



## **BacTech Reports on Metal Recovery Test Work**

November 1, 2018, Toronto, Canada

BacTech Environmental Corporation (CSE:BAC, OTC:BCCEF) ("BacTech" or the Company) is pleased to provide the results of metallurgical test work on mineralized material from the Telamayu tailings completed by Met-Solve Laboratories ("Met-Solve") of Vancouver, Canada. The test work was conducted to improve and confirm the recoveries of silver, copper and tin that were obtained from test work completed earlier this year at the University of Oruro in Bolivia.

A recap of the program to date is appropriate at this time.

BacTech entered into an association contract with Comibol, the Bolivian state mining company, in 2016. The agreement called for BacTech to undertake all the necessary test work and engineering to refurbish the existing mill at Atocha, Bolivia. The mill has operated as a toll treatment facility for producing mines in the general area for the past 80 years. BacTech is responsible for providing the capital and construction of the new equipment and in return will receive 100% of the cash flow from the project for 18 months or when the capital is repaid, whichever occurs first.

In September 2017 BacTech produced a National Instrumental 43-101 resource report. The independent report produced a summary of the metal content and grade for the Telamayu tailings. The study can be viewed on the BacTech website ([www.bactechgreen.com](http://www.bactechgreen.com)) or on SEDAR. Intensive metallurgical test work ensued at Oruro University in Bolivia as well as at Met-Solve Laboratories in Vancouver, Canada. Finally, in June of this year BacTech signed a Memorandum of Understanding with CASC International Investments, a leading engineering and procurement company based in China, to provide a feasibility study and 85% financing for the construction of the proposed plant in Bolivia.

The remainder of this press release will address the results of the test work both from Met-Solve and the earlier test work conducted in Bolivia for which two flowsheet options have now been identified. The differences between these two options have evolved by either considering a route of concentrate production and subsequent treatment of a concentrate or a route of direct whole ore treatment.

### **Summary**

- Between 50% to 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 freshen-up particle surfaces prior to bulk sulphide flotation using conventional reagent, 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 75-80c 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% silver with the majority of the balance being copper. The overall silver recovery from this route of weak acid leaching; concentrate production and brine leaching of concentrate is between 58% to 63%, while overall copper recovery is 80%.
- The tails from bulk sulphide flotation are then subjected to gravity processing for the recover of tin. The use of high-speed gravity falcon concentrators results in an overall tin recovery from the initial process feed of 25%, through gravity rougher and cleaner steps 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 directly be 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. .

The second option would be a whole-ore treatment. In using this approach, we eliminate the grinding circuit and a flotation circuit with the trade-off being that larger brine leach tanks will be needed to handle the increased volume to be processed.

#### Recommendations:

- Further Sn recovery test work with centrifugal gravity concentration is recommended to optimize and improve the recovery and upgrading of Sn;
- Determining the attainable Sn grade and recoveries with recycle streams of the Sn that are lost into the various gravity tailings via locked cycle testing is another option for future work and would simulate the Sn 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% of Sn which is not recoverable by direct flotation or gravity concentration;
- The Brine leach conditions must be further investigated to optimize the CuSO<sub>4</sub> dosage and leach retention times;

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- • The Cementation conditions must also be optimized to determine the iron chips dosage requirements and cementation retention times.

“Working capital to fund test work and meet our day to day obligations has been difficult to obtain in this market. Given we have a good comfort level of how we will produce and, the expected quantities of what we produce will be very helpful in securing a non-dilutive source of funding. With each step we complete in the process, we get closer to consummating a deal to provide capital for BacTech,” said Ross Orr, President and CEO.

BacTech’s Dr. Paul Miller is a qualified person as defined by National Instrument 43-101 and has reviewed and approved the content of this news release.

### Project Overview

The Telamayu project involves the environmental remediation of the “Antiguo” tailings with an option on the larger “Nuevo” tailings, both situated at the Telamayu mill site near the town of Atocha in the Department of Potosi in Bolivia.

The existing Telamayu mill concentrator has generated the Antiguo and Nuevo tailings by processing mineralized material from the surrounding mines for over 80 years. There is considerable infrastructure at the mill site including high voltage power, rail, mill housing, and a local workforce.

A second project entails BacTech investigating the use of bioleach processing to treat historic arsenic tailings and possibly arsenopyrite concentrates produced in the Ponce Enriquez area of Southern Ecuador.

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### Special Note Regarding Forward-Looking Statements

This news release contains “forward-looking information”, which may include, but is not limited to, statements with respect to future tailings sites, sampling or other investigations of tailing sites, the Company’s ability to make use of infrastructure around tailings sites or operating performance of the Company and its projects. Often, but not always, forward-looking statements can be identified using words such as “plans”, “expects”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates”, or believes” or variations (including negative variations) of such words and phrases, or state that certain actions, events or results “may”, “could”, “would”, “might” or “will” be taken, occur or be

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achieved. Forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements contained herein are made as of the date of this news release and the Company disclaims, other than as required by law, any obligation to update any forward-looking statements whether because of new information, results, future events, circumstances, or if management's estimates or opinions should change, or otherwise. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, the reader is cautioned not to place undue reliance on forward-looking statements.

Shares outstanding: 89,143,756

The Canadian Securities Exchange (CSE) has not reviewed and does not accept responsibility for the adequacy or the accuracy of the contents of this release.

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