

## **Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations**

The following discussion of the operating results, corporate activities and financial condition of EMC Metals Corp. (hereinafter referred to as "we", "us", "EMC", or the "Company") and its subsidiaries provides an analysis of the operating and financial results between June 30, 2012 and September 30, 2012 and a comparison of the material changes in our results of operations and financial condition between the three-month period ended September 30, 2011 and the three-month period ended September 30, 2012. This discussion should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2011.

The interim statements have been prepared in accordance with US Generally Accepted Accounting Principles ("US GAAP") in accordance with the requirements of U.S. federal securities laws as applicable to the Company, and as permitted under applicable Canadian securities laws. The Company is a reporting company under applicable securities laws in Canada, and in July of 2011 also became a reporting issuer under U.S. federal laws. As a result of the Company's U.S. reporting status, the financial statements for the annual period ended December 2010 were restated in accordance with US GAAP and were filed with the SEC and Canadian securities regulators as part of our annual filing on Form 10K for the year ended December 31, 2011. The reporting currency used in our financial statements is the Canadian Dollar.

The information contained within this report is current as of November 14, 2012 unless otherwise noted. Additional information relevant to the Company's activities can be found on SEDAR at [www.sedar.com](http://www.sedar.com).

Technical information in this MD&A has been reviewed by Willem Duyvesteyn, a Qualified Person as defined by Canadian National Instrument 43-101 ("NI 43-101"). Mr. Duyvesteyn is a director and consultant of EMC Metals.

### **Overview**

EMC is a specialty metals and alloys company focusing on tungsten, molybdenum, scandium, vanadium, and other specialty metals. The Company intends to utilize its know-how and, in certain instances, patented technologies 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 the Company's precious metals portfolio in March 2009, the Company changed its name to EMC Metals Corp. The Company currently trades on the Toronto Stock Exchange under the symbol "EMC".

The Company's 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 the Company is now working to restart mine operations following sustained tightening of supply and accompanying price increases in tungsten markets.

The Company is also asserting it has earned a 50% interest in the Nyngan scandium project in New South Wales, Australia although this interest is under dispute with our partner, Jervois Mining Limited. We also own the Carlin vanadium property in Nevada, USA and four other specialty metals properties: the Fairfield scandium property (Utah, USA), and Hogtva beryllium property (central Norway) and two scandium plus specialty metals properties in southern Norway (Tordal and Evje-Iveland).

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

The Company's focus during the quarter regarding Springer Mine included maintaining that asset on standby mode, and organizing, planning and pursuing mine and mill restart. A formal sale process on the Springer asset, initiated in September 2010, was terminated in March 2012, consistent with the restart strategy.

The Company advanced the Nyngan scandium project during the first quarter of 2012 through metallurgical work, process definition, and optimization work. During February, 2012, the Company completed and presented to our joint venture partner a NI 43-101 compliant report entitled "Technical Report on the Feasibility of the Nyngan Scandium Project". On February 27, 2012, we received written notice, which we dispute, from our joint venture partner, Jervois Mining Ltd. ("Jervois"), that we had failed to meet certain Agreement earn-in milestones. On June 22, 2012 we received notification that Jervois had filed a lawsuit against us in the Supreme Court of Victoria, Australia. On August 22, 2012, we filed a formal defense and counterclaim in the Supreme Court seeking a declaration from Jervois that we have achieved the earn-in and seeking damages resulting from Jervois wrongfully

treating the joint venture as terminated. We will take all lawful steps to secure our proprietary rights to the 50% joint venture interest and to pursue damages resulting from Jervois' wrongful actions. Please see additional discussion in the following Principal Properties section.

## Principal Properties Review

**Springer Tungsten:** The Springer Tungsten Mine ("Springer"), located in Pershing County in northwestern Nevada, was constructed by Utah International Inc. for the General Electric Company ("GE"), and was completed and commissioned in late 1981. The facility consists of a 1,000 ton per day ("tpd") electro-pneumatic underground rail mine and a mill facility with crushing, grinding, flotation circuits and an APT (ammonium paratungstate) plant. Springer operated for less than a full year in 1982 before being put on care and maintenance by GE. Since acquiring Springer in 2006, EMC has spent approximately \$38 million on the facility, specifically on rehabilitation, process improvements, resource exploration, process automation and a mill throughput expansion.

On September 20, 2012 we announced the results of a Preliminary Economic Assessment ("PEA"), including an updated resource estimate. The PEA was prepared for EMC by Associated Geosciences LTD. of Calgary, Alberta, Canada, and Practical Mining LLC. of Elko, Nevada, USA, both independent mining industry consultants. The PEA provides the first NI 43-101 compliant economic analysis on Springer, and was commissioned as part of EMC's planned restart of the Springer mining and milling operations.

Highlights from the PEA/Resource Update:

- Project restart is economic, feasible, and supported by current tungsten prices, based on a five year NI 43-101 production resource;
- Five year mine life NPV of \$22.8 million (8% discount, constant dollar, after tax);
- IRR of 47% on restart capital of \$30 million;
- Indicated resource increase of 81,000 tons (+29.6 %) over previous resource estimate;
- Inferred resource increase of 837,600 tons (+76.3 %) over previous resource estimate;
- New resource added on western side of the property, no previous resource estimate; and
- Average annual tungsten (WO<sub>3</sub>) production of 134,960 MTU (total 674,790 MTU).

The PEA updates the resource estimate published in a prior NI 43-101 Technical Report titled, "NI 43-101 Technical Report on Resources, EMC Metals Corp., Springer Facility- Sutton Beds, Nevada, USA" prepared by SRK Consulting of Lakewood, Colorado, filed on SEDAR in May, 2009. The PEA both increases the resource tonnage and also adds an economic estimate to the project in restart. The resource update also adds tonnage on the western side of the property, where no resource had previously been established, despite having been the site of historic tungsten production. The western resource has exciting potential for Springer, because the historic production records and current NI 43-101 drilling confirm superior tungsten grades, albeit at narrower vein widths.

The financial analysis of the mine restart, based on the current NI 43-101 resource, defines a 5 year mine life. The overall financial results, as presented in the PEA, are as follows:

<b>Key Performance Measures Summary</b>	<b>Financial Result (US\$)</b>
<b>Capital Cost (millions)*</b>	\$29.8
<b>Average Annual Revenue (millions)</b>	\$43.2
<b>Average Annual Operating Cost (millions)</b>	\$25.0
<b>Average Operating Cost (\$/MTU)</b>	\$186
<b>Average Annual EBITDA (millions)</b>	\$17.8
<b>Constant Dollar NPV (8%)</b>	\$22.8
<b>Constant Dollar NPV (10%)</b>	\$20.1
<b>Internal Rate of Return (IRR)</b>	47%
WO <sub>3</sub> Concentrate Price Assumption/MTU (based on 80% of \$400/MTU 24 month APT price)	\$320
*NOTE: Includes working capital and contingency	

NOTE: A metric tonne unit (MTU) is the standard unit of measure for tungsten in trading markets. One MTU equals 22.04 pounds of contained WO<sub>3</sub>, or 100<sup>th</sup> of a tonne of WO<sub>3</sub>.

The mine plan in the PEA calls for the conversion of the existing Sutton Mine from a cut and fill operation, as designed by the prior operator, the General Electric Company (“GE”), to a modern longhole mining operation---more properly termed end-slicing. Sutton will be re-developed with ramps connecting drifts at various levels, modern rubber-tired equipment, and production and mine access utilizing both the existing shaft/hoist house and a new mine adit approaching mineralized beds from lower elevation ground to the south.

The mine plan also calls for a second independent mining operation at O’Byrne, on the western side of the granite intrusion, utilizing the same mining techniques and equipment, with twin adit access. The hilly topography in the western beds lends itself to declined adit techniques that achieve sufficient depth to make for economic development.

The updated NI 43-101 resource provides for 4.8 years of mining from Sutton, and only 1.5 years from O’Byrne, but at substantially higher grades.

This updated resource, included in the PEA, is as follows:

Springer Mine- Mineral Resource Statement of Resources					
Resource Category	Cut-Off Grade	Resource	Grade	Contained Tungsten Units	
	WO <sub>3</sub>	Tons	WO <sub>3</sub>	STU's	MTU's
<b>Indicated Total (Sutton only)</b>	0.20%	355,000	0.537%	190,635	172,990
<b>Inferred (by location)</b>					
Sutton Resource	0.20%	1,616,000	0.459%	741,744	673,089
George Resource	0.20%	143,950	0.423%	60,863	55,230
O'Byrne Resource	0.20%	173,670	0.862%	149,719	135,861
<b>Inferred Total</b>	0.20%	1,933,620	0.493%	952,326	864,180

Note: a short ton unit (STU) = 20 lbs. WO<sub>3</sub>; a metric tonne unit (MTU) = 22.04 lbs. WO<sub>3</sub>

The effective date of each estimate of mineral resources above is August 20, 2012.

The existing mill at Springer has benefitted from considerable investment since the purchase from GE in 2006, although there is still important change and investment left to make prior to restart. The process flowsheet calls for the production of a 65% WO<sub>3</sub> scheelite concentrate, using modern gravity separation techniques and traditional flotation circuits. There are no plans to utilize the digester system or the APT (ammonium paratungstate) plant on site at this time.

Permitting and environmental matters are largely in place, although the Company is currently seeking a right of way from the US Bureau of Land Management for rights to re-install a tailings pipeline to an existing tailings pond, planned to be put into service to secure mill tailings not backfilled into the mine.

Project economics assume a two year trailing average constant dollar \$400/MTU APT price, and derive a concentrate price from that benchmark tungsten price, which is publically quoted. All dollar amounts for costs are also considered to be constant dollar—no escalation for inflation has been considered, and thus the 8% discount rate applied to cash flows to generate Net Present Values (“NPV’s”) should also be considered a constant dollar rate.

Economics do not assume any economic recovery of molybdenum disulphide (MoS<sub>2</sub>). There is no molybdenum resource established for the property which corresponds to the mineable tungsten resource, therefore no co-product credit in the PEA. There is capital included in the \$30 million total restart estimate to separate (float) molybdenum, because it has historically been present in the resource and must be removed from concentrates to meet customer product specifications.

First concentrate production is expected in December 2013, or Q1 2014.

The NI 43-101 compliant Technical Report, titled “*Preliminary Economic Assessment on the Springer Tungsten Mine, Pershing County, Nevada, USA*”, (the “PEA”), was filed on SEDAR October 2, 2012 and is available for public review at [www.sedar.com](http://www.sedar.com).

The earlier NI 43-101 compliant resource technical report on the Springer property, independently prepared by Dr. Bart Stryhas of SRK Consulting Engineers and Scientists of Lakewood, Colorado, titled, “NI 43-101 Technical Report on Resources Springer Facility- Sutton Beds, Nevada, USA,” is dated May 15, 2009, was filed on SEDAR on May 26, 2009 and is also available for public review at [www.sedar.com](http://www.sedar.com).

**Nyngan Scandium:** In February of 2010, the Company entered into a joint venture agreement (the “JV Agreement”) with Jervois Mining Limited (“Jervois”) of Melbourne, Australia (ASX: JRV) to develop the Nyngan scandium property in New South Wales, Australia. The terms specified in the JV Agreement required EMC to earn a 50% position in the property and the JV through a two stage work program as follows:

- Stage I required EMC to spend a minimum of AUD\$500,000 on project exploration and metallurgical test work by mid December 2010, and
- Stage II required the delivery of a feasibility study in the first quarter of 2012, along with a cash payment of AUD\$1,300,000 (plus applicable GST)

The JV partners agreed to extend the stage I work timeframe into 2011 and those first stage requirements were met during the second quarter of 2011. On February 24, 2012, the Company delivered to Jervois a AUD\$1,430,000 cash payment and an independent NI 43-101 report entitled "*Technical Report on the Feasibility of the Nyngan Scandium Project*" dated February 23, 2012 (the "Report"), which was compiled by SNC-Lavalin of Brisbane, Australia. On February 27, 2012 EMC received written notice from Jervois rejecting the Report as inadequate, claiming that the Report did not fall within the definition of "Feasibility Study" provided for in the JV Agreement. Jervois also subsequently returned the cash payment to EMC.

On March 23, 2012, the Company announced that, following discussions with Jervois, the parties agreed to engage in further without prejudice communications in an attempt to resolve the dispute. Those discussions have now ceased and on June 22, 2012, we received notification that Jervois had filed a lawsuit against us in the Supreme Court of Victoria, Australia. The lawsuit brought by Jervois contends that:

- The JV Agreement (including EMC's earn-in right) was automatically terminated because the Report failed to meet the standards set out in that agreement,
- EMC's formal Dispute Notice (dated March 13, 2012) has no force and effect as the JV Agreement was effectively terminated by Jervois prior to that date, and
- EMC must remove legal claims placed on the Nyngan property by EMC that prevent Jervois from transferring property interests.

On August 20, 2012, EMC filed its formal defense and a counterclaim with the Supreme Court in Victoria, Australia. In its counterclaim, EMC has sought relief that includes:

- A declaration from Jervois that EMC satisfied the earn-in conditions set out in clause 6.2 of the Joint Venture Agreement and that upon payment to Jervois of the sum of AUD\$1.3 million (plus GST), EMC is entitled to a 50% interest in the Joint Venture, and
- A damages award, to compensate EMC for the loss and damage that it has suffered as a result of Jervois wrongfully treating the joint venture as terminated. The damages counterclaim pleaded by EMC specifically relates to the delay that Jervois has caused to the project, associated losses to the project, and costs suffered by EMC, ranging up to AUD\$100 million.

The Court directed that the proceeding first be referred to a court-approved mediation, assisted by an independent facilitator, and that such mediation take place by October 1, 2012.

The mediation took place on September 27, 2012. A settlement did not result.

The Supreme Court proceedings will therefore continue, and EMC will vigorously prosecute its defense and counterclaim. Both the defense and counterclaim pleadings are publicly available from the Court in Victoria, Australia.

**Carlin Vanadium:** The Carlin vanadium project consists of 72 unpatented mineral claims covering approximately 578 hectares, located along the western flank of the Piñon Range near the town of Carlin, Nevada.

The Carlin resource was discovered in the 1960s by Union Carbide Corp. ("UCC") when significantly anomalous vanadium was found in samples collected by UCC Geologists (Galli, 1968, Morgan, 1968). During 1967 and 1968 UCC conducted exploration work including geological mapping, ~15,000 feet of trenching, and ~36,500 feet of drilling in 112 holes, outlining a zone of vanadium mineralization within the current claim boundary.

The vanadium mineralization is hosted within a 15-metre (50-foot) thick horizon of black shales within the Devonian Woodruff Formation, which consists of dark grey to black siliceous mudstones, and chert with lesser amounts of shale, siltstone, dolomitic siltstone, and calcareous sandstone. The Woodruff formation is unconformably overlain by shallow dipping Permian-Pennsylvanian siltstones, shales, conglomerates, and carbonates of the Chainman and Diamond Peak Formations.

Historical metallurgical test work from the Carlin vanadium project, completed by the U.S. Department of Mines (Brooks and Potter, 1974), showed that up to 69% of the vanadium could be recovered from weathered dolomitic shales containing 1% V<sub>2</sub>O<sub>5</sub> (vanadium oxide). Preliminary test work on fresh black shales shows similar recoveries using a salt roast and acid leaching.

In April, 2010, EMC announced receipt of an NI 43-101 compliant technical report and resource estimation for the Carlin vanadium project, located approximately 40 kilometers south of Elko, Nevada, USA. The Technical Report, titled, "NI 43-101 Technical Report on Resources, EMC Metals Corp., Carlin Vanadium Project, Carlin, Nevada", prepared by SRK Consulting US, was subsequently filed on SEDAR in May, 2010. The technical report outlines a NI 43-101 compliant inferred resource of 25.4 million tonnes grading 0.5% V<sub>2</sub>O<sub>5</sub> for a total of 289 million pounds of total contained V<sub>2</sub>O<sub>5</sub>, as outlined below:

Carlin Vanadium Project NI 43-101 Resource Estimation Stryhas (2010) of SRK Consulting				
Resource Category	Cut-off V <sub>2</sub> O <sub>5</sub> (%)	Total (tonnes)	Grade V <sub>2</sub> O <sub>5</sub> (%)	Contained V <sub>2</sub> O <sub>5</sub> (pounds)
Inferred	0.30	25,400,000	0.51	289,000,000

### Exploration Properties Review

**Norwegian Properties:** In April of 2011, the Company acquired 100% option rights to the Tørdal property in Telemark County, Southern Norway. The property, originally encompassing a 40 sq. km area, has since been increased to 140 sq. km. As part of the same agreement, we also acquired 100% option rights to the Evje-Iveland, property, located west of the Tørdal property in Aust-Agder County, also in Southern Norway. The Evje-Iveland property originally encompassed an 80 sq km area, but has been subsequently been increased in size to 150 sq. km. Both Tørdal and Evje-Iveland contain pegmatite formations, prospective for scandium and REE's, while Evje-Iveland is also prospective for certain base metals, notably nickel.

In September, 2011 EMC entered into an option agreement to earn a 100% interest in the exploration rights to a beryllium exploration site in Central Norway, known as the Hogtuva property. To earn 100% of the exploration rights, we must pay 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.

Exploration work done to date has focused on the Tørdal pegmatites. In July, 2011 we announced encouraging assay results from a surface soil sampling program conducted in June on a 3.75 sq. km portion at Tørdal.

Highlights of Initial Surface Soil Sample Program are as follows:

- 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 meters, 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 meters within the Heftetjern pegmatite field, and
- Many previously unmapped pegmatite dykes were noted in the areas traversed, some traceable on surface for several hundred meters.

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.

**Fairfield Scandium Exploration Property:** In September 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 [ScPO<sub>4</sub>·2H<sub>2</sub>O], for over a century.

### Other Developments

On February 15, 2012 the Company entered into USD\$3,000,000 loan financing. The loan has a maturity date of 18 months from February 15, 2012 and interest is payable monthly in arrears at a rate of 7% per annum. The lender may convert a maximum of USD\$2,000,000 of the principal amount of the loan into 10,000,000 common shares of the Company. In connection with the loan, the Company issued 3,000,000 warrants to the lender, each warrant exercisable into one common share of the Company at an exercise price of \$0.20 per share for a period of 24 months from the closing date. The Company will use commercially reasonable efforts to file a registration statement in the United States, qualifying any common shares issuable for resale.

The Company paid a cash commission of USD\$150,000 and issued 750,000 agent's warrants to the agent. Each agent's warrant is exercisable into one common share of the Company at an exercise price of D\$0.20 per share for a period of 24 months from the closing date.

The loan is secured by an interest in the assets of the Company's subsidiary, Springer Mining Company. The Company intends to use the loan to fund the advancement of the Company's metal and mineral properties and for general working capital purposes.

On April 24, 2012 the Company issued 2,335,000 stock options with an exercise price of \$0.08 per share, exercisable until April 24, 2017 to directors, officers, employees and other service providers of the Company.

On July 30, 2012, the Company announced that it had completed a private placement of 11,679,624 common shares of the Company at a price of \$0.06 per share for gross proceeds of \$701,753. The proceeds from the financing will be used for general working capital and restart work on the Springer Tungsten Mine.

On August 8, 2012 the Company issued 1,550,000 stock options with an exercise price of \$0.07 per share, exercisable until August 8, 2017 to directors, officers, and employees of the Company.

### Operating results-Revenues and Expenses

The Company continued its tight cost management at the Springer facility. The Company believes that it has fulfilled its commitments in respect of the Nyngan Joint Venture with Jervois Mining Limited.

### Summary of quarterly results

	2012			2011				2010
	Q3	Q2	Q1	Q4	Q3	Q2	Q1	Q4
Net Sales	-	-	-	-	-	-	-	-
Net Income (Loss)	(1,140,551)	(1,386,161)	(805,905)	(4,375,465)	(2,095,615)	(590,022)	(347,450)	(1,341,524)
Basic and diluted Net Income (Loss) per share	(0.01)	(0.01)	(0.00)	(0.03)	(0.01)	(0.01)	(0.00)	(0.01)

### Results of Operations for the three months ended September 30, 2012

The net loss for the quarter was \$1,140,551, a decrease of \$955,064 from \$2,095,615 in the same quarter of the prior year. Details of the individual items contributing to the decreased net loss are as follows:

**Q3 2012 vs. Q3 2011 - Variance Analysis**

<b>Item</b>	<b>Variance Favourable / (Unfavourable)</b>	<b>Explanation</b>
Foreign exchange	\$681,027	Foreign exchange losses and gains result from the holding of short and long term obligations (most notably US dollar denominated debenture and notes payable totalling US\$6.7 million) and cash in currencies other than Canadian dollars (primarily US dollars). The Canadian dollar strengthened against other currencies in Q3, 2012. The Canadian dollar weakened against other currencies during the comparable quarter of 2011, resulting in a \$681,027 favourable variance between the quarters.
Exploration	\$227,565	Q3 of 2012 expenses reflected lower activity levels on Nyngan project metallurgical work.
Consulting	\$138,348	During the first three quarters of 2011 EMC contracted for a significant portion of its administrative services. During the second half of 2011, the Company replaced contract expenses with direct office and staff, resulting in a decrease in consulting expenses.
Professional fees	\$115,971	Decrease in non-recurring expenses in 2012 resulting from one-time costs to complete our US filer status in 2011.
Amortization	\$37,184	Lower depreciation costs reflect an increase in fully depreciated assets at the Springer mine.
Travel and entertainment	\$28,409	Lower travel costs incurred in Q3, 2012 as exploration work at Nyngan was completed in early 2012.
Insurance	(\$11,432)	Higher insurance policy costs, providing broader coverage led to this unfavorable variance.
General and administrative	(\$28,998)	Increased G&A expenses relate to the non-cash amortization of costs associated with Q1, 2012 financing. No such costs were incurred in the third quarter of 2011.
Stock based compensation	(\$63,416)	During Q3, 2012 stock options were issued. In the comparable period in 2011 fewer options were issued resulting in lower stock based compensation costs at that time.
Interest expense	(\$69,557)	Monthly interest due on incurrence of convertible debt during February 2012 resulted in a higher interest expense during the current quarter when compared with the same quarter of 2011.
Salaries and benefits	(\$100,037)	During the first three quarters of 2011 EMC contracted for a significant portion of its administrative services. During the second half of 2011, the Company replaced contract expenses with direct office and staff resulting in increased salary

Q3 2012 vs. Q3 2011 - Variance Analysis		
Item	Variance Favourable / (Unfavourable)	Explanation
		expenses.

### Results of Operations for the nine months ended September 30, 2012

The net loss for the nine month period was \$3,332,617, an increase of \$299,530 from \$3,033,087 in the same period of the prior year, mainly as a result of a non-recurring gain on the sale of the Fostung property during 2011. Details of the individual items contributing to the increased net loss are as follows:

Nine months ended September 30 2012 vs. nine months ended September 30, 2011 - Variance Analysis		
Item	Variance Favourable / (Unfavourable)	Explanation
Gain on disposition of assets	(\$491,897)	In the second quarter of 2011 the Company disposed of the Fostung property for a profit of \$491,897. No such disposal took place in Q2 2012.
Salaries and benefits	(\$238,956)	Negative variance is due primarily to the replacement of contracted administrative services with direct office and staff during the second half of 2011 and through 2012.
Change in fair value of derivative liability	(\$228,741)	A one-time (non-cash), non-recurring valuation recognition event was taken in Q1 of 2011, resulting in the negative variance to 2012.
General and administrative	(\$177,634)	The increased costs relates to the amortization of costs related to the issuance of the convertible debt which are amortized over the life of the convertible debt, equipment repairs at Springer, TSX fees and overall increased activity levels from one year ago.
Interest expense	(\$140,347)	Monthly interest due on incurrence of convertible debt during February 2012 resulted in a higher interest expense during the 9 month period ended September 30, 2012 when compared with the same period of 2011.
Stock-based compensation	(\$135,940)	During the first 9 months of 2012, stock options were issued. 75% of these options vested immediately which resulted in immediate expensing of this non-cash item. Fewer stock options were issued during the same period of 2011 and contained longer vesting provisions.
Insurance	(\$30,521)	Higher insurance policy costs, providing broader coverage led to this unfavorable variance.
Travel and entertainment	\$75,390	Lower travel costs have been incurred in 2012 as exploration work at Nyngan was completed early in 2012.

Nine months ended September 30 2012 vs. nine months ended September 30, 2011 - Variance Analysis		
Item	Variance Favourable / (Unfavourable)	Explanation
Professional fees	\$75,896	Lower audit, legal and professional costs are as a result of costs being incurred in 2011 to allow the Company to report as a United States reporting entity. These types of costs were not incurred in 2012. Also in 2011 the acquisition of new properties and disposition of the Fostung resulted in legal costs of the type that were not incurred in 2012.
Amortization	\$83,654	Certain assets were fully amortized in the year ending December 31, 2011.
Consulting	\$192,752	In-house staff in 2012 replaced administrative consulting costs in 2011.
Foreign exchange	\$321,339	Foreign exchange losses and gains result from the holding of short and long term obligations (most notably US dollar denominated debenture and notes payable totalling US\$6.7 million) and cash in currencies other than Canadian dollars (primarily US dollars). The Canadian dollar strengthened against other currencies during the first nine months of 2012 offsetting the exchange loss suffered on the funds sent and returned for the Nyngan project. The Canadian dollar weakened against other currencies during the comparable nine months of 2011. This swing resulted in the \$321,339 favourable variance this year.

### Cash flow discussion for the nine months ended September 30, 2012 compared to September 30, 2011

The cash outflow for operating activities was \$3,025,029, an increase of \$175,848 (September 30, 2011 – \$2,849,181), due to increased activity levels as described in the variance analysis in addition to a decrease in accounts payable during the period.

Cash outflows for investing activities increased by \$420,227 to \$161,436 (September 30, 2011 – \$258,791 (cash inflow)) due to the payment of \$66,611 for the Company's buy-in on the Hogtuva property in Norway, the purchase of computer hardware for the Sparks office and a foreign exchange loss related to the Nyngan project earn-in.

Cash inflows from financing activities increased by \$2,356,228 to \$2,930,076 (September 30, 2011 - \$573,848), reflecting issuance of a convertible debenture in February and the closing of a private placement in July. These financing inflows were partially offset by the repayment of a promissory note.

### Financial Position

#### Cash

The Company's cash position decreased during the nine month period by \$256,389, to \$548,503 (December 31, 2011 - \$804,892) primarily due to ongoing operational costs and the repayment of a promissory note of US\$500,000. This was partially offset by the issuance of a convertible debenture for US\$3,000,000 and the closing of a private placement in July of \$701,753.

### *Marketable securities*

Marketable securities remain unchanged at \$2,250 (December 31, 2011 - \$2,250).

### *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 \$171,011 to \$30,505,415 (December 2011 - \$30,676,426) is due to amortization of net fixed assets.

### *Mineral interests*

Mineral interests increased by \$66,611 to \$746,322 (December 31, 2011 - \$679,711) because of a progress payment on the Hogtva property in Norway.

### *Accounts Payable*

Accounts Payable has decreased by \$298,903 to \$251,178 (December 2011 – \$550,081) due to a general decrease in activity from the year-end.

### *Convertible Debenture*

During February 2012, a debenture of US\$3,000,000 was issued. The amount reflected in the balance sheet represents the convertible portion of the debenture, less payments of legal and commission fees.

### *Promissory note payable – current portion*

The current promissory note payable increased by \$4,576,714 to \$Nil (December 31, 2011 - \$529,752) which is attributable to the note portion of the financing taken out in February of this year becoming due within the next 12 months as well as the note entered into to acquire land and water rights at the Springer mine becoming due on July 3, 2013.

### *Promissory note payable – long-term portion*

The long-term promissory note payable decreased by 3,813,750 to nil (December 31, 2011 - \$3,813,750) due to the reclassification of of the non-convertible portion of the February 2012 convertible debenture to a current liability.

### *Capital Stock*

Capital stock increased by \$701,753 to \$89,279,798 (December 31, 2011 - \$88,578,045) as a result of the private placement completed in July.

Additional paid-in capital increased by \$567,972, to \$2,044,257 (December 31, 2011 - \$1,476,285) as a result of the warrants issued in association with the convertible debt financing and the expensing of stock options.

## **Liquidity and Capital Resources**

At September 30, 2012, the Company had a working capital of (\$5,852,775) including cash of \$548,503 as compared to a working capital of (\$80,533) including cash of \$804,892 at December 31, 2011. Also included in working capital, at June 30, 2012, were marketable securities with a market value of \$2,250 (December 31, 2011 - \$2,250).

During the nine month period ended September 30, 2012, the Company received cash of \$701,753 (2011 - \$210,249) for stock issuances. At September 30, 2012, the Company had 3,750,000 share purchase warrants exercisable at \$0.20 per share which have the potential upon exercise to convert to approximately \$750,000 in cash over the next two years. Further, a total of 13,546,250 stock options exercisable between \$0.07 and \$2.00 have the potential upon exercise to generate a total of \$1,947,363 in cash over the next four and three quarter's years. There is no assurance that these securities will be exercised.

Our major capital expenditure requirements in the next 12 months relate to our efforts to restart the Springer Tungsten project, certain earn-in requirements associated with our projects in Norway, and the maturity of certain loan facilities. Detail on the loan maturities is as follows:

- Cosgrave Ranch property mortgage maturity in August 2013-US\$3,750,000
- Convertible debenture, maturing in August 2013 - US\$3,000,000

We expect these commitments will be funded from available cash when due in 2013, although US\$2,000,000 of the debenture is convertible, at the lender's discretion, to shares of the Company. The Company will need additional funding to meet the commitments shown above and will seek to raise additional equity financing in the short term or restructure certain obligations.

The Company's continued development is contingent upon its 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 the Company; however, management is committed to pursuing all possible sources of financing in order to execute its business plan. The Company continues its cost cutting measures to conserve cash to meet its operational obligations.

### **Outstanding share data**

At the date of this report the Company has 162,358,337 issued and outstanding common shares, 13,546,250 stock options currently outstanding at a weighted average exercise price of \$0.14, and 3,750,000 warrants currently outstanding at a weighted average exercise price of \$0.20.

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

At September 30, 2012, the Company 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 the Company.

### **Transactions with Related Parties**

A promissory note due to a current director of the company (principal balance of US\$500,000) matured and was paid during June 2012. The promissory note was originally issued in November 2009 as partial payment for the acquisition of a mineral technology company (TTS), which remains a subsidiary of EMC.

### **Proposed Transactions**

There are no proposed transactions outstanding other than as disclosed.

### **Critical Accounting Estimates**

The preparation of financial statements in conformity with generally accepted accounting policies requires management of the Company 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*

The Company uses 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 the Company makes will likely change from time to time. At the time the fair value is determined; the methodology the Company uses 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.

#### *Future income taxes*

The Company accounts for tax consequences of the differences in the carrying amounts of assets and liabilities and their tax bases using tax rates expected to apply when these temporary differences are expected to be settled. When the future 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. The Company has taken a valuation allowance against all such potential tax assets.

#### *Mineral properties and exploration and development costs*

We capitalize 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.

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

The Company's financial instruments consist of cash, investments in trading securities, subscriptions receivable, receivables, accounts payable and accrued liabilities, due to related parties, convertible debentures and promissory notes payable. It is management's opinion that the Company is not exposed to significant interest, currency or credit risks arising from its financial instruments. The fair values of these financial instruments approximate their carrying values unless otherwise noted. The Company has its cash primarily in one commercial bank in Vancouver, British Columbia, Canada.

#### **Risk Factors**

Prior to making an investment decision investors should consider the investment risks set out below and those described elsewhere in this document, which are in addition to the usual risks associated with an investment in a business at an early stage of development. The directors of the Company consider the risks set out below to be the most significant to potential investors in the Company, but are not all of the risks associated with an investment in securities of the Company. If any of these risks materialize into actual events or circumstances or other possible additional risks and uncertainties of which the Directors are currently unaware, or which they consider not to be material in relation to the Group's business, actually occur, the Group's assets, liabilities, financial condition, results of operations (including future results of operations), business and business prospects, are likely to be materially and adversely affected. In such circumstances, the price of the Company's securities could decline and investors may lose all or part of their investment.

#### ***EMC Will Require Significant Amounts of Additional Capital in the Future***

The Company has limited financial resources. The Company will continue to make substantial capital expenditures related to exploration, development and production. In particular the Company will have further capital requirements as it proceeds to expand its present exploration activities at its mineral projects, or to take advantage of opportunities for acquisitions, joint ventures or other business opportunities that may be presented to it.

In addition, the Company may incur major unanticipated liabilities or expenses. There can be no assurance that the Company will be able to obtain necessary financing in a timely manner on commercially acceptable terms, if at all.

Volatile demand for tungsten and other metals and the volatile prices for tungsten and other metals may make it difficult or impossible for the Company to obtain debt financing or equity financing on commercially acceptable terms or at all. Failure to obtain such additional financing could result in delay or indefinite postponement of further exploration and development of its tungsten and other mineral projects with the possible loss of the rights to such properties. If exploration or the development of any mine is delayed, such delay would have a material and adverse effect on the Company's business, financial condition and results of operation.

#### ***Stage of Development***

The Company's properties are in the exploration stage and the Company does not have an operating history. Exploration and development of mineral resources involves a high degree of risk and few properties which are explored are ultimately developed into producing properties. The amounts attributed to the Company's interest in its properties as reflected in its financial statements represent acquisition and exploration expenses and should not be

taken to represent realizable value. There is no assurance that the Company's exploration and development activities will result in any discoveries of commercial bodies of ore. The long-term profitability of the Company's operations will be in part directly related to the cost and success of its exploration programs, which may be affected by a number of factors such as unusual or unexpected geological formations, and other conditions. As a result of the Company's lack of operating history, it also faces many of the risks inherent in starting a new business.

### ***Profitability of Operations***

The Company is not currently operating profitably and it should be anticipated that it will operate at a loss at least until such time as production is achieved from one of the Company's properties, if production is, in fact, ever achieved. The Company has never earned a profit. Investors also cannot expect to receive any dividends on their investment in the foreseeable future.

### ***Tungsten and other mineral Industries Competition is Significant***

The international tungsten and other mineral industries are highly competitive. The Company will be competing against competitors that may be larger and better capitalized, have state support, have access to more efficient technology, and have access to reserves of tungsten and other mineral that are cheaper to extract and process. As such, no assurance can be given that the Company will be able to compete successfully with its industry competitors.

### ***Fluctuations in Metal Prices***

Although the Company does not hold any known mineral reserves of any kind, its future revenues, if any, are expected to be in large part derived from the future mining and sale of tungsten and other metals or interests related thereto. The prices of these commodities have fluctuated widely, particularly in recent years, and are affected by numerous factors beyond the Company's control including international economic and political conditions, expectations of inflation, international currency exchange rates, interest rates, global or regional consumption patterns, speculative activities, levels of supply and demand, increased production due to new mine developments and improved mining and production methods, availability and costs of metal substitutes, metal stock levels maintained by producers and others and inventory carrying costs. The effect of these factors on the prices of tungsten and other metals, and therefore the economic viability of the Company's operations, cannot be accurately predicted.

Depending on the price obtained for any minerals produced, the Company may determine that it is impractical to commence or continue commercial production.

### ***EMC Metals Corp.'s Operations are Subject to Operational Risks and Hazards Inherent in the Mining Industry***

The Company's business is subject to a number of inherent risks and hazards, including environmental pollution; accidents; industrial and transportation accidents, which may involve hazardous materials; labor disputes; power disruptions; catastrophic accidents; failure of plant and equipment to function correctly; the inability to obtain suitable or adequate equipment; fires; blockades or other acts of social activism; changes in the regulatory environment; impact of non-compliance with laws and regulations; natural phenomena, such as inclement weather conditions, underground floods, earthquakes, pit wall failures, ground movements, tailings, pipeline and dam failures and cave-ins; and encountering unusual or unexpected geological conditions and technical failure of mining methods.

There is no assurance that the foregoing risks and hazards will not result in damage to, or destruction of, the Company's tungsten and other mineral properties, personal injury or death, environmental damage, delays in the Company's exploration or development activities, costs, monetary losses and potential legal liability and adverse governmental action, all of which could have a material and adverse effect on the Company's future cash flows, earnings, results of operations and financial condition.

### ***Mineral Reserve and Resource Estimates are Only Estimates and May Not Reflect the Actual Deposits or the Economic Viability of Tungsten, Scandium and/or Gold Extraction***

Reserve and resource figures included for tungsten and other minerals are estimates only and no assurances can be given that the estimated levels of tungsten and other minerals will actually be produced or that the Company will receive the tungsten and other metal prices assumed in determining its reserves. 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. While the Company believes that the reserve and resource estimates included are well established and reflect management's best estimates, by their nature reserve and resource estimates are imprecise and depend, to a certain extent, upon statistical inferences which may ultimately prove unreliable. Furthermore, market price fluctuations in tungsten and other metals, as well as increased capital or production costs or reduced recovery rates, may render ore reserves containing lower grades of mineralization uneconomic and may ultimately result in a restatement of reserves. 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.

### ***Exploration, Development and Operating Risk***

The exploration for and development of tungsten and other mineral properties involves significant risks which even a combination of careful evaluation, experience and knowledge may not eliminate. While the discovery of an ore body may result in substantial rewards, few properties which are explored are ultimately developed into producing mines. Major expenses may be required to locate and establish mineral reserves, to develop metallurgical processes and to construct mining and processing facilities at a particular site. Whether a mineral deposit will be commercially viable depends on a number of factors, some of which are: the particular attributes of the deposit, such as size, grade and proximity to infrastructure; metal prices, which are highly cyclical, drilling and other related costs which appear to be rising; and government regulations, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of minerals and environmental protection. The exact effect of these factors cannot be accurately predicted, but the combination of these factors may result in the Company not receiving an adequate return on invested capital.

### ***Currency Risk***

The Company maintains accounts in Canadian and American currency. The Company's equity financings are sourced in Canadian dollars but for the most part it incurs its expenditures in local currencies or in US dollars. The Company's operations are subject to foreign currency fluctuations and such fluctuations may materially affect the Company's financial position and results. The Company does not engage in currency hedging activities.

### ***Environmental Risks and Hazards***

All phases of the Company's operations are subject to environmental regulation in the jurisdictions in which it operates. These regulations mandate, among other things, the maintenance of air and water quality standards and land reclamation. They also set forth limitations on the general, transportation, storage and disposal of solid and hazardous waste. Environmental legislation is evolving in a manner which will require stricter standards and enforcement, increased fines and penalties for non-compliance, more stringent environmental assessments of proposed projects and a heightened degree of responsibility for companies and their officers, directors and employees. There is no assurance that future changes in environmental regulation, if any, will not adversely affect the Company's operations. Environmental hazards may exist on the properties which are unknown to the Company at present and which have been caused by previous or existing owners or operators of the properties. Reclamation costs are uncertain and planned expenditures estimated by management may differ from the actual expenditures required.

### ***Government Regulation***

The Company's mineral exploration and planned development activities are subject to various laws governing prospecting, mining, development, production, taxes, labor standards and occupational health, mine safety, toxic substances, land use, water use, land claims of local people and other matters. Although the Company believes its exploration and development activities are currently carried out in accordance with all applicable rules and regulations, no assurance can be given that new rules and regulations will not be enacted or that existing rules and regulations will not be applied in a manner which could limit or curtail production or development.

Many of the mineral rights and interests of the Company are subject to government approvals, licenses and permits. Such approvals, licenses and permits are, as a practical matter, subject to the discretion of applicable governments or governmental officials. No assurance can be given that the Company will be successful in maintaining any or all of the various approvals, licenses and permits in full force and effect without modification or revocation. To the extent such approvals are required and not obtained, the Company may be curtailed or prohibited from continuing or proceeding with planned exploration or development of mineral properties. Failure to comply with applicable laws, regulations and permitting requirements may result in enforcement actions thereunder, including orders issued by regulatory or judicial authorities causing operations to cease or be curtailed, and may include corrective measures requiring capital expenditures, installation of additional equipment or remedial actions. Parties engaged in mining operations or in the exploration or development of mineral properties may be required to compensate those suffering loss or damage by reason of the mining activities and may have civil or criminal fines or penalties imposed for violations or applicable laws or regulations.

Amendments to current laws and regulation governing operations or more stringent implementation thereof could have a substantial impact on the Company and cause increases in exploration expenses, capital expenditures or production costs or reduction in levels of production at producing properties or require abandonment or delays in development of new mining properties.

### ***EMC has no History of Mineral Production or Mining Operations***

The Company has never had tungsten and other mineral producing properties. There is no assurance that commercial quantities of tungsten and other minerals will be discovered at the Properties or other future properties nor is there any assurance that the Company's exploration program thereon will yield positive results. Even if commercial quantities of tungsten and other minerals are discovered, there can be no assurance that any property of the Company will ever be brought to a stage where tungsten and other mineral resources can profitably be produced therefrom. Factors which may limit the ability of the Company to produce tungsten and other mineral resources from its properties include, but are not limited to, the spot prices of tungsten and other metals, availability of additional capital and financing and the nature of any mineral deposits.

The Company does not have a history of mining operations and there is no assurance that it will produce revenue, operate profitably or provide a return on investment in the future.

### ***Future Sales of Common Shares by Existing Shareholders***

Sales of a large number of Common Shares in the public markets, or the potential for such sales, could decrease the trading price of the Common Shares and could impair the Company's ability to raise capital through future sales of Common Shares. Substantially all of the Common Shares can be resold without material restriction in Canada.

### ***No Assurance of Titles or Borders***

The acquisition of the right to exploit mineral properties is a very detailed and time consuming process. There can be no guarantee that the Company has acquired title to any such surface or mineral rights or that such rights will be obtained in the future. To the extent they are obtained, titles to the Company's surface or mineral properties may be challenged or impugned and title insurance is generally not available. The Company's surface or mineral properties may be subject to prior unregistered agreements, transfers or claims and title may be affected by, among other things, undetected defects. Such third party claims could have a material adverse impact on the Company's operations.

### **Information Regarding Forward-Looking Statements**

This Management's Discussion and Analysis of Financial Condition and Results of Operations contain certain forward-looking statements. Forward-looking statements include but are not limited to those with respect to the prices of tungsten and other metals, the estimation of mineral resources and reserves, the realization of mineral reserve 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, permitting time lines, currency fluctuations, requirements for additional capital, Government regulation of mining operations, environmental risks, unanticipated reclamation expenses, title disputes or claims and limitations on insurance coverage and the timing and possible outcome of pending litigation. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes" or variations of such words and phrases, or statements 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 the actual results, performance or achievements of EMC to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Such risks and uncertainties include, among others, the actual results of current exploration activities, conclusions or economic evaluations, changes in project parameters as plans continue to be refined, possible variations in grade and or recovery rates, failure of plant, equipment or processes to operate as anticipated, accidents, labor disputes or other risks of the mining industry, delays in obtaining government approvals or financing or incompleteness of development or construction activities, risks relating to the integration of acquisitions, to international operations, and to the prices of tungsten and other metals. While EMC has 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. EMC expressly disclaims any intention or obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.

#### **Item 4. Controls and Procedures**

##### **Disclosure Controls and Procedures**

At the end of the period covered by this Quarterly Report on Form 10-Q for the three months ended September 30, 2012, an evaluation was carried out under the supervision of and with the participation of the Company's management, including the Chief Executive Officer ("CEO") and Chief Financial Officer ("CFO"), of the effectiveness of the design and operation of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act). It is the responsibility of the Company's management for establishing and maintaining adequate internal control over financial reporting for the Company.

The Company took into consideration the following three characteristics common to companies of a similar size:

- The limited number of personnel in smaller companies, which constrains the Company's ability to fully segregate conflicting duties;
- The Company relies on an active Board and management with open lines of communication to maintain the effectiveness of the Company's disclosure controls and procedures.
- The dynamic and evolving nature of smaller companies, which limits their ability to have static processes that are well-documented.

In addition, management has relied upon certain informal procedures and communication, and upon "hands-on" knowledge of senior management to maintain the effectiveness of disclosure controls and procedures.

Based on that evaluation the CEO and the CFO have concluded that as of the end of the period covered by this report, the Company's disclosure controls and procedures are effective in ensuring that: (i) information required to be disclosed by the Company in reports that it files or submits to the SEC under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in applicable rules and forms and (ii) material information required to be disclosed in our reports filed under the Exchange Act is accumulated and communicated to our management, including our CEO and CFO, as appropriate, to allow for accurate and timely decisions regarding required disclosure.

##### **Changes in Internal Control over Financial Reporting**

During the period covered by this report, there were no changes to internal control over financial reporting that materially affected or are reasonably likely to materially affect our internal control over financial reporting.