



## **MANAGEMENT DISCUSSION AND ANALYSIS FOR THE THREE MONTHS AND NINE MONTHS ENDED SEPTEMBER 30, 2013**

*The following management discussion and analysis ("MD&A") of financial results is dated November 29, 2013 and reviews the business of BacTech Environmental Corporation (the "Company" or "BacTech"), for the three months and nine months ended September 30, 2013, and should be read in conjunction with the accompanying unaudited condensed consolidated interim financial statements and related notes for the three months and nine months ended September 30, 2013, as well as the audited annual consolidated financial statements for the year ended December 31, 2012 and related MD&A. This MD&A and the accompanying unaudited interim condensed consolidated financial statements and related notes for the three months and nine months ended September 30, 2013 have been reviewed by the Company's Audit Committee and approved by the Company's Board of Directors.*

*This MD&A contains certain forward-looking statements, such as statements regarding potential mineralization, resources and research results, and future plans and objectives of the Company, that are subject to various risks and uncertainties. There can be no assurance that such statements will prove to be accurate, and actual results and future events could differ materially from those anticipated in such statements. Readers are cautioned not to place undue reliance on these forward-looking statements. Forward-looking statements contained herein are made as of the date of this MD&A and the Company disclaims, other than as required by law, any obligation to update any forward-looking statements whether as a result of new information, results, future events, circumstances, or if management's estimates or opinions should change, or otherwise.*

### **A. Core Business Strategy**

BacTech Environmental Corporation (the "Company" or "BacTech") was incorporated by REBgold Corporation ("REBgold" and formerly known as BacTech Mining Corporation) on October 5, 2010 under the *Canada Business Corporations Act*. Through the completion of the Plan of Arrangement ("Arrangement") transaction described below, the Company was granted a perpetual, exclusive, royalty free license to use REBgold Corporation's proprietary bioleaching technology ("BACOX") in the remediation business for mining. The technology utilizes bacteria to liberate precious and base metals and has been traditionally used to treat difficult-to-treat sulphide ores and concentrates. The business plan for the Company is to apply the bioleaching technology to abatement and reclamation projects to remove harmful elements such as arsenic and sulphur from the environment, where this can be assisted by a positive cash flow from metal recovery. Examples of metals which can be extracted include gold, silver, cobalt, nickel, copper, uranium and zinc.

Bioleaching is an environmentally-friendly process technology for treating difficult-to-treat sulphide ores and concentrates. By replacing smelting and/or roasting with a bioleach process, the production of sulphur dioxide emissions which is the primary source of acid rain, and arsenic trioxide are

eliminated. Furthermore, the capital and operating costs of a bioleach facility are significantly less when compared to other existing treatment methods.

Plan of Arrangement (“Arrangement”)

Effective December 2, 2010, REBgold completed a divisive reorganization by way of an Arrangement whereby a newly-formed subsidiary, BacTech Environmental Corporation, was granted rights and interests in REBgold's existing and proposed tailings remediation projects and an exclusive, perpetual, royalty-free licence to use REBgold’s proprietary bioleaching technology for reclamation of mine tailings and waste rock. REBgold retained the primary rights to the bioleaching technology, as well as all of REBgold’s existing project assets.

On December 2, 2010, BacTech started to trade on the Canadian National Stock Exchange under the symbol “BAC” and REBgold continued to trade on the TSX Venture Exchange under the symbol “RBG”. On December 2, 2010, under the terms of the Arrangement, REBgold's shareholders received, in exchange for each existing common share of REBgold, one new common share of REBgold and one-fifth of a common share of BacTech Environmental Corporation.

**B. Mineral Reclamation Projects**

The mineral reclamation projects and deferred assessment and evaluation expenditures are comprised as follows:

	<b>Snow Lake</b>	<b>Total</b>
<b>Balance December 31, 2011</b>	<b>341,259</b>	32,553
Third party project contributions	<b>(300,000)</b>	(300,000)
Expenditures on property	<b>800,885</b>	800,885
<b>Balance, December 31, 2012</b>	<b>842,144</b>	842,144
Expenditures on property	<b>458,280</b>	458,280
<b>Balance, September 30, 2013</b>	<b>1,327,424</b>	1,327,424

**Snow Lake Arsenopyrite Concentrate Stockpile - Manitoba**

In early 2010, the Company pursued a reclamation opportunity in Snow Lake, Manitoba. In the 1950’s, a gold mine was owned and operated by Nor-Acme Mines at Snow Lake, Manitoba. Approximately 10% of the ore was classified as arsenopyrite (arsenic bearing) and refractory in nature, which required additional treatment to liberate the gold for recovery. Given the high levels of arsenic that reported to the concentrate, conventional roasting or smelting were ruled out as process options and the concentrate was treated by direct cyanidation to recover as much gold as possible. The residue was stockpiled at the mine site to await future technologies capable of extracting the remaining gold values.

The Company approached the Manitoba Ministry of Innovation, Energy and Mines in April 2010 and outlined a plan whereby the Company, at its own expense, would use samples obtained from the concentrate stockpile to determine whether the material was amenable to bioleaching for liberating and extracting the gold while stabilizing the arsenic. The Manitoba government granted approval for the Company to conduct the sampling program, subject to oversight by an independent engineering consulting firm which the government engaged to ensure that there would be no adverse environmental impacts from drilling the arsenopyrite stockpile.

In February 2011, BacTech tendered a proposal for the remediation of the arsenopyrite stockpile at Snow Lake under a request for proposals (“RFP”) from Manitoba Innovation, Energy and Mines. In April 2011, BacTech was awarded the contract by the Mines Branch of the Manitoba Department of Innovation, Energy and Mines. The contract was finalized in December 2011. The Company will recover payable metals for its own account from the stockpile, while stabilizing the contained arsenic.

In May 2011, BacTech announced the completion of a drill program carried out at the arsenopyrite concentrate stockpile. A total of 299.3 meters of sonic drilling were completed in 33 holes. The holes were drilled on a grid at 20 m spacing to obtain a representative sample from the entire stockpile. One half of the core was retained in Snow Lake as a permanent record, with half the core taken for geochemical, metallurgical and bioleach testing samples. Some 432 geochemical samples were taken at 50 cm intervals of which 236 were used for a resource calculation. Saskatchewan Research Council in Saskatoon completed the fire assaying. In July 2011, the Company released the drill results of the program. An average grade of 9.7 g/t gold was obtained from the 33-hole program, which is consistent with previous historic results. Given the large number of samples, the Company advises the reader to visit the BacTech website at [www.bactechgreen.com](http://www.bactechgreen.com) to view a complete list of the drill holes and related samples.

On October 17, 2011, the Company announced the results of a National Instrument 43-101 technical report for the Snow Lake, Manitoba, arsenopyrite residue stockpile (ARS) compiled by Ralph Newson, P.Geo., the independent qualified person who authored the report. The following information is based on the technical report on the Snow Lake Project which is available on the System for Electronic Document Analysis and Retrieval (SEDAR) at [www.sedar.com](http://www.sedar.com), and also on the Company’s website. The technical report outlines a measured mineral resource of 265,000 tonnes grading 9.7 grams per tonne gold and 2.17 g/t silver for the stockpile. In addition, an indicated mineral reserve of 9,300 tonnes grading 9.2 g/t gold and 2.15 g/t silver is estimated, as is a further inferred mineral reserve of 28,000 tonnes grading 7 g/t gold and 2.4 g/t silver. The samples were assayed at Inspectorate Exploration and Mining Services Ltd. in Richmond, B.C., an approved assay facility. The accompanying table outlines the total ounces for the various resource calculations.

			Gold	Silver	
	Tonnes	(g/t)	Ounces	(g/t)	Ounces
Measured resource	265,000	9.7	82,643	2.17	18,488
Indicated resource	9,300	9.2	2,750	2.15	642
Inferred resource	28,000	7.0	6,300	2.4	2,160

The drill samples collected from the arsenopyrite stockpile were also used to determine the metallurgical variability of the stockpile, evaluate pre-treatment scenarios and costs, continue bioleach work on a larger scale for gold extraction, as well as to study the detox/arsenic stability for the oxidized end product.

On March 20, 2012, the Company announced results of the bioleach study program it had been working on for several months. The patented BACOX bio-oxidation process oxidized over 95 per cent of the sulphides. This study definitively demonstrates the technology’s ability in eliminating future acid mine drainage and the environmental problems associated with the stockpile, which is one of the key drivers of the project. In addition, the bio-oxidation process rendered 88.6 per cent of the gold contained

in the sulphides available for extraction, compared with only 9.4 per cent using conventional gold extraction without oxidation.

The bioleach study is an integral part of the Preliminary Economic Assessment (“PEA”) prepared by Micon International Limited, which was announced by press release on August 27, 2012, with the full PEA released on October 12, 2012. The PEA demonstrates an economic project to remediate the ARS at current market conditions. The following summary is taken from the press release and the PEA which are filed on SEDAR at [www.sedar.com](http://www.sedar.com), and on the Company’s website.

The Bioleach Process will generate two (2) discharge streams; one (1) being a stable ferric arsenate precipitate preventing any further leaching of arsenic into the environment; and two (2) will be a gold residue concentrate. BacTech is presently negotiating with the Town of Snow Lake to acquire a property for the bioleach plant that sits adjacent to the ARS. This will provide for relatively easy access to and from the plant and keep noise and dust at a minimum. Approximately 1.4 km from the proposed plant site are several clay pits that were recently excavated to source clay for projects in the local area. It is BacTech’s intention to pipe and safely dispose of the stable ferric arsenate to one of the nearby pits for storage, water recycling, and subsequent clay capping at the end of the project. Concurrent with the PEA, BacTech has engaged Golder Associates to provide baseline environmental studies for the proposed plant site and the clay impoundment pits, as well as formal submission of environmental operating permits and closure plan to Manitoba Conservation.

In November 2012, the Company completed the drilling of test holes with a continuous flight auger drill rig on the proposed bioleach plant site to provide detailed data on the site conditions to begin the Front End Engineering Design (“FEED”) – civil specifications for the plant and tank farm areas. In addition, the Company submitted their Environmental Act Proposal (“EAP”) to the Director of the Environmental Assessment and Licensing Branch, Manitoba Conservation and Water Stewardship. The EAP was completed by Golder Associates Ltd. of Winnipeg, Manitoba, under direction by the BacTech technical team. In February of 2013, BacTech’s EAP was posted for public comments by the Environmental Approvals Branch of the Manitoba Department of Conservation and Water Stewardship. The deadline for submission of comments was March 15, 2013. The Company has received the comments and has prepared and filed the formal with the Environmental Assessment and Licensing Branch. Final review is still pending by the Environmental Assessment and Licensing Branch.

In January 2013, the Company engaged the services of Tetra Tech to provide FEED for the bioleach plant. Tetra Tech has extensive engineering and design knowledge with regards to the bioleach process and will be responsible for the process overview, equipment review and specifications, and other associated process details. The FEED work should be completed by the end of December 2013. The results of the FEED package will be the basis for the detailed design engineering phase of the Snow Lake plant that will include civil, mechanical, electrical, and process automation.

### Future Plans

As disclosed in the press release dated August 27, 2012, the proposed Snow Lake bioleach plant is designed to treat 109 tonnes of concentrate per day from the ARS. This provides for a project life of approximately 7 years to remediate the ARS safely and benefit from an annual gold production of 10,400 oz/year. At a base case gold price of US\$1,396/oz and 88.6% gold recovery (the 3 year trailing average gold price at the time of the Micon PEA), the direct operating cost is \$671/oz gold. Royalties and the cost for gold recovery through offsite toll treatment add \$302/oz, bringing the total cash cost to \$973/oz. CAPEX, including a 10% contingency for the project, is estimated to be CAD\$21.4 million. BacTech

continues to identify and evaluate additional feeds that potentially can add to the operational life of the plant.

The operations include BacTech transporting the oxidized gold (post bioleaching) to a 3<sup>rd</sup> party for gold recovery. This is an expensive process that adds significant costs to the operations. The Company is searching for a more permanent and inexpensive method for years 2 and onward. One possible solution includes the installation of its own CIL plant for recovering gold in Snow Lake. The process to apply for the appropriate permits could take up to 12 months for approval which is after the start date of the plant.

### **Patent: Bioleaching Process Produces Liquid Ferric Sulfate**

In June 2012, the Company filed a provisional patent application for a new invention relating to bioleaching. The patent application covers the use of bioleaching as a means of manufacturing liquid ferric sulphate.

Ferric sulfate is a staple chemical with a wide range of applications. In conventional water treatment processes, it is commonly used as a coagulant to remove turbidity, colour, phosphate, and heavy metals. In the mining industry, ferric sulfate is not only a leaching lixiviant in various processes treating copper concentrates and uranium ores, but also a reagent commonly used to control arsenic in metal mining effluents.

The discovery of the invention arises from BacTech's bioleach work at Snow Lake, Manitoba. The invention provides for the onsite production of ferric sulfate using pyrite as a source and thereby eliminating the costly transportation of the liquid product. With the formula  $FeS_2$ , pyrite is the most common sulfide mineral and is widely associated with other metal sulfide deposits. Unless it contains valuable metals to be recovered, pyrite is usually rejected into tailings through the flotation processes at a mine site. Such tailings represent a large disposal problem because pyrite gets oxidized and generates sulfuric acid after being exposed to air and water. With this new invention, mine tailings at existing operations can be refloatated to provide a cheap source of material for the creation of ferric sulfate.

The current business plan encompasses the selling of single bioleach tank plants that can be delivered and built onsite for the customer. The single bioleach plant is envisioned to be ideal for remote locations where ferric sulfate cannot be obtained or in larger high volume locations to eliminate the costly and hazardous trucking of ferric sulfate through urban areas. The payback for the investment by the customer should be relatively short, given the low cost of pyrite feed stock and simple, unsophisticated operation of the bioleach plant.

The provisional patent is an alternative application of REBgold Corporation's bioleaching technology. BacTech owns a perpetual, exclusive license to the bioleach technology for tailings' reclamation and is allowed, under the agreement with REBgold Corporation, to own any improvements made to the technology. The Company and REBgold Corporation have negotiated an amendment to the licence agreement to specifically address the use of this application, which, as of the date of this report, has not been finalized. This patent is the invention of various contractors to the Company and they have assigned their rights in the invention to the Company, subject to the terms of a royalty agreement.

The Company is exploring possible partnerships or strategic agreements with other companies that already operate in this industry.

## **Bolivia**

In January 2013, the Company announced that it had signed a Memorandum of Understanding (“MOU”) with the Corporación Minera de Bolivia (“COMIBOL”), the state-owned mining company, for the Telamayu tailings site in Bolivia. Telamayu is a former mill site and consists of two tailings deposits created through custom milling for numerous mines in the area. Highlights of the MOU include:

- COMIBOL and BacTech will be 50/50 partners in a Joint Venture (“JV”) Bolivian company;
- COMIBOL will provide the JV with suitable tailings for reprocessing and make existing infrastructure available;
- BacTech holds the right to export concentrates from the Telamayu Tailings site for bioleaching at its discretion; and
- BacTech will provide all capital necessary to undertake a study of the Telamayu tailings, including flotation and bioleach testwork.

BacTech had previously announced assay results from a composite sample taken in May 2012 from one of the two tailings sites. Silver and copper values were 282 g/t and 1.7% respectively, illustrating the high-grade nature of the tailings. This compared favorably with COMIBOL's results from a 2005 sampling and assay program that reported 258 g/t Ag and 1.05% Cu. The composite sample was bagged, sealed at the Telamayu mill and then shipped to Lima, Peru by SGS Bolivia S.A. (“SGS”), and subsequently transferred to Inspectorate Exploration and Mining Services Ltd. (“Inspectorate”) for assaying.

COMIBOL has estimated that there are approximately 2.3 million tonnes of tailings attributable to the above assay results, and across the river lie an additional 3 million tonnes of tailings from the same sources. To date, no investigation has been initiated at the larger site. In addition, there are two additional tailings sites within 50 km that could be investigated in the future.

The Company’s next steps include completing the floatation and bioleach testwork to assess the projects economic viability. If economically positive, BacTech’s preliminary plan includes the installation of a flotation plant at the Telamayu site to produce a concentrate that will be exported to a nearby country for bioleach treatment. At present, BacTech is entertaining different scenarios for locating a bioleach plant to process concentrates from Bolivian tailings. Accesses to limestone and power costs are just two factors that need to be taken into consideration. Given the current focus of the company and limited capital resources, the Company has not advanced this project in the current period.

In October 2013 the Company launched a Crowd funding campaign to raise capital for test work for the Telamayu tailings remediation project in Bolivia. The Company is attempting to harness the potential of Crowd funding to raise \$30,000 to fund all the necessary flotation and bioleach test work to determine if the project is viable. If bioleaching can be proven as an effective solution, the Company believes the necessary financing can be arranged to build a bioleach plant to process the material. The Company will reach out to ethical, socially responsible, clean tech and impact investment sources to finance a full-scale remediation project.

## **Other Projects**

The Company continues to evaluate other projects in Canada, Mexico, South America and Europe.

### **C. Results of Operations**

This analysis of the results of the Company's operations should be read in conjunction with the Company's unaudited condensed consolidated interim financial statements for the three months and nine months September 30, 2013.

#### **Revenues**

The Company has no revenue or sources of recurring revenues at this time.

#### **Operating and Administrative Costs**

Operating and administrative expenses decreased to \$118,907 for the three month period ended June 30, 2013, compared to \$447,955 in the same period last year. For the nine months ended September 30, 2013, operating and administrative expenses increased to \$627,137 from \$904,015 in the same period last year. Significant components of this expense include:

1. Salaries, management fees and related costs decreased to \$83,682 for the three month period ended September 30, 2013, from \$100,635 in the same period last year. For the nine months ended September 30, 2013, salaries, management fees and related costs increased to \$322,737 from \$279,340 in the same period last year. These costs are for the salaries, wages and management fees incurred directly in managing and operating the business of the Company, which includes the investigation and evaluation of potential projects. The Company has capitalized less of these costs in the current period as they relate to general corporate purposes, which has resulted in higher management fees being recorded in the current period;
2. Share based payments, as explained in note 14 to the unaudited condensed consolidated interim financial statements, were \$88,350 for the nine month period ended September 30, 2013 compared to \$205,988 for the year ended December 31, 2012. Yearly fluctuations in stock option expense are dependent on a number of factors including, but not limited to, number of options issued, valuation of options, vesting period and timing. For the nine month period ended September 30, 2013, 750,000 new options were granted. For the year ended December 31, 2012 there were 1,500,000 options granted. The expense for the current period is based on the valuations of options granted in both the current period which are recognized as an expense in the current period, based on the portion of options vested in the current period;
3. Professional fees decreased to \$24,425 for the three month period ended September 30, 2013, from \$56,765 in the same period last year. For the nine months ended September 30, 2013, professional fees significantly decreased to \$84,930 from \$113,641 in the same period last year. Overall, legal fees and professional fees were incurred on project-related expenses and the level of spending has been significantly reduced in the current period in order to conserve cash.
4. Costs associated with shareholder information and investor relations significantly decreased to \$9,914 for the three month period ended September 30, 2013, from \$39,860 in the same period last year. For the nine months ended September 30, 2013, shareholder information and investor relations costs significantly decreased to \$50,435 from \$128,653 in the same period last year. These costs have been significantly reduced in the current period as a result of eliminating most IR programs. Management continues to use third-party investor relations programs to assist with raising awareness about the Company, but on a very limited basis;

5. Travel costs decreased to \$11,852 for the three month period ended September 30, 2013, from \$21,029 in the same period last year. For the nine months ended September 30, 2013, travel costs significantly decreased to \$37,696 from \$77,622 in the same period last year. These costs are for travel incurred to source and evaluate projects, as well as capital fundraising activities in the current period. Costs have been reduced to project “only” type of expenses in order to conserve cash. This has resulted in a significant reduction in these costs; and
6. General office expenses marginally increased to \$30,397 for the three month period ended September 30, 2013, compared to \$28,039 in the same period last year. For the nine months ended September 30, 2013, general office expenses decreased to \$86,165 from \$101,960 in the same period last year. These are expenses for the general corporate office located in Toronto, as well as the office in Manitoba. Cost reductions were initiated at the beginning of the year in order to reduce costs.
7. The Company filed for Scientific Research and Experimental Development (SRED) tax credit based on the test work completed on its projects. In the current period a portion of SRED tax credit was refunded to the Company, and is shown as reduction in expenses.

### **Finance Charges**

Debenture Interest expense for the three month period ended September 30, 2013 increased to \$31,741 compared to \$21,240 in the same period last year. For the nine months ended September 30, 2013, debenture interest increased to \$74,221 from \$40,899 in the same period last year. The debenture interest is made up of BacTech’s portion of the debenture issued by REBgold Corporation (for both years), plus the additional interest expense starting April 2012 from BacTech’s own convertible debenture issued in April 2012. Please refer to note 11 to the unaudited condensed consolidated interim financial statements for the three month and nine month period ended September 30, 2013. Additional interest charges of \$10,500 were incurred in the current period as a result of the bridge loan secured in the third quarter this year.

Accretion expense is related to the Company’s debentures as described in note 11 to the unaudited condensed consolidated interim financial statements for the three month and nine month period ended September 30, 2013. This expense reflects the difference, which is recognized as an expense over the life of the debenture, between the face value of the debenture and the fair value at which it is reported in the Company’s balance sheet. Accretion expense for the three months ended September 30, 2013 increased to \$31,587 compared to \$29,187 same period last year. For the nine months ended September 30, 2013, accretion expense increased to \$94,761 from \$55,977 in the same period last year. The significant increase in accretion expense is due to the new convertible debenture issued in April 2012 by the Company, as explained in note 11 to the annual consolidated financial statements for the three month period ended September 30, 2013.

### **D. Liquidity and Capital Resources**

At September 30, 2013, the Company had cash of \$114,599 and a working capital deficit of \$1,058,323. The existing cash reserves at December 31, 2012 and the bridge loan were used for general working capital and advancing the Snow Lake Project for the nine months ended September 30, 2013.

In November 2013, the Company closed a private placement for gross proceeds of \$100,000. The Company issued one million units priced at 10 cents per unit. Each unit consisted of one common share and one common share purchase warrant. Each warrant entitles the holder to acquire one common share at a price of 15 cents until November 9, 2016.

On July 3, 2013, the Company announced that it had arranged a bridge loan that will enable the Company to complete its technical preparations for the Snow Lake project. The bridge loan allows the Company to receive up to CAD\$600,000 comprised of (a) an initial \$300,000 within 10 days of closing, and (b) a second \$300,000 can be drawn after BacTech has confirmed that the underlying contract with the Province of Manitoba can be used as collateral for the loan. All funding has been received. All loans are subject to interest at the rate of 10% per annum, and was to be repaid initially by November 20, 2013, subject to the Company's right to extend repayment which is now December 15, 2013. In addition the loans are convertible into common stock in the context of the price of BacTech shares at the time of filing the loan agreement with the CNSX which was 8 cents per share. The Company has issued 1,000,000 common share purchase warrants to the lender as part of this transaction. The warrants are exercisable for 1 year from the date of the first closing at a price of \$0.10 per share.

On October 3, 2012, BacTech closed a private placement of common share units at a price of \$0.15 per Unit. Option Three Advisory Services Limited ("Option Three") subscribed for \$1,450,000 (9,666,666) units. Each unit consisted of one common share and one non-transferable common share purchase warrant. Each warrant entitles the holder to purchase one common share at a price of \$0.17 for a period of 360 days from the first anniversary of the date of issue. The warrants can be exercised prior to the first anniversary of the date of issue provided that, after giving effect to the exercise, the holder shall not directly or indirectly own more than 19.99% of the issued and outstanding common shares of BacTech. The common shares and warrants were subject to a four month hold period.

On January 18, 2012, the Company issued 705,000 units at \$0.20 per unit for gross proceeds of \$141,000. Each unit consisted of one common share and one half of one common share purchase warrant, with each whole warrant exercisable at a price of \$0.30 until January 18, 2013. Prior to January 1, 2012, the Company had collected \$64,000 related to the private placement which was recorded at the end of the reporting period as shares to be issued. The warrants related to this private placement have now expired.

	September 30, 2013		December 31, 2012	
	Number of shares	\$ Amount	Number of shares	\$ Amount
Balance, beginning of period	45,755,027	2,378,769	38,383,361	1,631,624
Shares issued for cash pursuant to a private placement	-	-	10,371,666	1,527,000
Less:				
Warrant fair value from shares issued	-	-	-	(689,074)
Share issue costs	-	-	-	(90,781)
Balance, end of period	45,755,027	2,378,769	45,755,027	2,378,769

For a description of the outstanding warrants and stock options that are available to purchase common shares of the Company, please refer to notes 14 and 15 of the audited annual consolidated financial statements.

## E. Quarterly Information

Selected quarterly information for the most recently completed quarter is presented below in Canadian currency (\$), and in accordance with International Financial Reporting Standards.

	2013			2012				2011
	Q3 \$000's	Q2 \$000's	Q1 \$000's	Q4 \$000's	Q3 \$000's	Q2 \$000's	Q1 \$000's	Q4 \$000's
Revenues	-	-	-	-	-	-	-	-
Operating loss	(183)	(237)	(379)	(374)	(499)	(277)	(207)	(458)
Loss for the period	(183)	(237)	(379)	(374)	(499)	(277)	(207)	(458)
Loss per share	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

## F. Off-Balance Sheet Arrangements

The Company had no off-balance sheet arrangements as of September 30, 2013 or December 31, 2012.

## G. Financial Instruments

The Company has not entered into any specialized financial arrangements to minimize its investment risk, currency risk or commodity risk.

## H. Outlook

The current volatile state of the capital markets and the volatile price for precious and base metals has significantly increased the level of activity for companies in the resource sector or in the remediation and reclamation of mine waste and tailings. Even though there is a heightened activity, there can be no assurance that the Company will be successful in attracting either new financing or new opportunities to apply its technology.

## I. Risks

The Company's strategy emphasizes developing projects in order to leverage its intellectual property and drive the creation of shareholder value. This strategy has required, and continues to require, significant financings, and is subject to risks associated with mineral prices, mineral resources and operations. Due to the nature of the Company's business, the present stage of development of its projects, and the constraints placed upon the Company's ability to move forward by its current liquidity situation, readers should carefully review and consider the financial, environmental and operational risk factors affecting the Company.

### Need for Additional Financing

The Company currently has no source of operating cash flow, and there is no assurance that additional funding will be available to the Company as and when needed for further assessment and evaluation, as well as development of its projects, or to fulfill its obligations to its existing creditors. Volatile markets may make it difficult or impossible for the Company to obtain adequate debt or equity financing in the future, or on terms acceptable to the Company. The failure to obtain additional financing could force the Company to liquidate its assets to satisfy creditor claims.

### **Dependence on Management**

The Company's business and operations are dependent on recruiting and retaining the services of a small number of key members of management and qualified personnel. The success of the operations and activities of the Company are dependent, to a significant extent, on the efforts and abilities of the management of the Company. Investors must be willing to rely, to a significant extent, on the discretion and judgment of the management of the Company. Furthermore, while the Company believes that it will be successful in attracting qualified personnel and retaining its current management team, there can be no assurance of such success. The Company does not maintain key employee insurance on any of its employees.

### **Competition**

The Company competes with other engineering companies for the acquisition of mineral rich mine tailings and mine waste that can be developed economically. The Company competes with other engineering companies that have greater financial and technical resources and experience. Such competition may result in the Company being unable to acquire desired properties, to recruit or retain qualified employees, or to acquire the capital necessary to fund its operations and develop its properties. The inability of the Company to compete with other engineering companies for these resources would have a material adverse effect on the Company's results of operations and business.

Currently, the Company's bioleaching technology does not operate in an overly competitive marketplace; however the Company anticipates that it may face increased competition in the future, as advanced technologies become available. While management believes that the Company's technology is more advanced, commercially proven and better situated than its competitors, there can be no assurance that the Company will be able to effectively compete with companies who have or may develop similar technologies and may possess greater financial resources and technical facilities. Competitive pressures, or the inability of the Company to successfully license its technology on terms that are acceptable, may have a material adverse effect on the Company's business, operating results and financial condition.

### **Protection of Intellectual Property Rights**

The Company is dependent not only on its ability to protect its intellectual property rights, but also upon the protection of rights of third parties from which it may license intellectual property rights. The Company currently holds patent rights and has pending patent applications. In addition, the Company relies upon certain other technologies, ideas, know how, secrets or other information, which it may not be able to protect. Notwithstanding precautions the Company may take to protect its rights, third parties may copy or obtain and use the Company's proprietary and licensed or optioned technologies, ideas, know how, secrets and other proprietary information without authorization or independently develop technologies similar or superior to the Company's proprietary and licensed or optioned technologies. The Company enters into confidentiality and restriction on use agreements with its employees, strategic partners and others; however, these agreements may not provide meaningful protection of the Company's proprietary and licensed or optioned technologies or other intellectual property in the event of unauthorized use or disclosure. Policing unauthorized use of such technologies and intellectual property is extremely difficult, and the cost of enforcing the Company's rights through litigation may be prohibitive. Further, the laws of jurisdictions other than Canada and the United States may not provide meaningful protection of the intellectual property rights of the Company and such third parties.

### **Obtaining and Enforcing Patents**

The patent positions of technology firms, including the Company, are generally uncertain and involve complex legal and factual questions. The Company's success in utilizing and licensing its bioleaching technology will depend, in part, on its ability to obtain, enforce and maintain patent protection for its technology worldwide. The Company cannot be assured that patents will issue from any pending applications or that claims now or in the future allowed under issued patents will be sufficiently

broad to protect its technology. In addition, no assurance can be given that any patents issued to or licensed by the Company will not be challenged, invalidated, infringed or circumvented, or that the rights granted thereunder will provide continuing competitive advantages to the Company. Furthermore, there is no assurance that the patents of others will not impede the ability of the Company to do business or that others will not independently develop similar products or technologies, duplicate any of the Company's products or technologies or, if patents are issued and licensed to the Company, design around the Company's patented product or technology.

Accordingly, the Company may not be able to obtain and enforce effective patents to protect its proprietary rights from use by competitors, and the patents of other parties could require the Company to stop using or pay to use certain intellectual property, and as such, the Company's competitive position and profitability could suffer as a result.

#### **Claims of Infringement of Proprietary Rights of Others**

The Company is not currently aware of any claims asserted by third parties that the Company's intellectual property infringes on their intellectual property. However, in the future, third parties may assert a claim that the Company infringes on their intellectual property. As a result, there is a risk that the Company, or one or more of its licensors, may become subject to litigation alleging that the products or technologies of the Company or its licensors infringe on the proprietary rights of third parties. Whether or not the products or technologies infringe on the proprietary rights of third parties, the Company or such licensors could incur significant expenses in defending allegations of infringement of proprietary rights. Further, the Company or such licensors may be required to modify their products or obtain licenses for intellectual property rights as a result of any alleged proprietary infringement which may not be achievable on commercially reasonable terms, in a timely manner, or at all, any of which could adversely affect the Company's business revenue, results from operations and financial condition.

#### **Conflicts of Interest**

Certain of the Company's directors and officers may serve as directors or officers of other reporting companies, companies providing services to the Company, or companies in which they may have significant shareholdings. To the extent that such other companies may participate in ventures in which the Company may participate, the directors of the Company may have a conflict of interest in negotiating and concluding terms respecting the extent of such participation. In the event that such a conflict of interest arises at a meeting of the Company's directors, a director who has such a conflict will abstain from voting for or against the approval of such participation or such terms.

From time to time, several companies may participate in the acquisition, assessment and evaluation, and development of mineral reclamation properties, thereby allowing for the participation in larger programs, permitting involvement in a greater number of programs and reducing financial exposure in respect of any one program. It may also occur that a particular company will assign all or a portion of its interest in a particular program to another of these companies due to the financial position of the company making the assignment.

In accordance with the laws of Canada, the directors of the Company are required to act honestly, in good faith and in the best interests of the Company. In determining whether or not the Company will participate in a particular program and the interest therein to be acquired by it, the directors will primarily consider the degree of risk to which the Company may be exposed and its financial position at the time.

## **J. Other MD&A Requirements**

Additional information related to the Company is filed electronically on the System for Electronic Document Analysis and Retrieval (SEDAR) at [www.sedar.com](http://www.sedar.com).