EMC METALS CORP.
Form 10-K
February 14, 2012

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION
**Washington, D.C. 20549**

# FORM 10-K

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

**For the fiscal year ended December 31, 2011**

[ ] 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** | **Not Applicable** |
|---|---|
| (State or other Jurisdiction of Incorporation or organization) | (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 [X]

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 [X]

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 [X] No [ ]

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: $19,517,255 as at June 30, 2011.

Indicate the number of shares outstanding of each of the registrant s classes of common equity, as of the latest practicable date: 150,678,713 common shares as at February 10, 2012.

DOCUMENTS INCORPORATED BY REFERENCE

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, 2011.

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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", "might" 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.

### Glossary of Terms

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| **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. |

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| **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. |

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| **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. SiO2. |
| **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 (FeS2)). |
| **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 the precious metals and certain specialty metals assets. Energy Metals was formerly a company listed on the Toronto Stock Exchange and NYSE Arca, focused on uranium development projects, and was acquired by Uranium One Inc. in August of 2007. 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 is our Springer tungsten mill and mine which we acquired from General Electric Company, and which is presently on care and maintenance. Our current focus of operations is the exploration and development of our specialty metals assets, including our interest in the Nyngan scandium deposit located in New South Wales, Australia.

### Intercorporate Relationships

The chart below illustrates our corporate structure, including our subsidiaries, the jurisdictions of incorporation, and the percentage of voting securities held.

### Recent History

Exploration Joint Venture with Jervois Mining Limited

On February 5, 2010, we entered into an Exploration Joint Venture Agreement with Jervois Mining Limited to develop the Nyngan scandium property in New South Wales, Australia, which is commonly referred to as the Nyngan Project. The Exploration Joint Venture Agreement, as amended, gives us the right to earn a 50% interest in a joint venture with Jervois Mining Limited, for the purpose of holding and developing the Nyngan Project.

Pursuant to the terms of the Exploration Joint Venture Agreement, our right to proceed to form a joint venture with Jervois Mining was conditional on preliminary conditions being met including the following:

1. confirming to our satisfaction that Jervois, subject to prior royalty interests, was the sole and beneficial owner of the Nyngan Project free of encumbrances or claims by third parties and that the Nyngan Project is in good standing under the relevant legislation;

2. paying $300,000 to Jervois;

3. obtaining the approval of the Toronto Stock Exchange of the Exploration Joint Venture Agreement;

4. obtaining the consent of the New South Wales state government to the transactions contemplated in the Exploration Joint Venture Agreement; and

5. obtaining the approval of the Australian Government Foreign Investment Review Board for the Exploration Joint Venture Agreement.

All of the above preliminary conditions were satisfied by March 30, 2010. As a result of the satisfaction of these conditions, we now have the right to earn a 50% interest in a joint venture with Jervois Mining Limited. The Exploration Joint Venture Agreement provides that we may earn our 50% by doing the following:

1. conducting a minimum of AUD$500,000 in exploration and metallurgical test-work on the Nyngan Project within 180 business days of the above conditions precedent being satisfied, or paying cash in lieu thereof. In September of 2010, the deadline was extended to June 15, 2011. The required exploration and metallurgical test-work was completed by us before the deadline and accordingly this condition has been met;

2. delivering a feasibility study by February 28, 2012; and

3. paying to Jervois an additional AUD$1,300,000 plus taxes, within 5 business days of the delivery of the feasibility study.

Once we have acquired a 50% interest in the joint venture, the Exploration Joint Venture Agreement provides for straight-line dilution, with interests diluted below 10% being converted into a 2% Net Smelter Returns Royalty.

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.

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.

Fury Explorations Ltd.

In 2008 we acquired Fury Explorations Ltd. in exchange for the issuance of 10,595,814 of our common shares and 18,310,237 common share purchase warrants and options to the shareholders of Fury Explorations. The acquisition of Fury Explorations was completed on August 15, 2008. Fury Explorations held two mineral resource projects in Nevada, including a silver mine and mill, and three mineral resource properties in Mexico. In February of 2009 Fury Explorations was transferred to Golden Predator as part of our reorganization and spin-out transaction.

Gold Standard Royalty Corporation

In 2008 we acquired Gold Standard Royalty Corporation in exchange for 2,050,000 of our common shares and options to acquire a further 168,334 of our common shares. Gold Standard holds a portfolio of gold exploration properties and leases formerly owned by the Lyle Campbell Trust. In February of 2009, Gold Standard was transferred to Golden Predator as part of our reorganization and spin-out transaction.

Great American Minerals, Inc.

In 2008 we acquired Great American Minerals, Inc., a Nevada company with gold, silver, vanadium and molybdenum assets in Nevada and California. Pursuant to the business combination agreement with Great American Minerals, we acquired a 74% equity interest in Great American Minerals for consideration of $7,480,626 in cash by way of private placement. We subsequently acquired the remaining 26% by issuing 1,045,775 of our common shares, issuing 258,383 share purchase warrants, and issuing 320,125 options to security holders of Great American Minerals.

In 2009 we retired certain convertible debentures issued by Great American Minerals by issuing to the holders of the convertible debentures 7,336,874 of our common shares and 1,787,374 share purchase warrants, exercisable to acquire our common shares at USD$0.30 per share for a period of two years. The holders of the convertible debentures also received share purchase warrants of Golden Predator. We issued 500,040 share purchase warrants as an agent s fee in connection with the proposal to holders of convertible debentures.

In November of 2010 we sold Great American Minerals to Golden Predator in consideration for a reduction in intercorporate amounts owing. We retained certain non-gold properties held by Great American Minerals, namely including the Carlin Vanadium Property.

**Business Operations**

Company Summary

We are a mineral exploration and development company that is focused on the development of scandium, tungsten, vanadium, 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 Springer Mine and mill complex in Nevada, a right to acquire a joint venture interest on the Nyngan Project in Australia, and 100% ownership of the Carlin Vanadium project in Nevada.

Corporate Objective and Strategy

Our primary corporate focus is to produce and sell scandium and scandium-based products, such as master alloy. None 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 feasibility study on the development of the scandium resource. Subject to a successful 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. Conceptual development plans of the Nyngan Project include construction of a commercial plant on the property that will process mineralized material extracted from the property. The time-frame for development of the project by us is subject to numerous risks and factors, including a successful feasibility study, however we are targeting 2012 for the commencement of construction of a plant. The commencement of construction is subject to various risks including our ability to earn and maintain a 50% joint venture interest in the Nyngan Project as well as the requirement to obtain project financing. 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 31st 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 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 ($Sc_2O_3$).

Global annual production estimates of scandium range from 2 tonnes to 10 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 the apatite 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 2011) documents the price of scandium oxide at USD$1,400/kg for the four previous years, however small quantities of scandium oxide are currently offered on the internet by traders for multiples of this figure. Scandium oxide prices vary based on purity and quantity. The weight-to-price ratio of scandium metals and compounds is generally much higher for gram quantities than for kilogram purchases. Kilogram prices for scandium metal ingot are typically double the cost of the starting scandium compound, while higher purity distilled or sublimed metal ranges from four to six times the cost of the starting material.

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 in Russia, 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 airplanes. The combination of high strength and lightweight makes scandium-aluminum alloys suitable for a number of applications.

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 with those producers will require that we establish a reliable supply of scandium to the market. In addition, our competitive advantage in delivering a finished metal would only exist if our proprietary scandium recovery and finishing techniques are effective at a commercial level, which currently is unproven.

Employees

As at January 1, 2012, we have 9 full and part time employees and 5 individuals 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 Springer Project**

***We may not be able to utilize the Springer Property.*** The Springer property, which includes an existing mine and refurbished mill facility, constitutes our largest asset. In September of 2008, we suspended work on the Springer property and placed the facility on care and maintenance pending improvement in the global financial markets and strengthening tungsten prices. While tungsten prices have improved, significant additional capital and additional management resources would be required to resume operations. If we make a decision to resume operations on the Springer property such operations will require the location of additional management and additional capital. Our inability to obtain such management and capital will result in the Springer property continuing to be on care and maintenance.

***The price of tungsten is subject to significant volatility.*** If we elect to operate the Springer mine and mill, there is no certainty that economic conditions or tungsten prices will not again deteriorate, and that production at the Springer Mine will need to be again suspended. To the extent tungsten prices may deteriorate after we commence operations, such operations may not be profitable resulting in the closure of the mine and mill, and resulting loss in value of our company to investors.

***We may incur a loss if we sell the Springer property.*** The Springer property has a significant book value on our financial statements. We are currently considering selling the Springer property among other strategic alternatives. There is no assurance that a suitable buyer can be found for the property, or that the terms of such a sale will not result in a financial loss to us. To the extent we cannot find a suitable buyer or other strategic party, we may have to sell the property at a significant loss, resulting in a reduced asset value of the company as a whole, and a reduction in available funds for other corporate purposes. These factors may result in a reduction in the market price of our shares.

**Risks Associated with the Nyngan Project**

***If we are not able to acquire an interest in the Nyngan Project our share price may decline.*** We are subject to various commitments pursuant to the terms of the Nyngan Exploration Joint Venture Agreement. There is no assurance that we will meet our payment obligations, timing deadlines or otherwise fulfill our commitments under the agreement in order to earn a 50% interest in the Nyngan Joint Venture. If we are unable to meet the requirements to earn a 50% interest, then the project will no longer be available to us. 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.

**Risks Associated with the Carlin Vanadium Property**

***There are technical challenges to production of Vanadium from the property that may reduce the value of the property.*** The Carlin property hosts vanadium contained in a black shale. This vanadium host is known to present challenging processing issues in the separation of vanadium. Techniques to separate vanadium in this environment are complex. As a result, shareholders may never see the property developed due to technical risks, and similarly the value of the property may be greatly reduced if such technical risks present an obstacle to further exploration or development of the property.

***Industry requirements may limit market opportunities for vanadium production.*** New battery technologies are emerging that rely on vanadium, these markets may take longer than expected to develop and increase vanadium demand. These battery technologies require high purity vanadium product, which is difficult and costly to produce. The purity of any vanadium that may in the future be extracted from the Carlin property is unknown and uncertain. The inability to produce vanadium with sufficient purity for market purposes will likely reduce the economic prospects of any proposed development of the property.

**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 entirely on the availability of 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, which conceivably could render our planned projects uneconomic if prevailing commodity prices are not sufficiently strong or reliable.

***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 Canada 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.

***Without additional funding, we will not be able to carry out our business plan, and if we raise additional funding existing securityholders may experience dilution.*** As an exploration stage mining company, we do not currently earn any revenue from mining operations on our principal properties. In order to continue our exploration activities and to meet our obligations under our joint venture agreement 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 funding 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. We may also seek to raise funds from the sale of our Springer Property assets, however our ability to sell these assets and the price at which we may sell these assets is subject to similar market volatility, as well as the number and nature of potential buyers. If we are unable to raise funds from the sale of our securities or our Springer assets, then we likely will not be able to carry out our business plan of achieving Scandium production, or continue exploration activities on our current or future exploration properties. If we are able to raise funds from the sale of our securities, existing securityholders 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**

**SPRINGER MINE PROPERTY**

Our principal asset is the Springer mine property, a former tungsten producing operation located in Imlay, Nevada, wholly owned by us through a subsidiary, Springer Mining Company, a Nevada corporation. The Springer Mine Property represents a completed mine, mill, and production complex which was operated briefly by Utah International Inc. for the General Electric Company from 1980 to 1981. The Springer Mine was closed in 1982 due to low tungsten prices. The facilities have been held on care and maintenance since that time, however significant investments by us have been made to the facilities in recent years and operations at the mine and mill facility could be restarted relatively quickly.

At the time that we placed the facility on care and maintenance, work was nearly complete to make the primary milling and flotation circuits in the Springer mill fully operational. Work remaining to make the tungsten processing facility fully operational includes the addition of a gravity circuit, addition and installation of a molybdenum flotation/recovery circuit, certain modifications to the existing flotation circuits, and completion of the installation of new automatic controls throughout the mill. Metallurgical testing by EMC Metals has shown that the process design is capable of producing a saleable scheelite concentrate product containing in excess of 65% tungsten oxide ($WO_3$). The test work utilizes a combination of gravity separation and flotation. Additional work has been conducted to expand the mill capacity from the original design of 1,000tpd up to 1,200tpd. This work is approximately 85% complete.

We are currently evaluating alternatives for the sale or resumption of activities of the Springer Mine assets in light of the recent improvement in the market for tungsten.

***Property Description and Location***

The Springer Mine Property is located approximately 25 miles southwest of the city of Winnemucca, in Pershing County, Nevada, and approximately 125 miles northeast of Reno, Nevada (see Figure 1). The mine has year around access by a gravel road in fair condition. The mine site is located at geographic coordinate s 40°46 56 N. latitude and 118°07 58 W longitude, (UTM coordinates are 4,515,212N and 404,438W, Zone 11, WGS84).

Figure 1: Location of Springer Property, Copper King Property, and Carlin Vanadium Property

***Ownership***

The Springer Facility is 100% owned by our wholly owned subsidiary, Springer Mining Company. It is comprised of 340 Lode mineral claims totalling approximately 7,024 acres, 25 placer claims totalling approximately 500 acres and fee lands totalling approximately 3,756 acres. The total area of the Springer Facility is approximately 11,280 acres, including all mineral claims and fee lands. The mineral resources described in this report are located entirely on private fee lands.

***Geology and Mineralization***

The Springer Facility is located on the eastern flank of the Eugene Mountains, a block-faulted horst of the Basin and Range tectonic province. The area is underlain by Mesozoic, metasedimentary rocks intruded by Cretaceous granitic rocks, which were later overlain by Tertiary Volcanic rocks. The meta-sedimentary rocks are composed of pelitic Sediments with thin beds of micritic limestone. These limestone beds host scheelite-bearing, contact metasomatic skarn deposits. These are arranged in two general horizons each with several individual beds. The horizons Strike north-northeast and Dip steeply to the northwest and to the southeast. Scheelite is the only tungsten mineral identified in the skarns. It occurs in early veins and as finely disseminated grains along localized marble fronts. It is also associated with later alteration of garnet and pyroxene, where it occurs as coarse-grained aggregates and fine to medium-grained, euhedral dipyramidal crystals.

***Historical Work***

There were three main phases of exploration work conducted on the Springer Facility by three different owner/operators. These exploration periods include:

I. Exploration drilling and underground sampling by Nevada-Massachusetts Corporation (NMC) between 1925 and 1958;

II. Exploration drilling and underground channel sampling completed by General Electric (GE) and Utah International Inc. (UII between during 1973 and 1982); and

III. Diamond drilling and reverse circulation drilling completed by EMC Metals in 2007 and 2008.

The NMC exploration work focused mainly within the mineralized beds located at the Stank and Springer-Humboldt Mines. No specific NMC sample or Assay data of from any of the drifting, mining or drilling is available for any of these areas.

The exploration drilling and sampling completed by GE and UII focused primarily on the Sutton I and Sutton II areas of the property. The vast majority of the modern exploration data was collected during this phase of work. GE and UII compiled most of the older NMC data, rehabilitated the historic underground workings, drilled 119 diamond Core holes from surface and underground, extended the underground workings and analyzed approximately 3,200 samples.

We completed the most recent exploration work in 2007 and 2008. During this time, seven diamond Core and 251 reverse circulation (RC) drill holes were completed in three main areas. We drilled 81 holes in the George beds, 79 holes in the Mill Beds and 51 holes in the Sutton I Beds. All of this drilling focused on near surface Mineralization in order to evaluate the open pit potential. A few diamond Core holes were located in the Sutton II areas for confirmation and expansion of the historical resources.

Prior to the decline of tungsten prices in 2008, the Springer mill had been the focus of an aggressive rehabilitation and expansion program by us over two years. Work is nearly complete to make the primary milling and flotation circuits fully operational. The necessary equipment and supplies to complete these circuits are on site. Work remaining to make the tungsten processing facility fully operational includes the addition of a gravity circuit, addition and installation of a molybdenum flotation/recovery circuit, certain modifications to the existing flotation circuits, and completion of the installation of new automatic controls throughout the mill.

Metallurgical testing by EMC Metals has shown that the process design is capable of producing a saleable scheelite concentrate product containing in excess of 65% tungsten oxide ($WO_3$). The test work utilizes a combination of gravity separation and flotation.

Additional work has been conducted to expand the mill capacity from the original design of 1,000tpd up to 1,200tpd. This work is approximately 85% complete.

***Mineral Resources***

A resource estimate on the property was prepared in 2009 and contained in a report titled, *NI 43-101 Technical Report on Resources EMC Metals Corp., Springer Facility Sutton Beds, Nevada, USA* . The report was completed by Bart Stryhas (Ph.D., C.P.G.) of SRK Consulting Engineers and Scientists. Results of the resource estimate are shown in Table 1 below.

**Table 1**

| **Springer Project NI 43-101 Resource Estimation** | | | | |
|---|---|---|---|---|
| **Resource Category** | **Cut-off $WO_3$ %** | **Total Tonnes (kt)** | **Grade $WO_3$ %** | **Contained $WO_3$ (Mlbs)** |
| Indicated | 0.30 | 274 | 0.619 | 3.392 |
| Inferred | 0.30 | 1,097 | 0.562 | 12.330 |

*The resource calculation is based on drill hole database consisting of 377 drill holes for a total of 144,171 meters of drilling. The maximum depth of 255 meters and an average depth of 124 meters and approximately 50% of the drill holes were used in the resource estimation. The grade estimate was completed using the inverse distance squared weighting algorithm. A specific gravity of 3.02g/cm3 was used for all mineralized material for this resource estimation.*

The resource estimation is based on a generalized geologic model consisting of just one mineralized rock type, namely the tungsten skarn, which occurs in four distinct beds. These have a sheet-like geometry, which ranges from 1.0 to 10.0 feet thick with an approximate average of about 3.0 feet. They Strike north to northeast and Dip nearly vertical.

The grade estimate was completed using the inverse distance squared weighting algorithm, conducted in two passes. The first required a minimum of three and maximum of 12 samples, which were less than 50 feet from the block centroids. The second pass only considered unestimated blocks and required a minimum of one and maximum of 12 composites, which were less than 350 feet away from the block centroids. The raw drill hole Assay data was composited into lengths equal to the original sample and capped at 4% $WO_3$. During the estimation process, the composites were length-weighted to accommodate for differing sample lengths.

Three techniques were used to evaluate the validity of the block model. First, the interpolated block Grades were visually checked on sections for comparison to the composite assay grades. Second, statistical comparisons were made between the interpolated block grades and composite data within each bed. Third, swath plots were generated to compare model blocks and composite grades at regular section spacing through the deposit.

The resource classification was based on solid shapes constructed around the parts of the beds where most drill holes are spaced approximately 100 feet or less apart and where abundant channel samples were taken. All blocks located within these solids were classified as indicated resource. All blocks located outside of these areas, about the periphery of the drilling were classified as inferred resource.

The mineral resource statement of the Springer Project- Sutton I and II areas is presented in Table 1. The mineral resource estimates prepared in accordance with NI 43-101, which incorporate the Canadian Institute of Mining, Metallurgy and Petroleum Best Practices and Reporting Guidelines classified indicated mineral resource of 274kt of material grading 0.62%$WO_3$ and an additional inferred mineral resource of 1.1 Metric tons of material grading 0.56% $WO_3$ both using a 0.30% $WO_3$ cut-off. The quality of the exploration data is very good and the mineral resource was classified mainly according to the general sample spacing. The 0.30% $WO_3$ cut-off Grade was chosen for resource reporting based on an approximated mining cost of $40/t, processing cost of $17/ton, administration cost of $13/ton, mill recovery of 82% and a $WO_3$ price of $11.50per pound. The results reported in the resource statement have been

rounded to reflect the approximation of Grade and quantity, which can be achieved at this level of resource estimation.

**NYNGAN SCANDIUM PROJECT**

The primary focus of our business operations is conducting additional exploration and technical work and analyses on the Nyngan scandium resource as required to complete a feasibility study in accordance with the terms of our earn-in agreement with Jervois Mining Limited (see above under Item 1. BUSINESS Recent History - Exploration Joint Venture with Jervois Mining Limited, for additional information). Following is a technical summary of the Nyngan Project.

***Property Description and Location***

The Nyngan scandium resource is located approximately 500 kilometres northwest of Sydney, Australia. The property consists of two exploration licenses, controlled by Jervois, which encompass over 9,000 hectares. 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 metres 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

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** | | | | |
|---|---|---|---|---|
| **Resource Category** | **Cut off Sc (ppm)** | **Total Tonnes (kt)** | **Grade Sc (ppm)** | **Overburden Ratio** |
| 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***

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 requires 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. Feasibility study work is now underway, conducted by SNC-Lavalin of Brisbane, Australia. Upon EMC delivering the feasibility study to Jervois, EMC must pay to Jervois an additional A$1,300,000 plus the applicable Goods and Services tax, at which time it will be granted a 50% interest in the joint venture.

The first work phase of the JV 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 study for the processing elements of the project, (press release dated July, 2010), 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 the Report was defined by bench scale as well as small scale pilot plant work results compiled by others, and a preliminary flow sheet complied by the CSIRO.

Highlights of the Report are as follows:

- Capital costs for the laterite processing facility are estimated at US$56 million, including US$15 million for a sulphuric acid plant on site,
- Processing costs are estimated at less than US$300/kg $Sc_2 O_3$ ,
- The hydrometallurgical plant is designed to process approximately of 250 tpd of resource,
- Production of $Sc_2 O_3$ is estimated at 28,000 kilograms per year, and
- Process assumptions are proprietary, follow earlier work done by METCON Research and the CSIRO of Australia, and include standard and accepted processes for applying ore preparation, leaching, solvent extraction and product preparation methodologies.

*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 involves 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 are 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. These updated metallurgical test results are expected to be incorporated into a feasibility study (FS), which EMC plans to complete in Q1 2012.

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 is 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.

In April, 2011 EMC announced a general progress report on the project which outlined a serried 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 June 6, 2011 EMC announced that SNC-Lavalin Pty Ltd ( SNC ) has been selected to develop the feasibility study on the Nyngan Scandium Project in New South Wales, Australia. The feasibility work will be conducted from SNC s Brisbane office and is scheduled for completion in late February 2012.

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. A formal review meeting in relation to the CPDP document is planned with division staff in late January 2012.

This environmental work continues under direction from R. W. Corkery & Co., (Orange, NSW, Australia), and will form part of the NI 43-101 Nyngan feasibility study being finalized by SNC-Lavalin Inc. (Brisbane, Australia).

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.

On January 19, 2012 EMC announced that it has received an independent metallurgical test-work report, titled "Purification of Scandium Extracted from Laterite Ore" (the "Report"), 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, commissioned by EMC, was independently prepared by Hazen Research, Inc., of Golden, Colorado, USA ("Hazen"), and is the final in a series of three phases of semi-continuous pilot plant scale test-work completed by Hazen during 2011, 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% Sc2O3,
- 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.

The Company is currently working with SNC-Lavalin Inc. (Brisbane, Australia) to complete a National Instrument NI 43-101 Technical Report on the economics of the Nyngan Scandium Project, scheduled for completion in late February 2012. These 2011 Hazen metallurgical test-work program results, together with previous test-work by the CSIRO and METCON Laboratories, will be used directly by SNC-Lavalin in that Technical Report, to support process design, costing, and production level assumptions.

**CARLIN VANADIUM PROPERTY**

We have a 100% interest in 72 unpatented mineral claims comprising the Carlin Vanadium Property, in Elko County, Nevada. The property was explored by Union Carbide in the 1960 s. We have not performed any exploration on this property, however in 2010 we commissioned SRK Consulting of Lakewood, Colorado to prepare a technical report in the form required under NI 43-101.

***Property Description and Location***

The Carlin Vanadium Property consists of 72 unpatented mining claims covering 1,140 acres. The property was explored and drilled by Union Carbide Corporation in the late 1960 s resulting in a defined vanadium resource. The claim group is located in North-Central Nevada in Elko County, 7 air miles south of Carlin. The vanadium resource is centered about UTM Zone 11N geographical coordinates 574,328E, 4,495,637N (Lat 40°36 29 N, Long 116°07 17 W). Carlin, with a population of 2,500 is the largest town in the area. See figure 1 above for a location map of the property.

***Geology and Mineralization***

The Carlin Vanadium Property is located on the western flank of the Piñon Range, a block faulted horst of the basin and range tectonic province. The local lithologies are predominantly Paleozoic age, western assemblage, siliceous rocks transported above the Roberts Mountain Thrust. These are overlain by Tertiary age Rhyolite flows and Pliocene lake Sediments. The mineralized zones are certain stratigraphic sections of the Woodruff Formation hosting elevated concentrations of vanadium. There do not appear to be any physical markers in the lithology which indicate areas of Mineralization. All the mineralized zones are defined by chemical analysis. The Mineralization is stratigraphically controlled and appears to follow the Strike and Dip of the host lithology. Drilling to date has defined a zone of Mineralization striking north-south over 6,100 feet of length and dipping 5°- 30° west averaging 2,500 feet of down Dip extent.

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***Historical Work***

All of the exploration and development on the property was completed by previous owners. The Carlin Vanadium Deposit was discovered in the 1960s by Union Carbide Corporation when significantly anomalous vanadium was found in samples collected by Union Carbide geologists. During 1967 and 1968 Union Carbide conducted exploration work including geological mapping, approximately 15,000 feet of trenching and 30,500 feet of drilling in 112 holes, outlining a significant 300 by 1000 meter zone of vanadium Mineralization within the current claim boundary. In 1968 Union Carbide used this work to complete a historical resource estimation of 19.69M tons @ 0.83% $V_2O_5$. Historical exploration was restricted to within 150m from surface with an average drill hole depth of 75 meters. This historical resource has not been verified by us or by a Qualified Person, and accordingly we cannot confirm its reliability for the purpose of current resource classification methods referred to in NI 43-101. As a result, while we consider this historical information to be relevant, the information should not be relied upon and we are not treating this information as a current mineral resource.

Union Carbide conducted extensive metallurgical testing in the 1960 s and at the time could not produce an economical process for extracting the vanadium. Developments in heap leaching technologies in the 1970 s have shown economic recoveries of vanadium from geologically similar projects such as Gibellini Vanadium Project (Rocky Mountain Resources). We are currently investigating a number of new processes to economically extract the vanadium from the Carlin deposit.

The Carlin Vanadium Property also covers an interesting gold occurrence and in 1998, Cambior Inc. and Sante Fe Pacific Mining Inc. used rock chip sampling to outline an approximate 550 feet northeast trending (>100 ppb) gold anomaly within the Devonian Woodruff Formation and drilled 20 holes totalling 2700 feet in length to test the anomalous zone. The best results were obtained in drill hole CBK-2 which intersected 0.01 oz. per ton gold from 5 to 70 feet within the Woodruff Formation immediately below the unconformity. This gold occurrence warrants further investigation to determine whether there is a possibility of a Carlin-type gold system on the property. We have not verified these historical results, and while we believe them to be relevant, we caution that this historical drilling information should not be relied upon.

***Resource Estimation***

In 2010, we commissioned SRK Consulting to prepare an NI 43-101 technical report and to produce a current resource estimation for the Carlin Vanadium Project. The report, titled, *NI 43-101 Technical Report on Resources EMC Metals Corp. Carlin Vanadium Project, Carlin Nevada* , was prepared by Bart Stryha, PhD of SRK Consulting, a Qualified Person as defined by NI 43-101.

The resource estimation is supported by information from the 152 rotary drill-holes totalling 36,525 feet. The drillhole database was compiled by us and verified by SRK Consulting. The resource estimation is based on a generalized geologic model and confined within a $V_2O_5$ Grade shell. Each model block was assigned an average density based on the lithologies present. Mineralization is interpreted to follow along the plane of bedding with a general orientation striking N-S dipping 5° to 25° west. Drill-hole samples were composited into 25 foot bench lengths without breaks at geologic contacts. The raw $V_2O_5$ assays were capped at 2.2% prior to compositing. The model blocks are 50ft x 50ft x 25ft in the x,y,z directions, respectively. $V_2O_5$ Grades were estimated using an Inverse Weighting to the second power. A minimum of 3 and maximum of 12 composites were required for the block Grade estimations. The results of the resource estimation provided a CIM classified Inferred Mineral Resource as shown in Table 3 below. The quality of the historical data is good and the mineral resource was classified as inferred mainly due to the fact that the rotary drilling has not been verified by modern program.

**Table 3**

| Carlin Vanadium Project Resource Estimation | | | | |
|---|---|---|---|---|
| **Resource Category** | **Cut off V2O5% (ppm)** | **Total Tonnes (kt)** | **Grade V2O5% (ppm)** | **Contained V2O5 (Mlbs)** |
| Inferred | 0.3 | 25,400 | 0.515 | 289 |

The 0.3% V2O5 cut-off-grade was chosen for resource reporting based on the reasonable potential for economic extraction under a conceptual open pit mining and milling scenario. The cut-off-grade was calculated using $2.30/ton mining cost, $35/ton milling cost, $0.50/ton admin cost, 65% recovery, 95% selling pay-for, 1% freight charge, 0% royalty and a $10.46/lb V2O5 value. The V2O5 price is based on a five year trailing average value. This analysis resulted in a break-even cut-off-grade of 0.30% . The results reported in the resource statement are rounded to reflect the approximation of Grade and quantity, which can be achieved at this level of resource estimation.

## COPPER KING TUNGSTEN PROPERTY

### *Property Description and Location*

We have a 100% interest in the Copper King Property which is located in Pershing County, Nevada. The Copper King Project consists of 7 unpatented claims and 9 patented claims covering 250ha is located on the west flank of the Trinity Range in Pershing Co., Nevada (see Figure 1 above).

### *Geology and Mineralization*

The Copper King tungsten Mineralization is hosted within 5 separate, parallel Triassic-Jurassic Sedimentary horizons including argillite, quartzite, and marble, in contact with a Cretaceous granodiorite Intrusion. Limestone beds within the sedimentary package have been silicified forming steeply dipping, epidote-garnet skarns.

### *Historical Work*

The Copper King Property was originally staked in the early 1900s as a copper prospect and very little is known about the early historical work until scheelite was discovered on the property in 1949. The property was mined in 1952 by Cordero Mining Company who removed 750 tons of ore and again in 1956 by Wallace and Durkin, who removed 193 tons of Ore from one of two vertical shafts.

In 1969, the property was optioned to Nevada Tungsten and Copper Inc. who completed 2,184 feet of Diamond drilling in 4 holes which ranged in depth from 279 feet to 935 feet.

In 1976, General Electric Co. acquired the property and carried out extensive mapping, sampling, and drilling.

### *Exploration*

The Copper King project is an early stage exploration project and we are currently evaluating the property for future exploration potential.

**NORWAY SCANDIUM PROPERTIES**

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. Option agreements to acquire central Norway properties, Tordal and Evje were entered into in April 2011 and an option agreement for the Hogtuva property, located in southern Norway, was signed in September 2011.

***Tordal and Evje Properties, Norway***

The location of the Tordal and Evje exploration properties are 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 Tordal property and the Evje 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.

Under the terms of the REE Option Agreement, we may earn 60% of the Norwegian limited liability company by:

(a) paying to REE Mining an aggregate USD$430,000 as follows:

(i) USD$130,000 on March 31, 2011 (paid); and

(ii) an additional USD$300,000 on or before October 31, 2012; and

If we acquire the initial 60% interest, we can earn the remaining 40% of the Norwegian limited liability company by:

(a) paying to REE Mining USD$200,000 on or before March 31, 2013; and

(b) issuing to REE Mining 1,000,000 of our common shares on or before March 31, 2013.

On July 21, 2011 EMC Metals Corp. announced encouraging assay results from a surface soil sampling program conducted in June on a 3.75 sq km portion of its Tørdal property, a scandium, REE, and specialty metals pegmatite project in Telemark county, southern Norway.

Highlights of Initial Surface Soil Sample Program:

- The best sample assay returned a 217 ppm scandium value,
- Eleven soil samples contained +50 ppm scandium, of which five samples exceeded 85 ppm and three exceeded 150 ppm,
- The eleven soil samples were clustered within an area measuring 700 x 100 metres, or approximately 35% of the total sample area,
- A total of 131 soil samples were collected at 100-metre spacing intervals, in more accessible areas that avoided steep terrain,
- The total sample area represented a zone of about 1,500 x 2,500 metres within the Heftetjern pegmatite field, and
- Many previously unmapped pegmatite dykes were noted in the areas traversed, some traceable on surface for several hundred metres.

The results of this initial soil sampling program are, by their nature, preliminary, and not conclusive evidence of the likelihood of a mineral resource.

The soil sampling program focused on a 3.75 sq km area, northwest of the town of Bø, in an area between the communities of Høydalen and Skardsfjell. Known as the Heftetjern region, this location exhibits numerous known pegmatite occurrences, including a locally famous pegmatite quarry associated with several unique scandium, tin, and beryllium mineral types. Steep slopes were generally avoided and sampling was carried out in the most accessible locations. The sampling program of 131 samples was based on soil sampling of 100 x 100 metre grids and covered somewhat less than half of the target area due to terrain impediments. The most promising scandium-bearing zone was observed at the north end of the tested area, and remains open to the north.

The 140 sq km Tørdal property is one of two pegmatite areas in southern Norway being explored by EMC. The other property, Evje-Iveland, located in Aust-Agder county originally encompassed an 80 sq km area, but has been increased in size to 150 sq km. Evje-Iveland is also prospective for scandium and REE's plus certain base metals, notably nickel.

***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 must 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. The three exploration sites cover a total of approximately 80 square kilometers prospective for scandium, beryllium and other specialty metals.

**FAIRFIELD SCANDIUM PROPERTY**

The location of the Fairfield exploration property is provided in Figure 6 below.

On September 13, 2011 EMC Metals Corp. announced that it entered into an option agreement with Mineral Exploration Services LLC of Reno, Nevada, pursuant to which EMC has an option to earn a 100% interest in a patented mining claim and former scandium property, known as The Little Green Monster, near the town of Fairfield, Utah. The property represents a high-grade scandium phosphate exploration target, is the site of a historical small underground scandium mining operation, and has been a popular collecting site with hobbyists seeking rare and semi-precious phosphate minerals, including the scandium phosphate mineral kolbeckite [ScPO4º2H2O], for over a century.

Highlights:

- Property is the site of brief scandium resource mining in 1950's,
- EMC has secured an option to acquire 100% of the property,
- EMC has staked 42 mining claims adjacent to the property,
- Access to historic mine workings enables immediate sampling, and
- Option rights were secured with payments totaling US$380,000, over 3 years.

EMC now holds an option to acquire a 100% interest in the Little Green Monster patented claim, and has staked an additional 42 claims in areas of interest surrounding the core property and site of historical activity. The Company has concurrently applied for and been granted an exploration permit by State authorities, and has located and excavated the old mine entrance. Additionally, the mine has been accessed, samples have been collected from various locations inside the mine, samples have been shipped, and await assay by ALS Minerals Laboratory in Vancouver, BC, Canada. Some limited surface trenching work has also been undertaken. Fairfield, Utah has long been recognized by mineral specimen collectors as a source of unusual variscite [AlPO4º2H2O] mineral nodules, which are typically slabbed, polished and displayed in mineral cabinets and museums. The mine producing area was known generally as the Clay Canyon Variscite Mine, and was established as far back as the late 1880's. The site was prospected for variscite nodules for the next 40 years. Scandium bearing minerals were first identified in 1940, in association with variscite nodules, but commercial interest in kolbeckite as a primary source of scandium mineralization did not begin until 1959. At this time, the Kawecki Chemical Company (Boyerstown, Pa.) shipped two samples of phosphate bearing material totalling over 4,300 pounds, to a Kawecki facility at Boyerstown. Kawecki Chemical Company worked for a time on refining techniques, and for reasons unknown, was not sufficiently satisfied with their results to maintain their interest. The property changed hands several more times in the ensuing years and the old mine workings were bulldozed shut in a reclamation effort, sometime in the 1990's.

**FOSTUNG TUNGSTEN PROPERTY**

Pursuant to the terms of a purchase and sale agreement dated June 26, 2009, as amended on July 22, 2009 and September 14, 2009, between us and Breakwater Resources Ltd., in October of 2009, we issued 500,000 of our common shares to Breakwater as consideration for a 100% interest in the Fostung property located in Ontario, subject to a 1% Net Smelter Returns Royalty. The property was placed on care and maintenance in 2008.

In May of 2011, we completed the sale of all of our interest in the Fostung property to a wholly owned subsidiary of Janus Resources, Inc., a Nevada company, for CAD$500,000.

## 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, through its wholly-owned subsidiary, Springer Mining Company, owns the Springer mine and mill. The property was placed under care and maintenance in 2008 and there are no active mining operations. The Company has no mine safety violations or other regulatory 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.

| Year | High (C$) | Low (C$) |
|---|---|---|
| **Fiscal Year ended December 31, 2011** | | |
| First quarter | 0.43 | 0.24 |
| Second quarter | 0.36 | 0.15 |
| Third quarter | 0.20 | 0.08 |
| Fourth quarter | 0.17 | 0.09 |
| **Fiscal Year ended December 31, 2010** | | |
| First quarter | 0.25 | 0.15 |
| Second quarter | 0.20 | 0.09 |
| Third quarter | 0.11 | 0.07 |
| Fourth quarter | 0.44 | 0.07 |

**Exchange Rates**

We maintain our books of account in Canadian dollars and references to dollar amounts herein are to the lawful currency of Canada unless otherwise indicated. 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:

| | High | Low |
|---|---|---|
| January 2012 | 1.0014 | 0.9935 |
| December 2011 | 1.0406 | 1.0105 |
| November 2011 | 1.0487 | 1.0126 |
| October 2011 | 1.0604 | 0.9935 |
| September 2011 | 1.0389 | 0.9752 |
| August 2011 | 0.9910 | 0.9580 |

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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, 2010 and 2011.

| | Year Ended December 31 (Canadian $ per U.S. $) | |
|---|---|---|
| | 2011 | 2010 |
| Rate at end of Period | 1.0170 | 0.9946 |
| Average during Period | 0.9891 | 1.0095 |
| Low | 0.9449 | 0.9946 |
| High | 1.0604 | 1.0778 |

As of February 10, 2012, there were 72 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.

**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 year ended December 31, 2011.

## 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, tungsten, molybdenum, vanadium, 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 is the Springer Tungsten Mine, a fully constructed mine and mill asset in Nevada, USA. The Springer mine is currently not operating, and we are offering the asset for sale.

We hold a 50% interest earn-in right in the Nyngan scandium project in New South Wales, Australia, and are advancing the project as the manager. We also own four other properties: the Fairfield (Utah, USA) and Hogtuva (central Norway) scandium properties, the Tordal and Evje-iveland (southern Norway) scandium properties, and the Carlin vanadium property, in Nevada, USA. We sold our Fostung tungsten property in Ontario, Canada in June, 2011.

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

Our focus during 2011 regarding Springer Mine included maintaining that asset on standby mode, and organizing and pursuing a sale process on this asset, underway since September 2010. We also advanced the Nyngan scandium project through metallurgical testing, process definition, and optimization work, and completed an initial soil sampling program at the Tordal scandium property. We also investigated other specialty metals opportunities.

**RESULTS FOR THE YEAR ENDED DECEMBER 31, 2011**

Liquidity and Capital Resources

At December 31, 2011, we had negative working capital of $80,533 including cash of $804,892 as compared to working capital of $3,330,415 including cash of $4,126,424 at December 31, 2010. Also included in working capital, at December 31 2011, were marketable securities with a market value of $2,250 (December 31, 2010 - $2,250).

During the year ended December 31, 2011, we received cash of $573,848 (2010 - $6,068,472) for stock issuances. At December 31, 2011, we had a total of 11,848,750 stock options exercisable between $0.10 and $2.15 has the potential upon exercise to generate a total of $2,254,263 in cash over the next five 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 the earning our 50% joint venture interest in the Nyngan Project by delivering a feasibility study that will cost an estimated AU$200,000 to produce, and paying an additional AU$1,300,000 to Jervois within 5 days of delivering the feasibility study. Also, under the terms of our agreements for the properties acquired in Norway, we must spend an additional $550,000 by the end of October 2012.

We are also obligated to repay a US$500,000 promissory note issued in to the vendors of TTS in connection with the acquisition of TTS. These commitments total approximately $2,550,000 and it is expected that these commitments will be funded from available cash.

The Company will need additional funding to meet the commitments shown above, and will seek to raise additional equity financing in the short term.

Results of Operations

***Quarter ended December 31, 2011***

The net loss for the quarter increased by $2,087,633 to $4,375,465 from $2,287,832 in the prior year, mainly as a result of a one-time land and water impairment charge taken during Q4 2011 which was not taken in the prior corresponding quarter. Individual items contributing to this decrease are as follows:

| Q4 2011 vs. Q4 2010 - Variance Analysis | | |
|---|---|---|
| **Item** | **Variance Favourable / (Unfavourable)** | **Explanation** |
| Write-off of land and water rights | ($3,100,000) | In the current quarter management determined that an impairment charge of $3,100,000 was appropriate for the lan and water rights located in Pershing County, Nevada. No such charge was incurred in the 4th quarter of the prior year |
| Exploration | ($745,462) | Exploration costs increased during the current quarter due primarily to increased activity at the Nyngan project plus preliminary costs incurred on the Norwegian projects and Fairfield Utah project purchased in 2011. |
| General and administrative | ($154,192) | The unfavourable variance results from an increased level of operations in the current year. |
| Salaries and benefits | ($88,958) | In the current quarter certain costs allocated to the consulting expense category in the first 9 months in 2011 were reallocated to salaries expense, resulting in this unfavourable variance. |
| Other income | ($53,723) | In the prior year a gain in the recovery of expenses from Golden Predator Corp was realized, not such gain was realized in the current quarter. |
| Gain on disposition of assets | ($35,554) | In the prior year there was a disposal of assets in Q4. In 2011 there was an adjustment to the gain of asset disposals taken in the previous quarters. |
| Travel and entertainment | ($29,064) | Increased travel to project sites in the current quarter resulted in the negative variance. |
| Unrealized gain on marketable securities | ($26,666) | In Q4 2010 an unrealized gain on marketable securities was recognized. No such gain was realized in 2011. |
| Insurance | ($23,142) | In the current quarter expenses included an adjustment for under accrued expenses through the third quarter of 2011. No such adjustment occurred during 2010, resulting in the negative variance. |

| | | |
|---|---|---|
| Write-off of mineral properties | $1,138,432 | In the fourth quarter of 2010 an impairment of mineral properties of $1,138,432 was recognized. No impairment was recognized this year. |

| Q4 2011 vs. Q4 2010 - Variance Analysis | | |
|---|---|---|
| **Item** | **Variance Favourable / (Unfavourable)** | **Explanation** |
| Stock-based compensation | $208,440 | The current expense is lower than in the prior year as a result of fewer options vesting. |
| Amortization | 191,719 | A significant portion of the assets placed in service at our Springer facility have been completely depreciated in the current year thus requiring no amortization as compared to the corresponding quarter of 2010. |
| Consulting | $183,314 | In the current quarter certain costs allocated to this expense category in the first 9 months in 2011 were reallocated to exploration expense and salaries expense categories, resulting in this favourable variance. |
| Foreign exchange gain | $150,650 | The gain results mainly from the conversion of US dollar denominated monetary item balances to Canadian dollar denominated balances for reporting purposes. |
| Change in fair value of derivative liability | $112,735 | In the prior year a loss was taken on the change in fair value of derivative liability. This did not occur in the current quarter. |
| Professional fees | $91,264 | In the current quarter certain costs allocated to this expense category in the first 9 months in 2011 were reallocated to exploration expenses, resulting in this favourable variance. |
| Loss on sale of marketable securities | $70,583 | A loss on the sale of marketable securities was realized in the fourth quarter of 2010. No such loss occurred this year. |
| Interest expense | $17,001 | Interest earned on guaranteed investment certificates was higher in this quarter as compared to the same quarter of last year. |

***Cash flow discussion for the Quarter ended December 31, 2011 compared to December 31, 2010***

The cash outflows from operating activities increased by $1,852,403 to $1,179,867 (2010 (672,534)) due to an increase in operating activity.

Cash outflows from investing activities decreased by $668,648 to $125,123 (2010 $793,771) due mainly to cash paid for a subsidiary in 2010.

Cash inflows from financing activities decreased by $4,038,300 to $0 (2010 - $4,038,300) due mainly to the completion of two private placements and the exercise of stock options and warrants at the end of 2010 which did not reoccur during 2011.

***Results of Operations for the Year ended December 31, 2011***

The net loss for the year increased by $2,685,797 to $7,408,552 from $4,722,755 in the prior year, mainly as a result of a $3,100,000 impairment charge against land and water rights in Pershing County, Nevada in the current year. Individual items contributing to this decrease are as follows:

| **2011 vs. 2010 - Variance Analysis** | | |
|---|---|---|
| **Item** | **Variance Favourable / (Unfavourable)** | **Explanation** |
| Write-off of land and water rights | ($3,100,000) | In the current year management determined that an impairment charge of $3,100,000 was appropriate for the land and water rights in Pershing County, Nevada. No such charge was incurred in the prior year. |
| Exploration costs | ($1,590,600) | Exploration costs increased during 2011 due primarily to increased activity at the Nyngan project plus preliminary costs incurred on the Norwegian projects and Fairfield Utah project purchased in 2011. |
| Foreign exchange gain | ($262,749) | The loss results mainly from the conversion of US dollar denominated monetary item balances to Canadian dollar denominated balances for reporting purposes. The current year loss amounts to $43,646 compared to a gain of $205,218 in the prior year. |
| General and administrative | ($196,894) | The unfavourable variance results from the transition of the administrative activities and office from Vancouver to Nevada during 2011. The one-time transition of services will result in improved responsiveness to company requirements and decreased costs in the future. |
| Salaries and benefits | ($107,671) | |

The negative variance results from a higher headcount in 2011 due to the opening of the Nevada office and higher levels of activity than in the prior year.

| 2011 vs. 2010 - Variance Analysis | | |
|---|---|---|
| **Item** | **Variance Favourable / (Unfavourable)** | **Explanation** |
| Travel and entertainment | ($78,592) | The unfavourable travel variance in 2011 compared to 2010 resulted from an increase in travel to Australia and Norway to visit properties acquired in the current and past year. |
| Other income | ($53,723) | During 2010 we earned sundry revenue from the spin-out from Golden Predator Corp. These revenues did not reoccur during 2011. |
| Consulting | ($39,372) | The increase compared to the prior year results from increased activity levels at our projects during 2011. |
| Write-off of mineral properties | $1,138,432 | In 2010 an impairment of mineral properties (associated with exploration for gold) of $1,138,432 was recognized. No impairment was recognized this year. |
| Stock-based compensation | $502,369 | As compared to 2010, fewer options were issued in the current year and their vesting was mostly over a two year period. In addition, a significant number of the options issued in the prior year vested immediately. |
| Disposition of assets | $445,343 | During 2011 we disposed of the Fostung property for a gain of $494,000. In addition we sold a fully depreciated vehicle at Springer. These gains were partially offset by the write-off of office furniture no longer in use. No similar transactions occurred during 2010. |
| Change in fair value of derivative liability | $251,615 | In the current year we recognized a positive change in the value of a derivative liability. In 2010 there was a negative value taken of $22,874 against earning. |
| Amortization | $127,273 | A significant portion of the assets placed in service at our Springer facility have been completely depreciated in the current year thus requiring no amortization as compared to 2010. |

| | | |
|---|---|---|
| Insurance | $80,250 | A risk survey in 2010 resulted in a reduction in the insured amount of the Springer Mill resulting in lower premiums in the current year when compared to 2010. |
| Interest expense | $78,236 | An increase in the cash balance available for interest bearing term deposits at the beginning of 2011 resulted in an increased offset to interest expense and lower interest expense during the current year when compared to 2010. |

| 2011 vs. 2010 - Variance Analysis | | |
|---|---|---|
| **Item** | **Variance Favourable / (Unfavourable)** | **Explanation** |
| Loss on sale of marketable securities | $70,583 | In the prior year a loss on sale of marketable securities occurred. There were no security sales in 2011. |
| Professional fees | $49,703 | In the current year there were fewer requirements for legal fees as our transactions dealt mostly with straight forward acquisitions. |

***Cash flow discussion for the year ended December 31, 2011 compared to December 31, 2010***

The cash outflow from operating activities decreased by $2,340,542 to $4,029,048 (2010 $1,688,506) due to an increase in operating activities.

Cash flows from investing activities increased by $971,646 to $133,668 (2010 ($837,978)) due mainly to the sale of the Fostung property.

Cash inflows from financing activities decreased by $5,494,624 to $573,848 (2010 - $6,068,472) as a result of us raising funds from private placements during the prior year which did not reoccur during 2011.

***Summary of quarterly results***

| | **2011** | | | | **2010** | | | |
|---|---|---|---|---|---|---|---|---|
| | **Q4** | **Q3** | **Q2** | **Q1** | **Q4** | **Q3** | **Q2** | **Q1** |
| Net Sales | - | - | - | - | - | - | - | - |
| Net Income (Loss) | (5,312,937) | (1,158,143) | (590,022) | (347,450) | (1,341,524) | (1,514,237) | (1,148,938) | (718,056) |
| Basic and diluted Net Income (Loss) per share | (0.03) | (0.01) | (0.01) | (0.00) | (0.01) | (0.01) | (0.01) | (0.01) |

***Financial Position***

*Cash*

The decrease in cash of $3,321,532 to $804,892 (2010 - $4,126,424) results from exploration activities undertaken without the infusion of cash from equity placements or other sources.

*Marketable securities*

Marketable securities remained at $2,250.

*Subscription receivable*

Subscription receivable of $Nil (2010 - $210,249) resulted from the collection of subscriptions from a private placement placed at the end of 2010.

*Prepaid expenses and receivables*

Prepaid expenses and receivables increased by $59,076 due in part to advances made to suppliers on our Nyngan project in Australia and also an increase in value added tax paid on certain supplies in Canada.

*Property, plant and equipment*

Property plant and equipment consists of land and water rights in Nevada, the Springer plant and equipment, and various other items of property plant and equipment. The decrease of $3,613,447 to $30,676,426 at December 31, 2011 (2010 - $34,289,873) is due to an impairment charge taken on land and water rights in Pershing County, Nevada, and the write-down of office equipment in the year.

*Mineral interests*

Mineral interests have increased by $176,691 to $679,711 at December 31, 2011 (2010 - $503,020) due mainly to the additions of scandium properties in Norway.

*Current liabilities (excluding current portion of promissory notes payable)*

Current liabilities have decreased by $91,509 to $550,081 at December 31, 2011 (2010 $641,590) due mainly to the extinguishing of the derivative liability of $228,741 at December 31, 2010. This was partially offset by an increase in accounts payable due to the increase in operating activities in the current year.

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

Promissory notes payable increased by $93,502 to $4,343,502 (2010 - $4,250,000) which is attributable to a change in foreign exchange on conversion of the United States dollars designated promissory notes to Canadian dollars for reporting purposes.

*Capital Stock*

Capital stock increased by $439,558 to $88,578,045 (2009 - $88,138,487) as a result of the exercise of warrants and stock options.

Additional paid-in capital decreased by $527,060 to $1,476,285 (2010 - $2,003,345) as a result the cancellation of treasury shares of $744,000 which was partially offset by the expensing of stock options and adjustments due to the exercise of stock options.

Certain treasury shares were cancelled during the year bringing their value to $1,343,333 at December 31, 2011 (2010 - $2,087,333)

**Off-balance sheet arrangements**

At December 31, 2011, 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 February 5, 2012 we had 150,678,713 issued and outstanding common shares, 11,848,750 outstanding stock options at a weighted average exercise price of $0.19.

**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 Springer and Nyngan projects 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.

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**Recent Accounting Pronouncements**

In May 2011, the Financial Accounting Standards Board ( FASB ) issued Accounting Standards Update ( ASU ) No. 2011-04, Fair Value Measurement (Topic 820): Amendments to Achieve Common Fair Value Measurement and Disclosure Requirements in U.S. GAAP and IFRSs , which is intended to improve comparability of fair value measurements presented and disclosed in financial statements prepared in accordance with U.S. generally, accepted accounting principles and International Financial Reporting Standards. This standard clarifies the application of existing fair value measurement requirements including (1) the application of the highest and best use valuation premise, (2) the methodology to measure the fair value of an instrument classified in a reporting entity s shareholders equity, (3) disclosure requirements for quantitative information on Level 3 fair value measurements and (4) guidance on measuring the fair value of financial instruments managed within a portfolio. In addition, the standard requires additional disclosures of the sensitivity of fair value to changes in unobservable inputs for Level 3 securities. This standard is effective for interim and annual reporting periods ending on or after December 15, 2011. Based on the Company s evaluation of the ASU, the adoption of ASU 2011-04 will not have material impact on the Company s financial statements.

In June 2011, the FASB issued ASU No. 2011-05, Presentation of Comprehensive Income , which requires that comprehensive income be presented either in a single continuous statement of comprehensive reclassification adjustments for items that are reclassified from other comprehensive income to net earnings. This standard no longer allows companies to present components of other comprehensive income only in the statement of equity. This standard is effective for interim and annual reporting periods beginning after December 15, 2011. The adoption of this guidance is not expected to have a significant impact on the Company s financial statements other than the prescribed change in presentation.

In September 2011, the FASB issued ASU No. 2011-08, Intangibles Goodwill and Other (Topic 350): Testing Goodwill for Impairment ( ASU 2011-08 ). ASU 2011-08 is intended to simplify how entities, both public and nonpublic, test goodwill for impairment. ASU 2011-08 permits an entity to first assess qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount as a basis for determining whether it is necessary to perform the two-step goodwill impairment test described in Topic 350. The more-likely-than-not threshold is defined as having a likelihood of more than 50%. ASU 2011-08 is effective for annual and interim goodwill impairment tests performed for fiscal years beginning after December 15, 2011. Although early adoption is permitted, the Company will adopt ASU 2011-08 as of January 1, 2012. Based on the Company s evaluation of this ASU, the adoption of ASU 2011-08 will not have a material impact on the Company s financial statements.

In December 2011, the FASB issued ASU No. 2011-11, Balance Sheet (Topic 210) Disclosures about Offsetting Assets and Liabilities ( ASU 2011-11 ). The update requires entities to disclose information about offsetting and related arrangements of financial instruments and derivative instruments. ASU 2011-11 is effective for the Company in the first quarter of its fiscal year ending June 30, 2014 ( fiscal 2014 ). The Company currently believes there will be no significant impact on its financial statements.

In December 2011, the FASB issued ASU 2011-12, Comprehensive Income (Topic 220) Deferral of the Effective Date for Amendments to the Presentation of Reclassifications of Items Out of Accumulated Other Comprehensive Income in Accounting Standards Update No. 2011-05. ASU 2011-12 defers only those changes in Update No. 2011-05 that relate to the presentation of the reclassification adjustments. Under the amendments in Update No. 2011-05, entities are required to present reclassification adjustments and the effect of those reclassification adjustments on the face of the financial statements where net income presented, by component of net income, and on the face of the financial statements where other comprehensive income is presented, by component of other comprehensive income. In addition, the amendments in Update No. 2011-05 require that reclassification adjustments be presented in interim financial periods. This standard is effective for interim and annual reporting periods beginning after December 15, 2011. The adoption of this guidance is not expected to have a significant impact on the Company s financial statements other than the prescribed change in presentation.

**Financial instruments and other risks**

Our financial instruments consist of cash, investments in trading securities, subscriptions receivable, receivables, accounts payable and accrued liabilities, due to related parties, 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, 2011 and 2010, 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, including its principal executive officer who is also 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 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.

This annual report does not include a report of management's assessment regarding internal control over financial reporting due to a transition period established by rules of the Securities and Exchange Commission for newly public companies.

## 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 29, 2012 and is incorporated herein by reference. If the definitive Proxy Statement cannot be filed on or before April 29, 2012, 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.

| Description | Page |
|---|---|
| Financial statements for the years ended December 31, 2011 and 2010 and audit report 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. |
| 21.1* | List of Subsidiaries |
| 31.1 | Certification Pursuant to Rule 13a-14(a) or 15d-14(a) of the U.S. Securities Exchange Act of 1934 - Principal Executive Officer |
| 31.2 | Certification Pursuant to Rule 13a-14(a) or 15d-14(a) of the U.S. Securities Exchange Act of 1934 - Principal Financial Officer |
| 32.1 | Section 1350 Certification of the Principal Executive Officer |
| 32.2 | Section 1350 Certification of the Principal Financial Officer |

* 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<br>George Putnam<br>President and Principal Executive Officer | By: /s/ Edward Dickinson<br>Edward Dickinson<br>Principal Accounting Officer |

Date: February 14, 2012

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.

| Signature | Title | Date |
|---|---|---|
| /s/ George Putnam<br>George Putnam | President, Principal Executive Officer, and Director | February 14, 2012 |
| /s/ William Harris<br>William Harris | Chairman and Director | February 14, 2012 |
| /s/ Willem Duyvesteyn<br>Willem Duyvesteyn | Director | February 14, 2012 |
| /s/ Barry Davies<br>Barry Davies | Director | February 14, 2012 |

**(An Exploration Stage Company)**

**CONSOLIDATED FINANCIAL STATEMENTS**

**YEAR ENDED DECEMBER 31, 2011**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Shareholders of
EMC Metals Corp.

We have audited the accompanying consolidated balance sheets of EMC Metals Corp. as of December 31, 2011 and 2010, and the related consolidated statements of operations, changes in stockholders' equity and cash flows for the years ended December 31, 2011 and 2010 and for the period from incorporation on July 17, 2006 to December 31, 2011. EMC Metals Corp. s management is responsible for these financial statements. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of EMC Metals Corp. as of December 31, 2011 and 2010, and the results of its operations and its cash flows for the years ended December 31, 2011 and 2010 and for the period from incorporation on July 17, 2006 to December 31, 2011 in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming EMC Metals Corp. will continue as a going concern. As discussed in Note 1 to the consolidated financial statements, EMC Metals Corp. generated negative cash flows from operating activities during the past year and has an accumulated deficit of $61,089,743 for the year ended December 31, 2011. This raises substantial doubt about EMC Metals Corp. s ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Vancouver, Canada Chartered Accountants

February 10, 2012

**EMC Metals Corp.**
(An Exploration Stage Company)
CONSOLIDATED BALANCE SHEETS
(Expressed in Canadian Dollars)

| | December 31, 2011 | December 31, 2010 |
|---|---|---|
| **ASSETS** | | |
| **Current** | | |
| Cash | $ 804,892 | $ 4,126,424 |
| Investments in trading securities, at fair value (Note 4) | 2,250 | 2,250 |
| Prepaid expenses and receivables (net of allowance of $Nil (2010 - $Nil)) | 192,158 | 133,082 |
| Subscription receivable | - | 210,249 |
| **Total Current Assets** | 999,300 | 4,472,005 |
| **Restricted cash** (Note 5) | 159,400 | - |
| **Property, plant and equipment** (Note 6) | 30,676,426 | 34,289,873 |
| **Mineral interests** (Note 7) | 679,711 | 503,020 |
| **Total Assets** | $ 32,514,837 | $ 39,264,898 |
| **LIABILITIES AND STOCKHOLDERS EQUITY** | | |
| **Current** | | |
| Accounts payable and accrued liabilities | $ 550,081 | $ 412,849 |
| Derivative liability (Note 9) | - | 228,741 |
| Current portion of promissory notes payable (Note 10) | 529,752 | 500,000 |
| **Total Current Liabilities** | 1,079,833 | 1,141,590 |
| **Promissory notes payable** (Note 10) | 3,813,750 | 3,750,000 |
| **Total Liabilities** | 4,893,583 | 4,891,590 |
| **Stockholders Equity** | | |
| Capital stock (Note 11) (Authorized: Unlimited number of shares; Issued and outstanding: 150,678,713 (2010 149,059,412)) | 88,578,045 | 88,138,487 |
| Treasury stock (Note 13) | (1,343,333) | (2,087,333 |
| Additional paid in capital (Note 11) | 1,476,285 | 2,003,345 |
| Deficit accumulated during the exploration stage | (61,089,743) | (53,681,191 |
| **Total Stockholders Equity** | 27,621,254 | 34,373,308 |
| **Total Liabilities and Stockholders Equity** | $ 32,514,837 | $ 39,264,898 |

**Nature and continuance of operations** (Note 1)

The accompanying notes are an integral part of these consolidated financial statements.

**EMC Metals Corp.**
(An Exploration Stage Company)
CONSOLIDATED STATEMENTS OF OPERATIONS
(Expressed in Canadian Dollars)

| | Cumulative amounts from incorporation on July 17, 2006 to December 31, 2011 | Year ended December 31, 2011 | Year ended December 31, 2010 |
|---|---|---|---|
| **EXPENSES** | | | |
| Amortization | $ 2,284,219 | $ 327,954 | $ 455,227 |
| Consulting | 2,272,241 | 96,615 | 57,243 |
| Exploration | 14,425,705 | 2,079,997 | 489,397 |
| General and administrative | 7,281,463 | 634,092 | 437,198 |
| Insurance | 957,878 | 67,101 | 147,351 |
| Professional fees | 3,051,016 | 214,214 | 263,917 |
| Research and development | 3,474,068 | - | - |
| Salaries and benefits | 6,709,189 | 840,288 | 732,617 |
| Stock-based compensation (Note 11) | 5,413,675 | 292,899 | 795,268 |
| Travel and entertainment | 1,609,967 | 186,193 | 107,601 |
| **Loss before other items** | (47,479,421) | (4,739,353) | (3,485,819) |
| **OTHER ITEMS** | | | |
| Foreign exchange gain (loss) | 525,637 | (57,531) | 205,218 |
| Loss on transfer of marketable securities | (3,115,889) | - | - |
| Gain on settlement of convertible debentures | 1,449,948 | - | - |
| Gain on sale of marketable securities | 1,836,011 | - | (70,583) |
| Write-off of mineral interests | (18,091,761) | - | (1,138,432) |
| Write-off of land and water rights | (3,100,000) | (3,100,000) | - |
| Gain on insurance proceeds | 972,761 | - | - |
| Interest income (expense) | 247,218 | (223,008) | (301,244) |
| Other income | 502,965 | - | 53,723 |
| Gain on disposition of assets | 959,281 | 482,599 | 37,256 |
| Change in fair value of derivative liability (Note 9) | 485,358 | 228,741 | (22,874) |
| Unrealized gain on marketable securities | 53,830 | - | - |
| | (17,274,641) | (2,669,199) | (1,236,936) |
| **Loss before income taxes** | (64,754,062) | (7,408,552) | (4,722,755) |
| **Deferred income tax recovery** | 6,522,138 | - | - |
| **Loss and comprehensive loss for the period** | $ (58,231,924) | $ (7,408,552) | $ (4,722,755) |
| **Basic and diluted loss per common share** | | (0.05) | (0.04) |

| | | |
|---|---|---|
| **Weighted average number of common shares outstanding** | 150,404,210 | 121,344,723 |

The accompanying notes are an integral part of these consolidated financial statements.

**EMC Metals Corp.**
(An Exploration Stage Company)
CONSOLIDATED STATEMENTS OF CASH FLOWS
(Expressed in Canadian Dollars)

| | Cumulative amounts from incorporation on July 17, 2006 to December 31, 2011 | Year ended December 31, 2011 | Year ended December 31, 2010 |
|---|---|---|---|
| **CASH FLOWS FROM OPERATING ACTIVITIES** | | | |
| Loss for the period | $ (58,231,924) | $ (7,408,552) | $ (4,722,755) |
| Items not affecting cash: | | | |
| Amortization | 2,284,219 | 327,954 | 455,227 |
| Research and development | 3,474,068 | - | - |
| Consulting paid with common shares | 10,711 | - | - |
| Gain on disposal of assets | (959,281) | (482,599) | (37,256) |
| Convertible debenture costs | (1,312,878) | - | - |
| Unrealized foreign exchange | 787,112 | 72,250 | (220,672) |
| Stock-based compensation | 5,413,675 | 292,899 | 795,268 |
| Unrealized gain on marketable securities | (53,830) | - | - |
| Realized gain on marketable securities | (1,836,011) | - | 70,583 |
| Write-off of mineral properties | 18,091,761 | - | 1,138,432 |
| Write-off of land and water rights | 3,100,000 | 3,100,000 | - |
| Realized loss on transfer of marketable securities | 3,115,889 | - | - |
| Change in fair value of derivative liability | (485,358) | (228,741) | 22,874 |
| Deferred income tax recovery | (6,522,138) | - | - |
| Accrued interest expense | 21,252 | 21,252 | - |
| Accrued interest income | (2,809) | (2,809) | - |
| | (33,105,542) | (4,308,346) | (2,498,299) |
| Changes in non-cash working capital items: | | | |
| Increase in prepaids and receivables | (125,608) | (56,267) | 142,678 |
| Decrease in accounts payable and accrued liabilities | (512,828) | 335,565 | (94,913) |
| Increase in due to related parties | 1,163,028 | - | 762,028 |
| Asset retirement obligations | (1,065,891) | - | - |
| | (33,646,841) | (4,029,048) | (1,688,506) |
| **CASH FLOWS FROM INVESTING ACTIVITIES** | | | |
| Cash acquired from subsidiary | 4,857,012 | - | - |
| Cash paid for Subsidiary | (11,359,511) | - | (557,523) |
| Spin-out of Golden Predator Corp. | (76,388) | - | - |
| Restricted cash | (159,400) | (159,400) | - |
| Reclamation bonds | 795,785 | - | - |
| Proceeds from sale of marketable securities, net | (4,135,798) | - | - |
| Proceeds from sale of property, plant and equipment | 675,742 | 15,406 | 109,797 |

| | | | |
|---|---|---|---|
| Purchase of property, plant and equipment | (21,255,448) | (40,335) | (90,252) |
| Proceeds from sale of mineral interests | 500,000 | 500,000 | - |
| Additions to unproven mineral interests | (3,173,518) | (182,003) | (300,000) |
| | (33,331,524) | 133,668 | (837,978) |
| **CASH FLOWS FROM FINANCING ACTIVITIES** | | | |
| Common shares issued | 55,521,421 | 210,249 | 4,746,172 |
| Share issuance costs | (1,277,713) | - | - |
| Special warrants | 13,000,000 | - | - |
| Options exercised | 384,900 | 43,000 | 230,300 |
| Warrants exercised | 11,164,849 | 320,599 | 1,092,000 |
| Notes payable | (9,966,000) | - | - |
| Payment of promissory note | (1,260,700) | - | - |
| Advances from related party | 216,500 | - | - |
| Loans advanced to Midway | (2,000,000) | - | - |
| Loan repayment from Midway | 2,000,000 | - | - |
| | 67,783,257 | 573,848 | 6,068,472 |
| **Change in cash during the period** | 804,892 | (3,321,532) | 3,541,988 |
| **Cash, beginning of period** | - | 4,126,424 | 584,436 |
| **Cash, end of period** | $ 804,892 | $ 804,892 | $ 4,126,424 |

**Supplemental disclosure with respect to cash flows** (Note 15)

The accompanying notes are an integral part of these consolidated financial statements.

**EMC Metals Corp.**
(An Exploration Stage Company)
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY
(Expressed in Canadian Dollars)

| | Capital Stock | | | | | |
|---|---|---|---|---|---|---|
| | Number of Shares | Amount $ | Additional Paid in Capital $ | Treasury Stock $ | Deficit Accumulated During the Exploration Stage $ | Total $ |
| **Balance, July 17, 2006** | - | - | - | - | - | |
| Private placements | 5,000,000 | 3,500,000 | - | - | - | 3,500,000 |
| Excess of exchange amount over carrying amount of Springer Mining Company | - | - | - | - | (2,857,819) | (2,857,819 |
| Loss for the period | - | - | - | - | (357,670) | (357,670 |
| **Balance, December 31, 2006** | 5,000,000 | 3,500,000 | - | - | (3,215,489) | 284,511 |
| Private placements | 17,577,500 | 35,155,000 | - | - | - | 35,155,000 |
| Conversion of special warrants | 5,390,000 | 5,390,000 | - | - | - | 5,390,000 |
| Exercise of warrants | 50,000 | 75,000 | - | - | - | 75,000 |
| Share issuance costs broker s fees | - | (1,215,074) | 99,000 | - | - | (1,116,074 |
| Share issuance costs shares issued | 100,000 | 100,000 | - | - | - | 100,000 |
| Shares issued for mineral properties | 100,000 | 100,000 | - | - | - | 100,000 |
| Stock-based compensation | 40,000 | 40,000 | 489,562 | - | - | 529,562 |
| Loss for the year | - | - | - | - | (6,128,912) | (6,128,912 |
| **Balance, December 31, 2007** | 28,257,500 | 43,144,926 | 588,562 | - | (9,344,401) | 34,389,087 |
| Private placements | 5,322,500 | 10,645,000 | - | - | - | 10,645,000 |
| Conversion of special warrants | 7,610,000 | 7,610,000 | - | - | - | 7,610,000 |
| Share issuance costs broker s fees | - | (261,638) | - | - | - | (261,638 |
| Shares issued for mineral properties | 110,000 | 210,000 | - | - | - | 210,000 |
| Acquisition of Gold Standard Royalty | 2,050,000 | 4,100,000 | 143,017 | - | - | 4,243,017 |
| Corp. Acquisition of Great American Minerals | 1,045,775 | 2,091,550 | 426,672 | - | - | 2,518,222 |
| Inc. Acquisition of Fury Explorations Ltd. | 10,595,814 | 13,774,558 | 7,787,783 | (2,087,333) | - | 19,475,008 |
| Exercise of stock options | 6,637,224 | 10,027,915 | (184,265) | - | - | 9,843,650 |
| Shares issued for repayment of promissory note | 4,728,000 | 2,364,000 | - | - | - | 2,364,000 |
| Stock-based compensation | - | - | 2,324,458 | - | - | 2,324,458 |
| Loss for the year | - | - | - | - | (17,968,454) | (17,968,454 |
| **Balance, December 31, 2008** | 66,356,813 | 93,706,311 | 11,086,227 | (2,087,333) | (27,312,855) | 75,392,350 |
| Private placements | 14,500,000 | 1,190,000 | - | - | - | 1,190,000 |
| Exercise of stock options | 101,000 | 126,186 | (105,986) | - | - | 20,200 |
| Shares issued for mineral properties | 2,765,643 | 367,695 | - | - | - | 367,695 |
| Settlement of convertible debentures | 7,336,874 | 2,934,752 | 62,903 | - | - | 2,997,655 |
| Shares issued for consulting | 89,254 | 10,711 | - | - | - | 10,711 |
| Shares issued for acquisition of TTS | 19,037,386 | 2,094,112 | - | - | - | 2,094,112 |
| Stock-based compensation before spin-out | - | - | 836,240 | - | - | 836,240 |
| Spin-out of GPD | - | (18,540,194) | (11,879,384) | - | - | (30,419,578 |
| Stock-based compensation after spin-out | - | - | 979,611 | - | - | 979,611 |
| Loss for the year | - | - | - | - | (21,645,581) | (21,645,581 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Balance, December 31, 2009** | 110,186,970 | 81,889,573 | 979,611 | (2,087,333) | (48,958,436) | 31,823,415 |
| Private placements | 30,252,442 | 4,700,312 | 454,768 | - | - | 5,155,080 |
| Exercise of stock options | 1,320,000 | 456,602 | (226,302) | - | - | 230,300 |
| Exercise of warrants | 7,300,000 | 1,092,000 | - | - | - | 1,092,000 |
| Stock-based compensation | - | - | 795,268 | - | - | 795,268 |
| Loss for the year | - | - | - | - | (4,722,755) | (4,722,755 |
| **Balance, December 31, 2010** | 149,059,412 | 88,138,487 | 2,003,345 | (2,087,333) | (53,681,191) | 34,373,308 |
| Exercise of stock options | 250,000 | 118,959 | (75,959) | - | - | 43,000 |
| Exercise/expiry of warrants | 1,369,301 | 320,599 | (744,000) | 744,000 | - | 320,599 |