



MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEAR ENDED DECEMBER 31, 2018

The following management's discussion and analysis ("MD&A") of financial results is dated April 29, 2019 and reviews the business of BacTech Environmental Corporation (the "Company" or "BacTech"), for the year ended December 31, 2018, and should be read in conjunction with the accompanying annual consolidated financial statements and related notes for the year ended December 31, 2018. This MD&A and the accompanying annual consolidated financial statements and related notes for the year ended December 31, 2018 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: 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 and First Quarter of 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 has begun immediately 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 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 Ecuador Government officials by the Company in July 2018.

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 500,000 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 first Quarter of 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, which 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) /70 % 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. This will be completed in May 2019.

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.

On June 27, 2018, the Company announced it had signed a Memorandum of Understanding ("MOU") with respect to financing its Bolivian tailings project. The MOU was signed with CACS International Investment Co. Ltd. ("CACSI"). BacTech will grant CACSI the sole mandate to exclusively design, manufacture and install a mineral processing plant for reprocessing of the Antigua tailings located at Atocha, Bolivia. In addition, CACSI will assist BacTech to arrange project financing from a Chinese financial institution for 85% of the cost of the project. The term of the MOU is 12 months. The Company does not anticipate consummating a transaction with CACSI at this time.

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

Initial Metallurgical Test Work

On October 25, 2017, BacTech released the results from its initial metallurgical test work on drill core sourced from the Telamayu tailings in Bolivia. The results are broken down below by metal type.

Copper

Bench scale laboratory washing tests conducted at ambient temperature using 1 kg samples of ‘as-received’ material gave a copper extraction of between 56.4% and 66.9%. The variation in recovery was dependent upon whether acid additions were made to the wash water. A larger scale batch test using 120kg of feed resulted in a copper extraction of 59.6% with a sulphuric acid consumption of 21.6kg/t of feed. Cementation of copper from the wash solution gave a cement quality copper precipitate of 97.8% purity and a scrap iron consumption of 1.08kg iron per kg of copper precipitated. Copper recovery from the solution was 99.9%. After this first step of copper recovery, 30kg of washed material was screened at 65mesh (230um) and a bulk sulphide flotation test conducted under acidic conditions on the undersize to produce a silver copper rougher concentrate. The results from flotation of this undersize fraction indicated that a further 23.5% of the copper present in the original ‘as-received’ feed can be captured into a flotation concentrate, complemented by 61% of the silver. The concentrate assayed 753g/t silver and 0.71% copper. The combination of copper recovered from wash water combined with the copper reporting to the rougher flotation concentrate gave an overall copper recovery of 83.1%. Additional test work is underway to investigate alternative methods of recovery for copper.

Silver

The silver remains inert in the acid washing stage and remains unaltered whether washing is conducted or not. Silver recovery for the second flotation test was improved to 75.3% compared to the recovery obtained from the first test of 61% - although into a higher concentrate mass of 33.5%. The second flotation test was conducted under alkali conditions and a different reagent regime. This suggested that conducting further optimization work on reagent schemes, may lead to further improvements in silver recovery.

Such an improvement on flotation reagent regimes was investigated by using a sulphidization step prior to flotation. The objective of this step is to make semi-oxidized material more amenable to the sulphide flotation process. This resulted in a silver recovery of 65% into a concentrate mass of 22.2% and an assay value of 3,190g/t silver while copper recovery also improved. These tests support the premise that conducting further flotation optimization work may lead to improved grade and metal recovery.

Tin

The tailings from the flotation of copper and silver were subjected to additional flotation testing for the recovery of tin. From the limited flotation conditions investigated, 33.1% of the tin was recovered into a concentrate of 13.1% by mass but at a very low grade of 3.1% tin. Further test work using a wider range of flotation reagents and test conditions may result in an improvement in both tin grade and recovery. Alternative methods for upgrading an improved tin rougher concentrate may also improve the final concentrate grade while reducing loss of recovery. Initial diagnostic type testing using a laboratory super-panner recovered 42.4% of the tin at a concentrate grade of 9.6% into a mass of 6.4%. These results are preliminary in conclusion because of the exploratory nature of the gravity techniques investigated in this phase of test work. The application of magnetic separation to remove hematite iron gangue and perhaps tungston may also be of value for upgrading final concentrates. As indicated earlier the tin will be subject to centrifugal test work at Met-Solve in Vancouver, Canada.

Initial metallurgical test work was conducted at the University of Oruro in Bolivia. Preliminary recovery results for copper and silver were deemed to be acceptable. The tin recoveries were not acceptable and subsequently, 100 kg of material was shipped in May to Met-Solve in Vancouver where a study was completed and announced in November 2018. See Current Activities Fiscal 2018 and First Quarter of 2019.

Activities Fiscal 2016

The definitive agreement had been under negotiation since the beginning of March 2015 and was fully signed as of May 24, 2016 and subsequently ratified by the Bolivian legislature in September 2016.

On July 7, 2016, BacTech provided an update on the status of the Telamayu project. The Company arranged for a site visit by Bumigeme Inc., a Montreal-based engineering company to visit the Telamayu mill site in Bolivia. The purpose of the trip was to undertake a due diligence review on behalf of the Montreal-based engineering company. The following benefits were identified by the engineers:

- Availability of ample space in the existing plant;
- Water in sufficient quantity;
- Good power costs and availability (four cents to five cents per kilowatt-hour);
- New tailings site to be built at a small distance from the existing mill;
- Qualified manpower available locally; and
- Space for offices and housing is available.

The engineers made the following recommendations for the next phase of the project:

- Subsequent coring, sampling and analysis of the tailings (a 500-metre program), confirming the concentrations of tin and gold, in addition to silver and copper;
- Preparation of a 400-kilogram sample for new metallurgical test work;
- Completing a National Instrument 43-101 resource estimation, report and recommendations.

Activities Fiscal 2015 and prior

In January 2013, the Company announced that it had signed a MOU with the 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 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 or conventional treatment at its discretion; and
- BacTech will provide all capital necessary to study the Telamayu tailings, including gravity, flotation and copper cementation test work.

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 2.24% 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. BacTech enlisted the services of SGS Bolivia S.A. to oversee the sampling of some 2,000 bags of tailings assembled by COMIBOL. In essence, material was bagged at 1-meter intervals by COMIBOL from 8 test holes of roughly 10 meters in depth. A "pipe" was used to extract a sample from every bag and a larger sample of 200 kg was created. This larger sample was bagged and secured at site before making its way to Lima, Peru. From there, the samples were shipped to Inspectorate Exploration and Mining Services Ltd. ("Inspectorate") in Vancouver, Canada for assaying.

On April 28, 2014, the Company announced the initial flotation results for the Telamayu tailings which are as follows: *(The Company has not investigated or verified the sampling program conducted by COMIBOL.)*

Assay chart

Element	Unit of measure	Telamayu Tailing Comp.
Ag	g/mt	275.0
Au	g/mt	0.24
As	ppm	3,145
Sb	ppm	853.61
Cu	ppm	22417 (2.2%)
Bi	ppm	557.97
Sn	ppm	1,571.8 (0.1%)

Flotation results

Element	Maximum Metal Recovered to Concentrate	Recovery
Ag	35 oz/t	60 – 64%
Cu (i)	4.2 – 4.4 %	33 -35%
As	0.65%	n/a

(i) Copper recovery is 33-35% of the remaining unoxidized sulphides in the tailings.

(ii) The tonnages provided by COMIBOL are of a historical nature and have not been confirmed by the Company. BacTech is not treating the historical estimate as current mineral resources or mineral reserves as they are not NI 43-101 compliant. The Qualified Person ("QP") for the above information is Gary Williams, P.Geol.

It was noted that roughly 50% of the sulphides in the sample had been oxidized. Two rougher kinetic flotation tests were carried out on the sample at different grinds to evaluate the tailings response to flotation. Results from these preliminary tests showed that after four stages of rougher flotation approximately 15% of the material was removed to a bulk rougher concentrate assaying 31-35oz/t silver (60-64% recovery), 4.2-4.4% (33-35% recovery) copper and 0.65% arsenic. Additional tests will be undertaken to attempt to improve the recoveries for the silver component at Met-Solve.

With respect to the copper recovery into concentrate, approximately one half of the copper was extracted before flotation into the grind/wash water. This would bring the recoveries up to 80% if the wash water is included in the calculation. An operation may include a washing process from which the soluble copper is recovered prior to flotation.

Ecuador

On January 27, 2016, the Company provided a corporate update on its activities and plans for the project in 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. Cumulative production has led to a saturation of the tailings facilities that accompany these mines. The tailings, as reported by local miners, run anywhere between 2 and 6 grams per tonne.

The Problem

After mining the ore, SGMs typically use primitive equipment such as "Chilean mills" (carpeting to extract gold) and a portion of it is lost in production to the tailings. In particular, the use of this equipment to obtain gold from arsenopyrite-rich material can be an exercise in futility, as normally less than 10 per cent of the gold is separated from this refractory type of ore. This is due to the gold being physically encapsulated within the arsenopyrite, which is unreactive and impervious to cyanide treatment.

In Ponce Enriquez, southern Ecuador, steps were taken with the assistance of Dr. Veiga and the Canadian government to build sulphide flotation plants to produce arsenopyrite concentrates that are easier to ship and treat using methods other than mercury amalgamation. For the most part, especially in the case of simple sulphides, this led to a noticeable reduction in the use of mercury. However, in cases where arsenopyrite is the main refractory mineral, it provided a double-edged sword, namely, very good gold grades in the concentrates, but also prohibitively high arsenic levels (over 10 per cent), making the resulting

product much less attractive to buyers. As it stands today, miners who produce high grade gold and arsenic concentrates can receive as little as 50% of the value of the contained gold due to arsenic penalties applied by the buyer.

The Solution

This scenario creates a unique opportunity for BacTech and bioleaching. Given the existing tailings have reached their capacity 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. This would allow the miners to continue to earn a living knowing there is ample room to add new tailings to the existing facilities. It would also provide a local outlet for concentrate production to be processed with higher prices flowing to the miner than what they get today from Asia.

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 first quarter of 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 has begun 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 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.

See Ecuador Highlights – Press Release October 9, 2018 for further information.

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. Selected Annual Information

The following table presents selected financial information in Canadian dollars (\$), for each of the three most recently completed financial years and has been prepared in accordance with International Financial Reporting Standards (“IFRS”).

	2018	2017	2016
	\$	\$	\$
Revenues	Nil	Nil	Nil
Net loss for the year	(1,273,778)	(1,408,342)	(1,170,030)
Net loss per share	(0.02)	(0.02)	(0.02)
Total assets ⁽¹⁾	139,809	156,618	101,160
Total current liabilities	3,323,813	2,388,331	2,102,913

The Company does not generate any revenue at this time. The funding of the Company’s operations since inception in December 2010 has been from the exercise of warrants and options, private placements, debentures, bridge loans and notes, which have been used for general working capital, advancing the projects in Bolivia and Peru, as well as pursuing other projects of interest

The increase in liabilities from 2015 through to 2018 is the result of limited funds available to reduce outstanding amounts while the Company still incurs costs as it pursues projects. The majority of accounts payable relate to accrued salaries and or consulting fees to officers and managers of the Company.

⁽¹⁾ The Company does not capitalize any of its developmental expenditures notwithstanding that they may have enduring value in future operations.

D. Results of Operations

This analysis of the results of the Company’s operations should be read in conjunction with the Company’s annual consolidated financial statements for the year ended December 31, 2018.

Revenues

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

Operating and Administrative Costs

Operating and administrative expenses decreased to \$733,065 for the year ended December 31, 2018 from \$879,315 in the same period last year. Significant components of this expense include:

1. Salaries, management fees and related costs of \$289,753 for the year ended December 31, 2018 are comparable to costs incurred of compared to \$289,104 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;
2. Share based payments, as explained in note 13 to the annual consolidated financial statements, were \$4,500 for the year ended December 31, 2018. For the year ended December 31, 2017, the expense was \$91,825. 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 year ended December 31, 2018, there were 150,000 options granted. In the year ended December 31, 2017, there were 2,500,000 options issued;

3. Professional fees decreased to \$162,729 for the year ended December 31, 2018, from \$240,057 in the same period last year. The Company has incurred significant professional fees, which includes 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. The fees were higher in the prior year as a result of starting the Ecuador Project last year and incurring higher initial fees to start the investigation;
4. Travel costs increased to \$51,249 for the year ended December 31, 2018, from \$45,518 in the same period last year. In the prior year, travel expenditures were reduced and kept to a minimum in order to reduce expenditures on non-project related activities. In the current period, the Company has increased the level of travel as a result of an increase in meetings with the government officials in Bolivia, Ecuador and China that are directly involved with the projects; and
5. Shareholder information and filing fees expenses marginally decreased to \$190,550 for the year ended December 31, 2018 from \$194,605 in the same period last year. Throughout fiscal 2017 and in the current period, the Company reignited the communication process with shareholders (current and new) in order to keep them informed. The Company is continuing with its broad dissemination of the Company's information and project results to the capital markets in both Canada and the United States.

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 year ended December 31, 2018 were \$365,693. Expenditures incurred on the Bolivia Project were \$308,193 with remainder of the expenditures on the Ecuador Project in the amount of \$57,500.

Project expenditures to date on the Bolivia Project total \$827,663 and can be broken down as follows; general overhead \$137,743, drilling and geological \$211,100, assay and metallurgical \$207,480 and technical reports \$271,340.

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 year ended December 31, 2018, interest on this loan is \$20,175. 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 \$53,400 and accretion expense of \$39,400 for the year ended December 31, 2018 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 \$24,000 and accretion expense of \$36,840 for the year ended December 31, 2018, 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 \$12,000 and accretion expense of \$9,000 for the year ended December 31, 2018, 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 \$6,417 and accretion expense of \$8,625 for the year ended December 31, 2018, which is included in debenture interest and accretion expense, respectively. See note 10(d) to the interim financial statements for further details.

E. Liquidity and Capital Resources

At December 31, 2018, the Company had cash of \$25,900 and a working capital deficit of \$3,184,004. Cash reserves and accounts receivable were used for general working capital and advancing the Bolivian Project and Ecuador Project for the period ended December 31, 2018.

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 November 29, 2017, the Company completed two financings for gross proceeds of \$200,000. This included the debenture financing for gross proceeds of \$100,000, accompanied by the issuance of 400,000 common shares (as noted above), plus a private placement for total gross proceeds of \$100,000 through the issuance of 2,000,000 common shares at \$0.05 per share. Both financings included a NSR in relation to the project in Bolivia.

On August 14, 2017, the Company announced a new non-brokered debenture financing (Series II) for gross proceeds of \$200,000, accompanied by 1,333,760 warrants and a 0.83% NSR. This new debenture includes an interest rate of 12% per annum. The common share purchase warrants of the Corporation have an exercise price of \$0.05 for a period of 5 years. The NSR is on the Telamayu tails, which has an estimated project life of 5 years. The debenture holder closed on two separate tranches of \$100,000 with the initial tranche paid on the first closing which occurred on August 14, 2017.

Between April 20, 2017 and June 26, 2017, the Company closed three tranches of a debenture financing (Series I). The total proceeds from this financing were \$445,000. The unsecured debentures have a 2-year term and pay interest of 12% per annum. Interest payments will be paid at maturity. In addition, each \$10,000 amount of the debentures, includes 40,000 common shares of the Company paid as bonus interest at the time of closing to the debenture holder. At the conclusion of this financing, 1,780,000 common shares were issued as bonus equity interest to the debenture holders valued at \$70,100.

On December 20, 2016, January 19, 2017 and February 21, 2017 the Company completed the three tranches of a private placement for total gross proceeds of \$197,500 and issued 3,950,000 units at \$0.05 per unit. Each unit consisted of one common share and one half of one common share purchase warrant. Each whole warrant entitles the holder to purchase one common share of the Company at an exercise price of \$0.10 for a period of 2 years.

Share Capital				
	December 31, 2018		December 31, 2017	
	Number of shares	\$ Amount	Number of shares	\$ Amount
Balance, beginning of period	67,970,430	4,820,489	58,032,930	4,430,281
Shares issued for private placements	25,328,851	798,910	3,450,000	172,500
Shares issued for exercised warrants	1,000,000	65,000	-	-
Shares pursuant to debenture financing	340,000	11,900	2,180,000	88,100
Shares issued for debt	2,264,475	79,257	4,307,500	153,338
Less share issue costs				
Fair value of warrants	-	(338,900)	-	(15,430)
Share issue costs	-	(24,762)	-	(8,300)
Balance, end of period	96,903,756	5,411,894	67,970,430	4,820,489

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 annual financial statements.

F. 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.

	2018				2017			
	Q4 \$000's	Q3 \$000's	Q2 \$000's	Q1 \$000's	Q4 \$000's	Q3 \$000's	Q2 \$000's	Q1 \$000's
Revenues	-	-	-	-	-	-	-	-
Other items	-	-	-	-	-	-	-	-
Net loss	(323)	(324)	(355)	(271)	(351)	(332)	(492)	(233)
Loss for the period	(323)	(324)	(355)	(271)	(351)	(332)	(492)	(233)
Loss per share	(0.005)	(0.005)	(0.01)	(0.00)	(0.01)	(0.00)	(0.01)	(0.00)

G. Fourth Quarter

There were no substantive changes in administrative expenses, other than the increase in project expenditures for the Bolivian Project. With the contract for Bolivian Project being approved by parliament in September 2016, project and overhead spending have increased as result of completing the first phase of development work on the Telamayu site in Bolivia. Some investigative work was completed on other future projects, but was limited in nature, due to lack of capital to fund such programs.

H. Off-Balance Sheet Arrangements

The Company had no off-balance sheet arrangements as of December 31, 2018.

I. Financial Instruments

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

J. Outlook

The current volatile state of the capital markets and the volatile price for precious and base metals has significantly reduced the ability to access capital for junior companies in the resource sector or 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.

K. 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.

L. Related Party Transactions

Please refer to Note 8 of the consolidated financial statements for the year ended December 31, 2018.

M. 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.