



MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE THREE AND SIX MONTHS ENDED JUNE 30, 2019

The following management's discussion and analysis ("MD&A") of financial results is dated August 29, 2019 and reviews the business of BacTech Environmental Corporation (the "Company" or "BacTech"), for the three and six months ended June 30, 2019, and should be read in conjunction with the accompanying condensed interim consolidated financial statements and related notes for the three and six months ended June 30, 2019, as well as the audited annual financial statements for the year ended December 31, 2018 and related notes and MD&A. This MD&A and the accompanying condensed interim consolidated financial statements and related notes for the three and six months ended June 30, 2019 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 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, 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 wastes and was listed on what is today the Canadian Stock Exchange under the symbol "BAC".

The BACOX 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.

B. Mineral Reclamation Projects

Highlights : General

On May 15, 2019 BacTech announced that it had signed a letter of intent with GMR Inc. ("GMR") to license BacTech's proprietary bioleach technology. BacTech joins Dundee Sustainable Technologies (CSE:DST) as a technology partner with GMR to develop a potential solution for the remediation of the Gold Residual Stockpile in Snow Lake, Manitoba.

Through this agreement, BacTech received a \$20,000 cash payment as an advance on the right to utilise the BacTech proprietary bioleach technology on the Gold Residual Stockpile in Snow Lake, Manitoba. In addition, BacTech will earn 3% undivided equity interest in the net income of the project. GMR is relying on BacTech's historical research conducted in 2011/12 that showed oxidation rates of 95% and gold recovery of 88.6% on material obtained from the arsenic stockpile. Due to a lack of iron in the stockpile the residual material could not be adequately stabilized, and the project was abandoned by BacTech at that time.

On May 29, 2019 the Company announced the launch of a new project in Ecuador. Please refer to press release for further details.

Highlights: Bolivia

On May 24, 2016, BacTech announced that its 98% owned Bolivian subsidiary, Empresa Minera Ambiental BacTech S.A. ("EMABSA"), had signed an Association Contract with Corporación Minera de Bolivia ("COMIBOL"), the state mining company of Bolivia. On September 15, 2016, the Bolivian government by Law N degrees 831, approved and ratified the agreement.

The Company completed the drill program on the Telamayu Tailings and released the assay results for the 57 holes that were drilled. The dates of the press releases were May 8, May 16 and June 27 in fiscal 2017, all of which reported similar results. The results of the drill program confirmed the Company's initial expectations of metal quantities contained in the tailings. For details of the results please refer to the press releases noted above and below.

On September 12, 2017, the Company reported a summary of a recently completed National Instrument 43-101 mineral resource estimate on its Telamayu Tailings reclamation project in Bolivia. The 57-drill-hole campaign and subsequent assay results form the basis of the resource calculation. Please refer to Section – Bolivia Current Activities 2017 for details on the resource estimate.

On October 25, 2017, BacTech released the results from its initial metallurgical test work on material sourced from the Telamayu tailings in Bolivia. Overall, the results were as expected for copper and silver and additional test work using different reagents was carried out to potentially add more tin metal recovery. The results are broken down below by metal type. Please refer to Section – Bolivia Activities Fiscal 2017 for details on the test results.

The tin recoveries were not acceptable and subsequently 100 kg of material was shipped in May 2018 to Met-Solve in Vancouver to complete centrifugal gravity processing to recover the fine-grained tin as well as obtain a confirmation of the results produced to date.

On November 1, 2018, BacTech announced the results of the test work from Met-Solve from which two flowsheet options have now been identified. One option considers concentrate production and subsequent treatment of a concentrate by a brine leach process. The 2nd option considers a whole ore treatment again using a brine leach approach. The major difference between the 2 processes lies in the additional silver that can be recovered using a whole ore feed but at an increased capital cost. For a summary of the results see Bolivia – Current Activities Fiscal 2018 2019.

Highlights: Ecuador

On July 23, 2018, the Company provided an update of results of an on-going bioleach study being conducted at Laurentian University in Sudbury, Canada, from which design information is being obtained to build a bioleach plant for refractory gold concentrate processing in Ecuador.

BacTech announced that all of the materials tested to date have responded well to the bio-oxidation testing procedure indicating a high amenability to bioleach processing demonstrating that high oxidation levels are achievable. Importantly, samples of neutralised arsenic precipitate containing stabilised arsenic, have been subjected to Toxicity Characteristic Leach Procedure (TCLP) testing showing that these precipitates are environmentally stable and benign meeting US EPA or equivalent regulatory requirements for disposal.

A second round of test work began immediately after the first test at Laurentian optimising the pulp density of concentrates in the bioleaching process and for optimisation of conditions for downstream gold recovery. The results will be used to develop a project in Ecuador, for the bioleaching of arsenic concentrates that currently are sold to Asian smelters at reduced prices due to the arsenic. BacTech hopes to be able to source original arsenopyrite concentrates from local miners in Ponce Enriquez that would normally attract high treatment penalties due to the arsenic content. The results were presented to Ecuador Government officials by the Company in July 2018.

BacTech is presently attempting to identify mines willing to donate concentrate for bioleach work that would result in the mining company becoming a customer of the proposed bioleach circuit.

Bolivia

On May 24, 2016, BacTech announced that its 98% owned Bolivian subsidiary, EMABSA, had signed an Association Contract with COMIBOL, the state mining company of Bolivia. On September 15, 2016, the Bolivian government by Law N degrees 831, approved and ratified the agreement.

The ten-year contract calls for the environmental remediation and restoration of the “Antigua” tailings and an option on the “Nuevo” tailings, both situated at the Telamayu mill site. Telamayu is situated near the town of Atocha in the Department of Potosi. The agreement envisions three phases, with the first phase focused on the completion of a technical study on the Antigua tails, which is almost complete. Included in the study will be the drilling of a grid of 10 metre holes, (drilling is now completed, see below for further information) which will provide information for a NI 43-101 study. In addition, tailings material will be used in metallurgical studies to determine the optimal flow chart for the proposed plant.

COMIBOL has estimated that there are approximately 475,000 tonnes at the Antigua tailings site. Across the river lies an additional estimated 3-4 million tonnes of tailings from similar sources at the Nuevo tailings site. 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.

Current Activities Fiscal 2018 and 2019

On November 1, 2018, BacTech announced the results of the test work from Met-Solve. Two process options have been generated from the results. One considers a flotation circuit to produce a concentrate for brine leaching. The other is a whole ore feed for brine leaching. The differences between these two options have to do with the recoverable silver. The concentrate approach recovers 60% of the silver while a whole ore feed will recover 80% of the silver but at a higher capital cost. An optimization study will determine whether the additional silver production can be justified by the higher capital cost.

Qualified person: Dr. Paul Miller is a qualified person as defined by NI 43-101. Dr. Paul Miller has reviewed and approved the contents of this summary report. The following are the highlights of the report:

Summary of Results

- Between 50% and 60% of the copper is highly labile and is extracted in a weak sulphuric acid leach at pH 2.0 as the first process step. Cementation using iron is employed to precipitate the copper from the pregnant solution to give a high purity copper precipitate for direct sale.
- After removal of the labile copper an option exists for production of a bulk sulphide concentrate using flotation. The material is subjected to a light regrind to refresh particle surfaces prior to bulk sulphide flotation using conventional reagents, which recovers up to 84% of the silver and an equivalent of 25% of the copper in the feed into a mass of between 35% and 40% of the original feed. The bulk sulphide concentrate is subjected to hot brine leaching at 75-80 °C from which 80% of the silver and 80% of the copper is extracted from the concentrate into the brine solution. Cementation using iron is employed on the pregnant brine solution to give a precipitate for direct sale containing up to 5% (50 kg/t) silver with the majority of the balance being 70% copper. The overall silver recovery from this route of weak acid leaching; concentrate production and brine leaching of concentrate is between 58% and 63%, while overall copper recovery is 80%.
- The tails from bulk sulphide flotation are then subjected to gravity processing for the recovery of tin. The use of high-speed gravity falcon concentrators results in an overall tin recovery from the initial process feed of 25% to produce a concentrate grade of 6%.
- As an alternative to producing a bulk sulphide concentrate, and after the first process step to remove labile copper, the ore can be directly subjected to a hot brine leach without concentrate production. This results in an improved silver recovery of 80% as there are no silver losses in concentrate production. However, this route has increased capital and operating costs due to the brine leaching of the whole ore as opposed to a smaller mass of concentrate. A trade off study is required to evaluate the most economic flowsheet option to employ.
- For the whole ore treatment option, the residue from brine leaching would be subjected to gravity recovery using high speed falcon concentrators for tin recovery. Work has yet to be undertaken to confirm that the tin recovery would be similar for whole ore processing to that obtained from the concentrate production route.

Recommendations:

- Further tin recovery test work with centrifugal gravity concentration is recommended to optimize and improve the recovery and upgrading of tin.
- Determining the attainable tin grade and recoveries with recycle streams of the tin that are lost into the various gravity tailings by locked-cycle testing is another option for future work and would simulate the tin upgrading and recovery performance in an industrial circuit.

- Mineralogical analysis is recommended on the brine leach residue to determine the cause of approximately 23.4 per cent of tin is not recoverable by direct flotation or gravity concentration.
- The brine leach conditions must be further investigated to optimize the CuSO₄ (copper sulphate) dosage and leach retention times.
- The cementation conditions must also be optimized to determine the iron chip dosage requirements and cementation retention times.

Future Plans

Following the completion of the drill program, the Company started metallurgical test work to determine the appropriate process for metal recovery. The Company completed the first set of metallurgical test work at the University of Oruro in Bolivia and a second metallurgical test at an accredited laboratory, Met-Solve, in Canada.

BacTech is now reviewing the processing flowsheet between the two options which are a) an acid wash followed by concentrate production and subsequent treatment of a concentrate with a brine leach and b) a route of direct whole ore treatment by a brine leach. Depending on which of 2 flow sheets chosen at this time, the expected annual production for the first 5 years on the Telamayu tailings could generate the following:

- 950 tonnes of Cu cement,
- 540,000-750,000 oz Ag and
- 320 tonnes of Tin in a 6% tin concentrate. The tin concentrate will most likely be sold locally to a smelter in Oruro.

The products produced include a copper cement product that is 98% copper and 2% iron and a silver/copper cement (that is 5% silver (50 kg/t) /80 % copper) product that resembles a stable "sludge" from filtration consisting of very fine particles of metal. Quality assessment will be very easy to do as each batch will come from a filter press and will be uniform in content and will be easy to assay. Our pregnant solution, containing the copper prior to the precipitation process, will be of high purity with very little contamination from other elements. The main contaminant will be iron as this is what is used to precipitate the copper.

The next stage of the project is the completion of a feasibility study to determine the selection of either the flotation approach or the whole ore approach.

There is considerable infrastructure at the mill site including power, rail, a mill housing and a local, trained workforce. The Telamayu mill has processed ores from the surrounding mines for over 80 years with the Antigua and Nuevo tailings created from the operation. The existing infrastructure should lead to reduced capital costs.

The final stage is the commercialization of the plant which is expected to be completed within the calendar year. All three stages require the posting of a performance bond equal to 7% of the expected capital outlay that is released upon completion of each phase. BacTech has posted a bond of \$32,000 to cover the initial phase. The final stage will be the building and commercialization of the plant which is expected to be completed in 2019 or 2020.

Activities Fiscal 2017

On September 12, 2017, the Company reported a summary of a completed National Instrument 43-101 mineral resource estimate on its Telamayu Tailings reclamation project in Bolivia. The 57-drill-hole campaign and subsequent assay results form the basis of the resource calculation. For more information please refer to the press release dated September 12, 2017.

Qualified person: The mineral resource estimate was prepared by Pierre O'Dowd, PGeo, an independent qualified person as defined by NI 43-101. Mr. O'Dowd has reviewed and approved the contents of this report. The following are the highlights of the report:

- Indicated and inferred resource of 373,000 tonnes and 79,000 tonnes, respectively;
- Average tin grade of 1.30 per cent indicated and 1.19 per cent inferred;
- Average silver grade of 8.2 ounces per ton indicated and 8.7 ounces per ton inferred;
- Average (total) copper grade of 1.15 per cent indicated and 1.07 per cent inferred;
- Average (soluble) copper grade of 0.63 per cent indicated and 0.65 per cent inferred.

<i>Ag oz./t</i>	<i>% Sn</i>	<i>% CU S.</i>	<i>% Cu T.</i>	<i>BD</i>	<i>TONNAGE</i>	<i>Ag ounces</i>	<i>Sn lbs.</i>
INDICATED							
8,223	1,30	0,63	1,15	1,63	373 016	3 380 868	9 725 887
INFERRED							
8,689	1,19	0,65	1,07	1,75	78 991	756 494	1 885 809

BD: Bulk Density

Ecuador

The following is the Company's updated vision for an Ecuadorian project, as reported in the press release, that includes the use of bioleaching to treat high-arsenic gold concentrates, resulting in a reduction in mercury use.

Industry Background

With the significant increase in the price of gold over the past 10 years, there has been a corresponding surge in the number of small gold mining and artisanal operations ("SGM") globally. An SGM is someone who produces small amounts of ore, usually through the use of rudimentary methods and tools where recoveries are poor. In Ponce Enriquez, Ecuador, there are number of small mining operations that sit 1000 to 1500 meters above sea level on the western side of the Andes. Many of the mines in this area produce arsenopyrite which is an arsenic sulphide containing gold. The problem for these miners is finding a suitable place to sell these high As concentrates. Currently, the only groups willing to bid on these concentrates are smelters and metal processors in Asia, China in particular.

The Problem

The major issue facing these miners are the penalties that hurt the value they receive for their material. In most cases, high As concentrates (>10%) are bought by Asian buyers for as little as 50-60% of the gold value in the concentrate. Any other ancillary economic metals are also retained by the buyer. It is illegal for a smelter/roaster to process (burn) material that exceeds 1% arsenic leaving no other buyer or options for the miner. In addition, there are an abundance of tailings in the area created by many years of mining that also contain As that was not captured in the initial processing.

The Solution

This scenario creates a unique opportunity for BacTech and bioleaching. Given the levels of arsenic and BacTech's ability to process these types of ores it would make sense for the installation of a bioleach facility to process material locally. The miner would get better pay for his product, jobs would be created in Ecuador instead of China and the government would benefit from the increase in taxes. Since bioleaching is modular in nature expansion of the plant could lead to reprocessing of the tailings in the area thereby eliminating future arsenic pollution. It is well known that existing tailings have reached their capacity and a solution is needed to allow mining to continue in this pro-mining community.

The opportunity provided to BacTech is real. Given BacTech's experience in bioleaching, and after studying the local market with the assistance of the company's newly appointed country representative, Bernardo Brito, BacTech is confident that a strategy of building a bioleach circuit in Ponce Enriquez would provide healthy returns, not only for the company, but also for the local inhabitants.

In January 2018, 150 kg of material (concentrates, tailings and ore) were shipped to Laurentian University in Sudbury, Canada. The first phase produced exceptional arsenic stability with 99.5% of the arsenic reporting to a ferric arsenate. Gold recovery was recorded at 85% and a second round of test work was begun to identify the appropriate pulp density to maximise gold recovery. Historically bioleaching liberates between 94 and 96% of the contained gold.

Should BacTech be successful in implementing its strategy for Ecuador, there are opportunities to duplicate these plants in other high-arsenic areas of the Andes Mountains, namely northern Peru and Colombia.

Current Activities in Fiscal 2018 and 2019

The Company worked closely with Dr. Nadia Mykytczuk at Laurentian University to complete the six-month bioleach test work program (the first phase of the program) on the 150kg sample shipped to the University which is now complete (see below). A successful outcome from this program of testing would allow BacTech to pursue the construction of a bioleach plant near the flotation circuits of the area, and to become the sole processor of gold concentrate that is currently shipped halfway around the world.

On July 23, 2018, BacTech announced that all of the materials tested to-date have responded well to the bio-oxidation testing procedure. This indicates a high amenability to bioleach processing demonstrating that high oxidation levels are achievable. Importantly, samples of neutralised arsenic precipitate containing stabilised arsenic, have been subjected to Toxicity Characteristic Leach Procedure (TCLP) testing showing that these precipitates are environmentally stable and benign meeting US EPA or equivalent regulatory requirements for disposal.

A second round of test work began immediately after the first test at Laurentian optimising the pulp density of concentrates in the bioleaching process and for optimisation of conditions for downstream gold recovery. The results will be used to develop a project in Ecuador, for the bioleaching of arsenic concentrates and tailings that have reached a critical mass and need to be relocated for safety reasons. In addition, BacTech hopes to be able to source original arsenopyrite concentrates from local miners that would normally attract high treatment penalties due to the arsenic content. Currently these concentrates are sold into Asia for processing at a significant discount to the concentrate value. The results were presented to the government of Ecuador by Ross Orr in July 2018.

Activities Fiscal 2017

On May 2, 2017, the Company announced that their joint application with Laurentian University to Ontario Centres of Excellence (“OCE”) has been approved for \$150,000 through OCE's Voucher for Innovation and Productivity II (“VIP II”), offered on behalf of the Province of Ontario. These funds were used to leverage against contributions from BacTech Environmental Corporation in the amounts of \$37,500 cash and \$37,500 in-kind.

The purpose of the funding was to test bioleaching against very high arsenic concentrates and tailings (+10%) that are becoming more prevalent, not only in Canada, but also in numerous South American countries.

On June 7, 2017, the Company reported that it had shipped approximately 150 kg of arsenopyrite gold concentrate to Laurentian University in Canada. With the supervision of Inspectorate Ecuador (subsidiary of Bureau Veritas S.A.), the concentrates were collected from various flotation plants in Ponce Enriquez, Southern Ecuador. In addition to concentrate, smaller samples of oxidized rock, unprocessed arsenopyrite ore and tailings were shipped. The material contained various levels of arsenic and was subject to a test work programme aimed at demonstrating the economic, environmental and technical viability of using bioleaching as a pre-treatment method for gold extraction.

On August 1, 2017, BacTech released assay values for arsenopyrite concentrates collected from various flotation plants in the Ponce Enriquez mining district, Ecuador. Third-party fire assays were conducted on the concentrates by SGS Canada Inc. at Lakefield, Ontario. Of note, Sample EC-26 returned 67.3 g/t gold (2.17 oz/t) with 12.3% arsenic. This is a classic example of a high gold/arsenic concentrate from the district, which has a limited value for resale. The assays also showed substantial amounts of iron and sulphide-sulphur, which are essential for successful bioleaching.

Sample No.	Gold (g/t)	Silver (g/t)	Arsenic (%)
EC-41B	24.4	19.0	7.43
EC-26	67.3	41.0	12.3
EC71	18.3	55.0	1.31
EC72	17.5	37.0	7.48
EC41R	33.9	27.0	0.65

The concentrates were collected from 5 strategically-selected flotation plants to provide representative material for the Company's bioleach test work being conducted at Laurentian University in Sudbury, Canada. In addition to the concentrates, mineralized material and tailings samples were also collected and will be tested as the opportunity exists to retreat high grade tailings or fresh ore by constructing a bioleach plant.

This OCE funded project will not only help advance the Ecuador work, but will also help advance the technology and potential application for re-processing various mine wastes in Ontario and elsewhere.

The study at Laurentian was conducted under the guidance of Dr. Paul Miller, PhD (chemical engineering), CEng, MIMM, the company's vice-president of metallurgy and a leading expert in bioleaching. Dr. Nadia Mykytczuk of Laurentian worked in concert with BacTech, as well as overseeing the work on behalf of the university.

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 condensed interim consolidated financial statements for the three and six months ended June 30, 2019.

Fees

The Company has no revenue or sources of recurring revenues at this time, other than the non-recurring revenue in the amount of \$20,000 received as an advance on the right to utilise the BacTech proprietary bioleach technology on the Gold Residual Stockpile in Snow Lake, Manitoba. For further information, please refer to Highlights.

Operating and Administrative Costs

Operating and administrative expenses decreased to \$294,165 for the six months ended June 30, 2019 from \$376,922 in the same period last year. For the three months ended June 30, 2019, these expenses decreased to \$157,607 from \$201,129 in the same period last year. Significant components of this expense include:

1. Salaries and management fees of \$142,500 for the six months ended June 30, 2019 are the same when compared to costs incurred in the same period last year. These costs are for the salaries and management fees incurred directly in managing and operating the business of the Company, which includes the investigation and evaluation of potential and current projects. Given the Company's current financial situation, the majority of these amounts continue to be accrued and have not been paid or have been partially settled through shares for debt over the past few years;
2. Share based payments, as explained in note 13 to the condensed interim consolidated financial statements, were \$Nil for the six months ended June 30, 2019. For the year ended December 31, 2018, the expense was \$4,500. Yearly fluctuations in stock option expense are dependent on several factors including, but not limited to, number of options issued, valuation of options, vesting period and timing. For the six months ended June 30, 2019, no new options were granted. For the year ended December 31, 2018, there were 150,000 options issued;
3. Professional fees decreased to \$59,085 for the six months ended June 30, 2019 from \$80,217 in the same period last year. The Company had incurred significant professional fees in the prior year which includes the legal and consulting fees, as a result of supporting the development of the Telamayu Tailings project in Bolivia as well as starting the project in Ecuador. In the current year these expenditures have been curtailed due to the lack of working capital to finance these expenses;
4. Travel costs decreased to \$12,685 for the six months ended June 30, 2019, from \$24,9325 in the same period last year. Travel expenditures were reduced and kept to a minimum in order to reduce expenditures on non-project related activities and conserve cash.; and
5. Shareholder information and filing fees expenses decreased to \$71,446 for the six months ended June 30, 2019 from \$116,748 in the same period last year. Throughout fiscal 2017 and 2018, the Company reignited the communication process with shareholders (current and new) in order to keep them informed. In the current period, the Company has discontinued some of its marketing efforts in order to reduce expenditures and conserve cash.

Project Expenditures

The majority of the project expenditures have been on the Bolivia Project, which includes the drilling costs, assay work, NI 43-101 mineral resource estimate, metallurgy and management and consulting fees. Total project expenditures incurred for the six months ended June 30, 2019 were \$234,261 (2018 – 191,756). Expenditures incurred on the Bolivia Project were \$229,761 with remainder of the expenditures on the Ecuador Project in the amount of \$4,500. The significant cost in the current period relates to the completion of the feasibility study for the Bolivia Project.

Project expenditures to date on the Bolivia Project total \$1,044,250 and can be broken down as follows; general overhead \$247,400, drilling and geological \$211,130, assay and metallurgical \$207,480 and technical reports \$378,240.

The project costs on the Ecuador Project include costs to support the work at Laurentian University as well as the OCE funding and ongoing support costs for testing at the university.

Finance Charges

Finance charges are made up of interest charged by suppliers and vendors, loans payable and the new debenture payable.

The loans payable interest of \$6,725 is the accrued quarterly interest for the \$150,000 loan payable. For the six months ended June 30, 2019, interest on this loan is \$13,350. See note 9 to the consolidated financial statements for further details.

Between April 19, 2017 and June 26, 2017, BacTech completed three tranches of a debenture financing for gross proceeds of \$445,000. This debenture included bonus interest in the form of common shares. This debenture has generated interest expense of \$26,700 and accretion expense of \$17,870 for the six months ended June 30, 2019 which is included in debenture interest and accretion expense, respectively. See note 10(a) to the interim financial statements for further details.

Between August 14, 2017 and September 22, 2017, BacTech completed two tranches of a new debenture financing for gross proceeds of \$200,000. This debenture included warrants and a Net Smelter Royalty (“NSR”) on the project in Bolivia. This debenture has generated interest expense of \$12,000 and accretion expense of \$18,420 for the six months ended June 30, 2019, which is included in debenture interest and accretion expense, respectively. See note 10(b) to the interim financial statements for further details.

On November 29, 2017, BacTech completed a debenture financing for gross proceeds of \$100,000 and accompanied by the issuance of 400,000 common shares, which are included as a bonus equity interest and NSR of 0.50% in relation to the project in Bolivia. The debenture has a 2-year term and pays 12% interest. This debenture has generated interest expense of \$6,000 and accretion expense of \$4,500 for the six months ended June 30, 2019, which is included in debenture interest and accretion expense, respectively. See note 10(c) to the interim financial statements for further details.

On May 14, 2018, BacTech completed a debenture financing for gross proceeds of \$85,000 and accompanied by the issuance of 340,000 common shares which are included as a bonus equity interest and NSR in relation to the project in Bolivia. The debenture has a 2-year term and pays 12% interest. This debenture has generated interest expense of \$5,100 and accretion expense of \$6,900 for the six months ended June 30, 2019, which is included in debenture interest and accretion expense, respectively. See note 10(d) to the interim financial statements for further details.

On May 1, 2019, the Company closed a \$150,000 Senior Bridge Debenture. The Senior Bridge Debenture is for one year and will pay 12% interest on redemption. This debenture included warrants. This debenture has generated interest expense of \$3,000 and accretion expense of \$2,466 for the six months ended June 30, 2019, which is included in debenture interest and accretion expense, respectively. See note 10(e) to the interim financial statements for further details.

Balance Sheet Comparisons

The increase in the current liabilities, starting with the 2018 year end and the first two quarters of fiscal 2019, is from the debentures being due or will be due in the coming one year. The debentures with an expiry date of less than one year from the date of the balance sheet date are classified as current liabilities. Currently, all the debentures are past due or due within one year of the balance sheet date.

Cash Flow Comparison

Cash flow from financing activities: For the six months ended June 30, 2019, the Company completed the \$150,000 Senior Bridge Debenture. In the same period last year, the Company completed a \$85,000 debenture financing and a private placement with gross proceeds of \$579,910 through the issue of 16,658,851 units at a price of \$0.035 per unit.

Cash flow from operating activities: This represents the cash paid for overhead expenditures and project expenditures. These payments were financed from the sources of cash in financing activities.

D. Liquidity and Capital Resources

At June 30, 2019, the Company had cash of \$10,321 and a working capital deficit of \$3,860,882. Cash reserves and accounts receivable were used for general working capital and advancing the Bolivian Project and Ecuador Project for the period ended June 30, 2019.

On July 26, 2019 the Company closed the first tranche of a \$125,000 private placement. The private placement is a unit financing with each \$0.02 unit consisting of one common share of the company and one-half of a common share purchase warrant. One full warrant enables the holder to purchase one additional common share of the company at five cents for a period of two years from closing. The first closing of the financing totaled \$75,000.

On May 1, 2019, the Company closed a \$150,000 Senior Bridge Debenture. The Senior Bridge Debenture is for one year and will pay 12% interest on redemption. In addition, the Company will issue a total of 1,500,000 common share purchase warrants with a two-year term and allow the holder to buy additional shares at \$0.05 per share (ten warrants per dollar of principal of Loan).

On December 4, 2018, the Company completed a private placement for total gross proceeds of \$219,000 through the issue of 8,760,000 units at a price of \$0.025 per unit. Each unit consisted of one common share of the Company and one full common share purchase warrant exercisable at \$0.05 for 2 years.

On September 21, 2018, a total of 1,000,000 warrants were exercised for 1,000,000 common shares of the Company for gross proceeds of \$50,000.

On May 14, 2018 the Company closed the final tranche of its debenture financing. The final tranche raised under the Series III Debenture was \$85,000, bringing the total raised to \$185,000. The debenture pays 12% annually, includes a 20% common share equity bonus and a proportional share of a Net Smelter Royalty on the Company's Telamayu Tailings project. There were also 340,000 common shares issued as Bonus Equity Interest.

On April 5 and April 19, 2018, the Company announced that it had closed in two tranches for total gross proceeds of \$579,910 through the issue of 16,658,851 units at a price of \$0.035 per unit. Each unit consisted of one common share of the Company, one full common share purchase warrant exercisable at \$0.05 for 2 years and a proportionate share of a NSR on the Telamayu project.

On April 25, 2019, the Company requested that debenture holders of the Company's 12% debentures maturing this year to extend the term of the debentures for an additional 12 months. In consideration of the extension of the maturity date to April 19, 2020, the Company will issue a common share purchase warrant allowing the investors to purchase a common share of the corporation at five cents for a period of three years for each \$0.05 of debenture held. The Company is currently negotiating with the debenture holders and finalizing the documentation required to complete this extension.

	June 30, 2019		December 31, 2018	
	Number of shares	\$ Amount	Number of shares	\$ Amount
Balance, beginning of period	96,903,756	5,411,894	67,970,430	4,820,489
Shares issued for private placements	-	-	25,328,851	798,910
Shares issued for exercised warrants	-	-	1,000,000	65,000
Shares pursuant to debenture financing	-	-	340,000	11,900
Shares issued for debt	-	-	2,264,475	79,257
Less share issue costs				
Fair value of warrants	-	-	-	(338,900)
Share issue costs	-	-	-	(24,762)
Balance, end of period	96,903,756	5,411,894	96,903,756	5,411,894

For a description of the outstanding warrants and stock options that are available to purchase common shares of the Company, please refer to Note 11 - Share Capital, Note 12 – Warrants, and Note 13 – Stock Options of the condensed interim 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.

	2019		2018				2017	
	Q2 \$000's	Q1 \$000's	Q4 \$000's	Q3 \$000's	Q2 \$000's	Q1 \$000's	Q4 \$000's	Q3 \$000's
Revenues	20	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-
Net loss	(296)	(349)	(323)	(324)	(355)	(271)	(351)	(332)
Loss for the period	(276)	(349)	(323)	(324)	(355)	(271)	(351)	(332)
Loss per share	(0.005)	(0.005)	(0.005)	(0.005)	(0.01)	(0.00)	(0.01)	(0.00)

F. Off-Balance Sheet Arrangements

The Company had no off-balance sheet arrangements as of June 30, 2019.

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

While the volatility in the capital markets and markets for metals has subsided, the resource sector has relatively fallen from favour with investors making capital raising in the sector more difficult than it has traditionally been for junior companies in the resource sector and in the remediation and reclamation of mine waste and tailings. 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 to leverage its intellectual property to drive 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 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 there under 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. If 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 the Company will participate in a 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. Related Party Transactions

Please refer to Note 8 of the consolidated financial statements for the six months ended June 30, 2019.

K. 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.