary assessment of the economic viability of the project, and there is no guarantee that the company will achieve production from the resource at Nyngan.*

In January 2011, EMC announced results of initial lab test work, independently prepared by Hazen Research, Inc., of Golden, Colorado, USA. These results defined general results involving conventional contained acid leach systems and suggested recoveries from resource of up to 75%. No secondary recoveries were considered in these initial bench-scale tests.

The second phase of the Hazen test work program continued through July, and involved continuous pilot plant testing of the acid leach systems, solvent extraction systems and product finish systems identified by earlier CSIRO work. The overall objectives of the test work program were to define and optimize a process or series of processes that achieves an 80% scandium recovery, lowest possible capital and operating costs, and most benign environmental impact, using standard and accepted processes.

On January 19, 2012 we announced receipt an independent metallurgical test-work report, titled "Purification of Scandium Extracted from Laterite Ore", outlining the results of a number of pilot-scale tests on Nyngan resource material, and estimated recoveries and grades of scandium oxide product. The report was independently prepared by Hazen and is the final in a series of three phases of semi-continuous pilot plant scale test-work completed by Hazen during 2011. Work was finalized in late November.

Highlights of the 2011 Hazen semi-continuous pilot plant test-work are as follows:

- Results of conventional contained sulfuric acid bake and water leach systems, at atmospheric pressure, demonstrated scandium recoveries averaging 75%,
- Results of conventional solvent extraction ("SX") on the pregnant leach solution, demonstrated scandium recoveries exceeding 99%,
- Results on final stage precipitation of scandium oxide, focused on highest combined purity and recovery, demonstrated scandium recoveries of 97.5%, at purity levels of 97.5% Sc<sub>2</sub>O<sub>3</sub>,
- Overall recovery results were 70% to 80%, based on ore type (limonite or saprolite), and
- All process assumptions were based on standard and accepted techniques for ore preparation, leaching, solvent extraction and final product preparation.

In February, 2011 EMC announced results of a series of laboratory-scale tests investigating the production of scandium-aluminum ("Sc-Al") alloys directly from aluminum oxide and scandium oxide feed materials, prepared by the CSIRO. The overall objective of this research was to demonstrate and commercialize the production of Sc-Al master alloy using impure scandium oxide as the scandium source, potentially significantly improving the economics of scandium aluminum master alloy production.

#### Environmental Permitting Work

In April, 2011 EMC announced a general progress report on the project which outlined a series of environmental work steps designed to advance the Environmental Impact Study ("EIS"). Work steps included both ground and surface water assessments, along with other assessments of Aboriginal, ecology, traffic, noise and air quality matters.

All of this work has subsequently been completed, including 8 water bores with ongoing test monitoring equipment, and reports on the various other targeted assessments, without material issues in any area. An aerial photography and contour mapping program was also completed, to support the feasibility study work regarding location of site facilities.

On January 18, 2012 EMC announced that that key elements of environmental site work on the Nyngan Scandium Project have been completed and a Conceptual Project Development Plan (CPDP) submitted to the NSW, Australia state regulators. The CPDP submission forms the basis for an Environmental Impact Study ("EIS"), the foundation environmental document required for a mining permit in the state.

Specific EIS and property work, contained in the CPDP, completed by year end 2011:

- Draft ground water assessment study finalized and submitted to regulators,
- Surface water assessment results favorable, State review ongoing,
- Aboriginal heritage study finalized, no areas of significance,
- Soils study finalized, no issues, and
- Property aerial photography and contour mapping completed, location of site facilities defined.

Continuing EIS work underway:

- License applications (6), for access to groundwater as generated from property water bores have been submitted,
- Flora and fauna studies are ongoing; to-date no significant issues have arisen, and
- Traffic, noise and air quality baseline monitoring are ongoing.

The environmental work was performed under direction from R. W. Corkery & Co., (Orange, NSW, Australia), and formed part of the SNC-Lavalin Nyngan feasibility study.

### **Norway Scandium Property**

During 2011 we entered into two option agreements with REE Mining AS of Norway, to obtain exploration rights to several properties in central and southern Norway. The Tørdal, Evje-Iveland and Hogtuva properties are classified as Norway Property for purposes of financial statement segment information.

Option agreements to acquire central Norway properties, Tørdal and Evje-Iveland were entered into in April 2011 and an option agreement for the Hogtuva property, located in southern Norway, was signed in September 2011. Both of these agreements were subsequently renegotiated to secure 100% ownership positions for EMC.

### ***Tørdal and Evje-Iveland Properties, Norway***

The location of the Tørdal exploration property is provided in Figure 4 below.



In April of 2011, we entered into an option agreement with REE Mining AS of Norway, pursuant to which we acquired the option to earn 100% of the outstanding common shares in the capital of a Norwegian limited liability company which holds the exploration rights to two pegmatite properties, known as the Tørdal property and the Evje-Iveland property. The properties are both prospective for a grouping of specialty metals, and rare earth elements, including scandium, yttrium, tantalum, beryllium, niobium, zirconium, titanium, lithium, nickel and tin.

Terms of the REE Option Agreement provided for a two stage earn-in option including cash payments totalling \$650,000, work commitments totalling \$250,000, and an EMC share grant of 1 million EMC shares, with payments due in October 2012 and June 2013.

On January 16, 2013 we announced a renegotiated earn-in immediately accelerating our ownership of the Tørdal exploration licenses to 100%. The renegotiated agreement canceled all outstanding cash payments (\$500,000), and all remaining work commitments, in return for payment of certain property costs and other costs totalling \$65,000 in December/January 2013, the 1 million EMC share grant, and a 1% net smelter return ("NSR") on production proceeds from the property. As part of the amended agreement, EMC relinquished all rights to the Evje-Iveland property, which were returned to REE Mining.

## **2012 Tørdal Field Exploration**

On February 14, 2013 we announced promising results from field exploration work on the Tørdal property during the summer and fall months of 2012, focussed on scandium-bearing pegmatites. The 2012 work included independent assay results of pegmatite rock samples taken from one specific property area, and also includes an extensive pegmatite mapping program covering approximately 30 sq km. The assay results indicated the presence of high levels of scandium and various rare earth elements (REE's), including heavy rare earth elements (HREE's) in particular. Field XRF readings indicated elevated scandium content in hundreds of large and small pegmatite bodies found and mapped in the reconnaissance area.

Highlights of the results of the 2012 field exploration are as follows:

- Tørdal 2012 assays of pegmatite rocks show presence of both scandium and REE's,
- Best scandium assays exceed 1,600 ppm,
- Promising HREE assay results from pegmatites with gadolinite mineralization,
- Host rock mineralization points to higher grade scandium or HREE contents,
- 2012 summer exploration program mapped and sampled over 300 pegmatites,
- A total of 1,940 Niton XRF scandium readings were taken on whole rock samples, and
- Overall program results at Tørdal are very encouraging and warrant expanded exploration.

Assay Results of Grab Samples at Tørdal

The 2011 summer exploration program on the Tørdal property consisted of reconnaissance, surface soil sampling, and limited pegmatite mapping work in a relatively small area north of the village of Kleppe, in Southern Norway.

As a follow-on from that 2011 program, the company then returned to the same area and conducted a series of ‘blasts’, using small explosive charges to generate whole rock samples on select exposed pegmatites, at the locations of the best soil sample results. The exploration team planned 9 blasts and conducted 8, on 5 different pegmatite bodies, from which they assembled 23 grab samples for analysis and assay by OMAC Laboratories in Ireland. Assay results on these samples were received in Q1 2012—in time to help formulate the 2012 summer/autumn season pegmatite mapping program, conducted on a much wider area.

Independent assay results on 20 of the 23 samples, covering all 5 targeted pegmatites, are shown below.

*Assay results are as-reported elemental assay results from OMAC Laboratories, and are not converted to oxide equivalent (REO &  $Sc_2O_3$ ). Heavy rare earth elements abbreviated "HREE"; and include Yttrium; Total rare earth elements abbreviated "TREE".*

The numbered assay samples were formed either by random selection of fresh (un-weathered) whole rock material broken loose from individual pegmatite bodies, or alternatively, based on selectively collecting fresh rock material that was clearly (1) garnet-laden, (2) mica-laden, or showed clear visible (3) gadolinite mineralization. Gadolinite is a beryllium and rare earth-bearing mineral with the chemical formula  $[(Ce,La,Nd,Y)_2FeBe_2Si_2O_{10}]$ . The intent was to determine from assay results if certain visible mineralization correlated to the presence and concentrations of target elements; specifically scandium, rare earth elements (REE's), or other metals of interest and value.

The results in the assay table indicate that all of the selected pegmatites contain interesting levels of both REE's and scandium. In general, all of the pegmatites contained both target elements, while the mica phase appears to hold the higher scandium concentrations with small REE additions, and the gadolinite phase holds the highest REE concentrations and small scandium additions. The presence of garnet material in samples tended to generate interesting but moderate values for both REE's and scandium. Assay work was designed to identify 30 specific elements, including all 16 REE elements plus scandium, and the relative concentration of heavy REE's was of particular interest. The mica and garnet grab sample materials had generally only trace levels of thorium and uranium (average <15 ppm), while the gadolinite grab sample materials had thorium levels between 2,500-5,000 ppm, and uranium levels

between 500-1,300 ppm. A full table of OMAC assay results related to these 23 sample analyses is available on EMC's website at [www.emcmetals.com](http://www.emcmetals.com).

#### Reconnaissance Results – Extended Pegmatite Mapping Program at Tørdal

Following on from the 2011 work and the 2012 assay results, EMC conducted an expanded 2012 summer work reconnaissance program at both Tørdal and Evje-Iveland, from July through October. The goals of the 2012 program were to develop detailed mapping of outcropping pegmatite fields over a much broader area than the 2011 program, while also conducting field sampling of scandium mineralization on those pegmatites using a hand-held Niton XRF Analyzer.

The 2012 program concentrated on five separate areas (approximately 30 sq km) as can be seen in the map below:

A total of 1,940 Niton XRF readings were logged on whole rock and pegmatite mineral separates, logged against individually mapped and numbered pegmatite bodies. The XRF readings ranged up to +6,000 ppm scandium (on a mineral separate), and averaged 661 ppm on 1,504 total logged readings above the instrument's 20 ppm detection limit. XRF readings focussed on scandium data collection only, although the team diligently noted the visible presence of gadolinite and amazonite mineralization.

The reader is cautioned that hand-held Niton XRF readings are not the same as laboratory assays, and are not NI 43-101 compliant with regard to estimating resource grades. However, the Company is confident that these data readings are highly useful in confirming and shaping the next stage of the exploration program on this property.

A summary of results by area is as follows:

- Area 1 (Kleppe); Mapped more than 50 pegmatite bodies. Best average XRF Sc readings from 1,000-1,500 ppm, some very large surface expressions. Gadolinite present.
- Area 2 (Heftetjern); Partially mapped more than 40 pegmatite bodies, many large surface expressions, green amazonite mineralization. Better XRF Sc readings from 500-1,500 ppm.
- Area 3 (Solli); Mapped numerous large and small pegmatites. Generally lower XRF Sc readings, ranging 300-700 ppm. Red feldspars, quartz and gadolinite mineralization present.
- Area 4 (South Kleppsvatn); Partially mapped large area containing more than 80 pegmatites, generally mica-based. Typical XRF Sc readings in the 300-900 ppm range, with some reaching 1,500 ppm Sc.
- Area 5 (Buvatn); Partially mapped, numerous pegmatite bodies, some very large. Typical XRF Sc readings in the 300-1,000 ppm range. Old feldspar quarries, amazonite mineralization present.

Similar work done at Evje-Iveland (total 180 sq km) identified several interesting target areas, but scandium readings were not sufficiently attractive when compared to results at Tørdal. These observations led to the decision to drop Evje-Iveland, as part of an amended agreement which also enabled EMC to achieve an immediate 100% earn-in on Tørdal.

The exploration results of the 2012 work program also allowed EMC to selectively reduce property holdings at Tørdal in January 2013. The property has been reduced from 140 sq km to 90 sq km, with lower ongoing exploration license holding costs as a result.

#### Next Steps in Norway Exploration Program

EMC's mapping and sampling work has confirmed that much of the Tørdal property is heavily populated with complex, near-surface pegmatite bodies. Based on hand-held XRF readings and mineralogy, these pegmatites show excellent promise for significant scandium enrichment, particularly within bodies containing micas, and for REE mineralization where the rare earth silicate gadolinite is present. Based on the results of 2012 exploration work, planning for future exploration work is underway.

#### Qualified Person and Quality Assurance/Quality Control

Sampling methods followed industry quality control standards. Mr. Kjell Nilsen, an independent geologist consultant currently employed by EMC, conducted the reconnaissance and sampling on the property. Individual whole rock grab samples were collected by hand shovel, from areas where blasted material could be seen to have come from blast points on pegmatite bodies. The assayed samples were individually bagged, sealed, logged on the grid map as to location, boxed in a container suitable for mailing, and sent by express mail to OMAC Laboratories Limited in Galway, Ireland for testing. Assay testing on the samples utilized an ICP-MS spectrometer (Inductively Coupled Plasma-Mass Spectrometry) to test for numerous elements, specifically scandium. The numerous Niton XRF (X-ray Fluorescence) readings were taken at field locations, logged and identified with individual numbered pegmatites,

located on grid maps, by the field geology team. Mr. Willem Duyvesteyn, Chief Technology Officer of EMC, is the Qualified Person who is responsible for the design and conduct of the exploration program, and reviewed the program results.

***Hogtuva Scandium Exploration Property:***

The location of the Hogtuva exploration property is provided in Figure 5 below.

On September 1, 2011 EMC entered into an option agreement with REE pursuant to which EMC has an option to earn a 100% interest in the exploration rights to three scandium and beryllium exploration sites in Central Norway. To earn 100% of the exploration rights, EMC was required to pay REE a total of \$150,000 over 18 months (including \$50,000 paid on the agreement date) and up to 200,000 shares of EMC common stock. On January 16, 2013 we announced a renegotiated earn-in immediately accelerating our ownership of the Hogtuva exploration licenses to 100%. The renegotiated agreement canceled all outstanding cash payments (\$150,000) and stock grants in return for a 1% net smelter return (“NSR”) on production proceeds from the property. The three exploration sites cover a total of approximately 80 square kilometers prospective for scandium, beryllium and other specialty metals.

In December 2013, EMC made the decision to drop the Hogtuva property, based on holding costs and the low likelihood of advancing the exploration program on this property. Holding costs with the Norwegian minerals department were not met in January 2014. The Company can recover this property for a period in 2014, but currently has no plan to do so.

**ITEM 3. LEGAL PROCEEDINGS**

We are not a party to any pending legal proceedings and, to the best of our knowledge, none of our property or assets are the subject of any pending legal proceedings.

**ITEM 4. MINE SAFETY DISCLOSURES**

The Company has no active mining operations or dormant mining assets at this time, and has no outstanding mine safety violations or other regulatory safety matters to report.



**PART II****ITEM 5. MARKET FOR REGISTRANTS' COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES****Price Range of Common Shares**

The principal market on which our common shares are traded is the Toronto Stock Exchange. Our common shares commenced trading on the Toronto Stock Exchange on April 24, 2008 under the symbol "GP". Effective March 11, 2009, the common shares were listed and posted for trading on the Toronto Stock Exchange under the symbol "EMC". The following table shows the high and low trading prices and average trading volume of our common shares on the Toronto Stock Exchange for the periods indicated.

<b>Year</b>	<b>High</b>	<b>Low</b>
	<b>(C\$)</b>	<b>(C\$)</b>
<b>Fiscal Year ended December 31, 2013</b>		
First quarter	0.085	0.035
Second quarter	0.040	0.020
Third quarter	0.040	0.025
Fourth quarter	0.035	0.020
<b>Fiscal Year ended December 31, 2012</b>		
First quarter	0.175	0.070
Second quarter	0.095	0.060
Third quarter	0.075	0.040
Fourth quarter	0.070	0.035

**Exchange Rates**

We maintain our books of account in United States dollars and references to dollar amounts herein are to the lawful currency of the United States except that we are traded on the Toronto Stock Exchange and, accordingly, stock price quotes and sales of stock are conducted in Canadian dollars. The following table sets forth, for the periods indicated, certain exchange rates based on the noon rate provided by the Bank of Canada. Such rates are the number of Canadian dollars per one (1) U.S. dollar. The high and low exchange rates for each month during the previous six months were as follows:

	<u>High</u>	<u>Low</u>
February 2014	1.0285	0.9960
January 2014	1.1148	1.0614
December 2013	1.0697	1.0577
November 2013	1.0599	1.0415
October 2013	1.0456	1.0284
September 2013	1.0533	1.0237

The following table sets out the exchange rate (price of one U.S. dollar in Canadian dollars) information as at each of the years ended December 31, 2012 and 2013.

	Year Ended December 31
	(Canadian \$ per U.S. \$)
	<u>2012</u> <u>2013</u>
Rate at end of Period	0.9949 1.0636
Low	0.9719 0.9845
High	1.0443 1.0737

As of March 22, 2014, there were 62 registered holders of record of the Company's common shares and an undetermined number of beneficial holders.

## Dividends

We have not paid any cash dividends on our common shares since our inception and do not anticipate paying any cash dividends in the foreseeable future. We plan to retain our earnings, if any, to provide funds for the expansion of our business.

## Securities Authorized for Issuance under Compensation Plans

The following table sets forth information as at December 31, 2013 respecting the compensation plans under which shares of the Company's common stock are authorized to be issued.

	Number of securities to be issued upon exercise of price of outstanding	Weighted-average exercise price of outstanding	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
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	<b>outstanding options, warrants and rights</b>	<b>options, warrants and rights</b>	<b>(c)</b>
<b>Plan Category</b>	<b>(a)</b>	<b>(b)</b>	
Equity compensation plans approved by security holders	17,918,750	C\$0.14	14,168,750
Equity compensation plans not approved by Nil security holders		nil	nil
<b>Total</b>	<b>17,918,750</b>	<b>C\$0.14</b>	<b>14,168,750</b>

#### **Purchases of Equity Securities by the Company and Affiliated Purchasers**

Neither the Company nor an affiliated purchaser of the Company purchased common shares of the Company in the quarter ended December 31, 2013.

### **Unregistered Sales of Equity Securities.**

On December 28, 2012, EMC Metals Corp. completed a private placement of 2,000,000 shares of common stock at a price of \$0.05 (CAD\$0.05) per share for total proceeds of \$100,482 (CAD\$100,000). The securities were sold to an accredited investor pursuant to Rule 506 of Regulation D and to a non-US person pursuant to Regulation S under the United States *Securities Act of 1933*.

### **ITEM 6. SELECTED FINANCIAL DATA**

Not applicable.

### **ITEM 7. Management's Discussion and Analysis of Financial Conditions and Results of Operations**

#### **Overview**

EMC is a specialty metals and alloys company focusing on scandium and other specialty metals. We intend to utilize our patented technologies and know-how to maximize opportunities in these and other specialty metals.

The Company was formed in 2006, under the name Golden Predator Mines Inc. As part of a reorganization and spin-out of our precious metals portfolio in March 2009, we changed our name to EMC Metals Corp. We currently trade on the Toronto Stock Exchange under the symbol "EMC".

Our most advanced asset was the Springer Tungsten Mine, a fully constructed mine and mill asset in Nevada, USA. The Springer mine, however, was sold in December 2013.

We hold a 100% interest in the Nyngan scandium project in New South Wales, Australia, and after settling a protracted legal dispute with our previous partner, we are reassessing technical planning and schedule in order to advance project development. We also own the Tørdal (southern Norway) scandium property.

We acquired rights to metallurgical processing know-how as part of the acquisition of The Technology Store (“TTS”) during 2011, which we are utilizing to gain access to a number of specialty metals opportunities.

Our focus during 2013 regarding the Springer Mine included maintaining that asset on standby mode, and pursuing its sale. The Nyngan and Tordal scandium properties were on a care and maintenance basis as we tried to secure additional financing to advance these projects. We also investigated and rejected other specialty metals opportunities.

### **Results for the Year ended December 31, 2013**

#### Liquidity and Capital Resources

At December 31, 2013, we had working capital of (\$1,190,003) including cash of \$785,075 and current liabilities of \$2,102,488 (including notes due in February and June of 2014 totaling \$1,854,875); as compared to a working capital of (\$6,899,010) including cash of \$190,215 at December 31, 2012. The increase in working capital is due to the sale of the Springer Mining Company.

During the year ended December 31, 2013, we received cash of \$1,994,875 (2012 - \$3,000,000) from the issuance of promissory notes and debentures.

At December 31, 2013, we had a total of 14,168,750 (2012 – 13,546,250) stock options exercisable between C\$0.05 and C\$0.315 (2012 – between C\$0.07 and \$2.00) which has the potential upon exercise to generate a total of C\$1,703,313 (2012 – C\$1,947,363) in cash over the next four years. There is no assurance that these securities will be exercised.

Our continued development is contingent upon our ability to raise sufficient financing both in the short and long term. There are no guarantees that additional sources of funding will be available to us; however, management is committed to pursuing all possible sources of financing in order to execute our business plan.

Our major capital requirements in the next 12 months relate mainly to earning our 100% interest in the Nyngan Project by paying an AU\$1,400,000 to Jervois by June 30, 2014. The Company also must pay \$1,200,000 in June 2014 as repayment of a promissory note taken out in June of 2013.

The Company will need additional funding to meet the commitments shown above, and will seek to raise additional equity financing in the short term. New debt to replace the current notes due in February and July of 2014 is under consideration as well as seeking restructuring of these notes. A private placement was announced in March 2014 where 8,553,260 shares will be issued resulting in proceeds of \$193,000. As at March 18, 2014, the Company has received proceeds of \$193,000 and is awaiting regulatory approval to issue the shares.

## Results of Operations

### *Quarter ended December 31, 2013*

The net loss for the quarter increased by \$574,543 to \$2,197,558 from \$1,623,015 in the prior year, mainly as a result of the sale of the Springer mine in 2013. Individual items contributing to this increase are as follows:

Q4 2013 vs. Q4 2012 - Variance Analysis		
Item	Variance Favourable / (Unfavourable)	Explanation
Discontinued operations	(\$1,160,576)	Q4 2014 Springer recognized a one-time charge to allocate the portion of the foreign currency translation adjustment that was related to the Springer operations from prior years when financial reporting was done in Canadian dollar. This was offset by the fact that in Q4 2013 Springer costs were funded by the buyer, prior to final close in December 2013, while the Q4 2012 costs were borne by EMC.
Exploration	\$315,089	EMC spent approximately \$11,000 on exploration activities in Q4 2013, compared to significant expenditures on the Nyngan project in Q4 2012.
Salaries and benefits	\$121,960	Lower Q4 2013 salary costs reflect pay cuts taken by management.
Interest	\$104,238	Lower Q4 2013 interest payments reflect lower outstanding debt liabilities (\$1,150,000) than were present in Q4 2012.
General and administrative	\$90,478	Lower Q4 2013 G&A reflects Company efforts to minimize operating costs and conserve cash.
Foreign exchange loss	\$9,678	The stronger US dollar resulted in slightly higher favourable variances when funds and receivables held in foreign currencies were revalued at close of business in 2013 when compared to close of business 2012.
Stock based compensation	\$9,415	Fewer options issued in 2013, as well as those issued in 2013 being vested upon issue, resulted in this favorable variance.
Insurance	\$5,871	Insurance policy costs decreased in 2013.
Loss on sale of marketable securities	\$1,411	Expense reduction due to non-recurring loss on sale of marketable securities in 2012.
Amortization	\$119	Costs were essentially the same as in the prior comparative period.
Professional fees	(\$1,712)	Costs were essentially the same as in the prior comparative period.
Travel and entertainment	(\$7,060)	Q4 2013 expense increase reflects higher travel activity in than in Q3 2012.
Consulting	(\$18,364)	This Q4 2013 expense increase resulted from a one-time severance expense to the Springer Mine Manager, partially offset by lower consulting costs generally.
	(\$45,090)	

Loss on disposal of mineral  
properties

In Q4 2013 the Company wrote off the Hogtuva project for  
\$50,000. The variance to prior period reflects a small property  
write off in Q4 2012.

**Results of Operations for the Year ended December 31, 2013**

The net loss for the year increased by \$20,725,302 to \$25,690,599 from \$4,965,297 in the prior year, mainly as a result of the sale of the Springer Mining Company in the current year. Individual items contributing to this increase are as follows:

<b>2013 vs. 2012 - Variance Analysis</b>		
<b>Item</b>	<b>Variance Favourable / (Unfavourable)</b>	<b>Explanation</b>
Loss from discontinued operations	(\$22,190,627)	In the third quarter of 2013 the Company sold the Springer Mining Company along with the Carlin Vanadium and Copper King projects. Accounting guidelines require that this constitutes a discontinued operation and as such the results from these operations need to be removed from normal course operating results. 2012 has been restated to show this effect as well. The year over year variance is \$22,190,627 due mainly to the book loss incurred in the Springer Mine disposal.
Write off of mineral interests	(\$45,090)	In 2013 the Company wrote down the Hogtva project in Norway realizing a \$50,000 loss. In 2012, the Company wrote down the Fairfield project realizing a loss of \$4,910.
Consulting	(\$33,625)	In 2013 consultants were used in the Company's efforts to properly evaluate the Springer mine to help in the sale or partnership of that property.
Interest expense	(\$1,212)	Higher debt charges for new loans taken out in 2013 versus 2012 resulted in this small negative variance.
Amortization	(\$241)	Costs were essentially the same as in the prior comparative period.
Exploration	\$749,690	In 2012, the Company expended funds to meet the earn-in requirement on the Nyngan project as well as some surface exploration at the Tordal property in Norway. In 2013 exploration activities were curtailed as the Company sought to reduce costs and conserve cash.
Stock-based compensation	\$257,19	Fewer options were issued in 2013 and this along with the lower share price for EMC's stock used in calculating this expenses, resulted in this favourable variance.
Salaries and benefits	\$191,919	Lower 2013 salary costs reflect pay cuts taken by management.
Foreign exchange gain	\$119,082	In 2013 the US dollar made gains against both the Canadian and Australian dollars. Costs recognized in both these foreign currencies decreased when the amounts were finally paid resulting in foreign exchange gains. In 2012 the opposite occurred.
Professional fees	\$90,233	The litigation in 2012 to settle the Company's dispute with our former partner on the Nyngan project resulted in the higher

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costs in that year when compared to 2013.

General and administrative	\$89,495	With the reduced overall activity at EMC the company incurred less general and administrative costs.
Travel and entertainment	\$40,914	During 2013 less travel was incurred as the focus of activities shifted to North America based assets as well as the Company's ongoing efforts to conserve cash.
Insurance	\$5,555	The Company was able to negotiate better terms for general liability insurance in 2013 versus 2012.
Loss on sale of marketable securities	\$1,441	In 2012 the Company sold its remaining marketable securities and recognized a small loss. No such activities took place in 2013.

*Cash flow discussion for the year ended December 31, 2013 compared to December 31, 2012*

The cash outflow from operating activities decreased by \$1,352,200 to \$2,151,530 (2012 – \$3,503,730) due to overall lower operating and exploration costs.

Cash flows from investing activities increased by \$3,927,603 to \$3,891,516 (2012 – (\$36,087)) due mainly to the funds received on the sale of the Springer Mining Company.

Cash inflows from financing activities decreased by \$4,183,224 to (\$1,145,126) (2012 - \$3,038,098) as a result of repayment of the convertible debenture taken out in February 2013. This was partially offset by new convertible debt and promissory notes taken out during 2013.

*Summary of quarterly results*

	<b>2013</b>				<b>2012</b>			
	<b>Q4</b>	<b>Q3</b>	<b>Q2</b>	<b>Q1</b>	<b>Q4</b>	<b>Q3</b>	<b>Q2</b>	<b>Q1</b>
Net Sales	-	-	-	-	-	-	-	-
Net Income (Loss) Basic and diluted	(2,197,558)	(22,060,858)	(521,895)	(910,288)	(1,623,015)	(1,148,216)	(1,386,161)	(807,905)
Net Income (Loss) per share	(0.02)	(0.13)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.00)

*Financial Position**Cash*

The increase in cash of \$615,013 to \$785,075 (2012 - \$170,062) results from proceeds received on the sale of the Springer Mining Company.

*Property, plant and equipment*

Property plant and equipment consists of office furniture and computer equipment at the Sparks, Nevada office. The decrease of \$4,182 to \$10,278 at December 31, 2013 (2012 - \$14,460) is due to the regular amortization of these items.

*Mineral interests*

Mineral interests have increased by \$1,058,484 to \$1,613,203 at December 31, 2013 (2012 - \$554,719) due mainly to a progress payment on the Nyngan property in mid-2013. This was partially offset by the disposal of the Hogtuva project.

*Notes Payable and Accrued Liabilities*

Notes payable and accrued liabilities have decreased by \$300,671 to \$247,613 at December 31, 2013 (2012 – \$548,284) due mainly to decreased levels of activity.

*Promissory notes and convertible debenture payable (current and long-term)*

Current promissory notes payable and convertible debenture decreased by \$937,186 due to the repayment of convertible debt taken in February of 2012 which matured in 2013. Also contributing to this change was the repayment of \$500,000 in 2012 due in respect of the Technology Store purchase made in 2009.

*Capital Stock*

Capital stock remained at \$87,310,708 throughout the entire year ended December 31, 2013.

Additional paid-in capital increased by \$74,609 to \$2,108,327 (2012 - \$2,033,718) as a result of the granting of stock options.

Treasury shares remained at \$1,264,194 through the 2013 fiscal period.

### **Off-balance sheet arrangements**

At December 31, 2013, we had no material off-balance sheet arrangements such as guarantee contracts, contingent interest in assets transferred to an entity, derivative instruments obligations or any obligations that trigger financing, liquidity, market or credit risk to us.

## **ADDITIONAL INFORMATION AND ACCOUNTING PRONOUNCEMENTS**

### **Outstanding share data**

At March 18, 2014 we had 165,358,337 issued and outstanding common shares, 13,581,250 outstanding stock options at a weighted average exercise price of C\$0.11. No warrants are outstanding at March 18, 2014.

### **Critical Accounting Estimates**

The preparation of financial statements in conformity with generally accepted accounting policies requires our management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. These estimates are based on past experience, industry trends and known commitments and events. By their nature, these estimates are subject to measurement uncertainty and the effects on the financial statements of changes in such estimates in future periods could be significant. Actual results will likely differ from those estimates.

#### *Stock-based compensation*

We use the Black-Scholes option pricing model to calculate the fair value of stock options and compensatory warrants granted. This model is subject to various assumptions. The assumptions we make will likely change from time to time. At the time the fair value is determined, the methodology that we use is based on historical information, as well as anticipated future events. The assumptions with the greatest impact on fair value are those for estimated stock volatility and for the expected life of the instrument.

*Deferred income taxes*

We account for tax consequences of the differences in the carrying amounts of assets and liabilities and our tax bases using tax rates expected to apply when these temporary differences are expected to be settled. When the deferred realization of income tax assets does not meet the test of being more likely than not to occur, a valuation allowance in the amount of the potential future benefit is taken and no future income tax asset is recognized. We have taken a valuation allowance against all such potential tax assets.

*Mineral properties and exploration and development costs*

We capitalise the costs of acquiring mineral rights at the date of acquisition. After acquisition, various factors can affect the recoverability of the capitalized costs. Our recoverability evaluation of our mineral properties and equipment is based on market conditions for minerals, underlying mineral resources associated with the assets and future costs that may be required for ultimate realization through mining operations or by sale. We are in an industry that is exposed to a number of risks and uncertainties, including exploration risk, development risk, commodity price risk, operating risk, ownership and political risk, funding and currency risk, as well as environmental risk. Bearing these risks in mind, we have assumed recent world commodity prices will be achievable.

We have considered the mineral resource reports by independent engineers on the Nyngan project in considering the recoverability of the carrying costs of the mineral properties. All of these assumptions are potentially subject to change, out of our control, however such changes are not determinable. Accordingly, there is always the potential for a material adjustment to the value assigned to mineral properties and equipment.

### **Recent Accounting Pronouncements**

In March 2013, the FASB issued ASU 2013-05 which contains guidance to resolve the diversity in practice about whether Subtopic 810-10, Consolidation—Overall, or Subtopic 830-30, Foreign Currency Matters—Translation of Financial Statements, applies to the release of the cumulative translation adjustment into net income when a parent either sells a part or all of its investment *in* a foreign entity or no longer holds a controlling financial interest in a subsidiary or group of assets that is a non-profit activity or a business (other than a sale of in substance real estate or conveyance of oil and gas mineral rights) *within* a foreign entity. The Company is currently reviewing this update to assess its impact.

In April 2013, the FASB issued ASU 2013-07 which contains updated accounting guidance that addresses when it is appropriate to apply, or how to apply, the liquidation basis of accounting. Consequently, there is diversity in practice. The amendments in this Update are being issued to clarify when an entity should apply the liquidation basis of accounting. In addition, the guidance provides principles for the recognition and measurement of assets and liabilities and requirements for financial statements prepared using the liquidation basis of accounting. We do not anticipate that this update will have a material impact on our financial statements.

In July 2013, the FASB issued ASU 2013-09 which contains guidance regarding stakeholders concerns that certain disclosure requirements in paragraph 820-10-50-2 of the *FASB Accounting Standards Codification*, which was effective for non-public entities for annual periods beginning after December 15, 2011, potentially provide proprietary information about non-public entities through the dissemination of their employee benefit plans' financial statements on the regulator's website. We are currently evaluating the impact of ASU 2013-09, but do not expect its adoption to have a material impact on our financial reporting disclosures.

### **Financial instruments and other risks**

Our financial instruments consist of cash, receivables, accounts payable and accrued liabilities, convertible debentures, and promissory notes payable. It is management's opinion that we are not exposed to significant interest, currency or credit risks arising from our financial instruments. The fair values of these financial instruments approximate their carrying values unless otherwise noted. We have our cash primarily in one commercial bank in Vancouver, British Columbia, Canada.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements of the Company and the notes thereto are attached to this report following the signature page and Certifications.

**ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

For the fiscal years ended December 31, 2013 and 2012, we did not have any disagreement with our accountants on any matter of accounting principles, practices or financial statement disclosure.

**ITEM 9A. CONTROLS AND PROCEDURES**

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's management, including our principal executive officer and our principal financial officer, evaluated the effectiveness of disclosure controls and procedures (as defined in Exchange Act Rule 13a-15(e)) as of the end of the period covered by this report based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on that evaluation, the principal executive officer and principal financial officer concluded that as of the end of the period covered by this report, the Company has maintained effective disclosure controls and procedures in all material respects, including those necessary to ensure that information required to be disclosed in reports filed or submitted with the SEC (i) is recorded, processed, and reported within the time periods specified by the SEC, and (ii) is accumulated and communicated to management, including the principal executive officer and principal financial officer, as appropriate to allow for timely decision regarding required disclosure.

There have been no changes in internal control over financial reporting that occurred during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

**Item 9B. Other Information**

None.

**PART III**

Information with respect to Items 10 through 14 is set forth in the definitive Proxy Statement to be filed with the Securities and Exchange Commission on or before April 30, 2014 and is incorporated herein by reference. If the definitive Proxy Statement cannot be filed on or before April 30, 2014, the Company will instead file an amendment to this Form 10-K disclosing the information with respect to Items 10 through 14.

## PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENTS SCHEDULES

#### **Financial Statements**

The following Consolidated Financial Statements are filed as part of this report.

<b>Description</b>	<b>Page</b>
Financial statements for the years ended December 31, 2013 and 2012 and audit reports thereon.	F-1

#### **Exhibits**

The following table sets out the exhibits filed herewith or incorporated herein by reference.

#### **Exhibit Description**

3.1*	Certificate of Incorporation, Certificate of Name Change, Notice of Articles
3.2*	Corporate Articles
10.1*	2008 Stock Option Plan
10.3**	Stock Purchase Agreement dated November 19, 2009 between EMC Metals Corp., Willem P.C. Duyvesteyn, and Irene G. Duyvesteyn
10.4*	Exploration Joint Venture Agreement dated February 5, 2010 between EMC Metals Corp. and Jervois Mining Limited
10.5*	Services Agreement between EMC Metals Corp. and George Putnam dated May 1, 2010
10.6*	Extension Agreement dated September 29, 2010 between EMC Metals Corp. and Jervois Mining Limited
10.7*	Stock Purchase Agreement dated November 16, 2010 between EMC Metals Corp. and Golden Predator US Holding Corp.
11.1	<u>Statement of Computation of Per Share Earnings for the Year Ended December 31, 2013</u>
14.1	<u>Board of Directors Code of Conduct</u>
21.1*	List of Subsidiaries
31.1	<u>Certification Pursuant to Rule 13a-14(a) or 15d-14(a) of the U.S. Securities Exchange Act of 1934</u>
32.1	<u>Section 1350 Certification of the Principal Executive Officer and Principal Financial Officer</u>
99.1	<u>Consolidated Financial Statement - Year Ended December 31, 2013</u>

\* Previously filed as exhibits to the Form 10 filed May 24, 2011 and incorporated herein by reference.

\*\* Previously filed as an exhibit to the Form 10/A filed July 22, 2011 and incorporated herein by reference.



## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

### EMC METALS CORP.

By: /s/ George Putnam

George Putnam

President and Principal Executive Officer

Date: April 1, 2014

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
/s/ George Putnam George Putnam	President, Principal Executive Officer, and Director	April 1, 2014
/s/ William Harris William Harris	Chairman and Director	April 1, 2014
/s/ Willem Duyvesteyn Willem Duyvesteyn	Director	April 1, 2014

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/s/ Warren Davis Warren Davis	Director	April 1, 2014
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/s/ Barry Davies Barry Davies	Director	April 1, 2014
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/s/ Edward Dickinson Edward Dickinson	Principal Accounting Officer and Principal Financial Officer	April 1, 2014
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