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Mining Corporation

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PRESS RELEASE
TSX-V: BM

PR-041112

BACTECH SET TO BEGIN EXPLORATION PROGRAM AT MCKINNON CREEK

Toronto, Canada, November 12, 2004 - BacTech Mining Corporation ("BacTech") today announced that it has been granted an extension to December 15, 2004 for the option to purchase the McKinnon Creek deposit near Revelstoke, B.C. A fee of $10,000 was paid by BacTech to the Estate of T. E. Arnold to secure the extension. The extension will allow time for BacTech and the Estate to negotiate a definitive option agreement while BacTech completes its' 2004 work program at the site, which includes an underground drilling program.

BacTech has an option to acquire 100% of the McKinnon Creek polymetallic deposit situated approximately 45 km north of Revelstoke. A Technical Review prepared in 1996 by H. A. Simons Ltd. includes a potential resource of 3.6 million tonnes grading 7.24 g/t gold, 81 g/t silver, 3.0% lead and 3.93% zinc. Over the past 15 years, approximately $12 million has been spent by various companies on exploration, scoping studies and adit development. BacTech advises that this is historical information that has yet to be verified in detail and there is no certainty that economic resources will exist on the McKinnon Creek property. The historical resources use resource categories that do not conform to Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") or National Instrument 43-101 standards. To the best of BacTech's knowledge, the resource estimate cited in this press release is the most recent estimate available.

BacTech's 2004 work program includes environmental data collection, mine metallurgical testing, permitting and underground exploration, and bulk sampling. The purpose of the underground exploration, which was recently initiated, is to provide additional information, and to review the historical resource estimate according to CIM and National Instrument 43-101 standards, as well as provide fresh drill core for metallurgical evaluation. A 5 tonne bulk sample was mined in August and shipped to Process Research Associates in Vancouver for metallurgical evaluation. The metallurgical work in progress includes evaluation of separate lead and zinc flotation concentrates for smelting, and a gold/silver flotation concentrate for bioleaching. Results of the underground drilling program and metallurgical evaluations will be released as they come available.

Tim Maunula, P.Geo., Chief Geologist of Wardrop Engineering Inc. is the independent Qualified Person as defined by National Instrument 43-101. The work program is being conducted under Mr. Maunula's supervision. Mr. Maunula has read and approved this news release.

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CORPORATE PROFILE

BacTech has developed and patented bioleach technology for the treatment of refractory ores and concentrates to enhance the recovery of gold, silver and base metals. BacTech has successfully commissioned three bioleach plants for gold and, in 2000, successfully demonstrated its' technology in the selective recovery of base metals from complex sulphide concentrates in a joint project with Industrias Penoles de C.V. of Mexico.

BacTech acquired a 55% stake in Tonkin Springs LLC, the owner of the Tonkin Springs gold project in north central Nevada, in July 2003. BacTech has also acquired an option on 100% of the McKinnon Creek polymetallic deposit near Revelstoke, British Columbia. Finally, BacTech has entered into a series of agreements in China and the Philippines that will see the Company participating in certain projects.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Except for statements of historical fact relating to the Corporation, certain information contained herein constitutes "forward-looking statements" within the meaning of Section 21E of the United States Securities Exchange Act of 1934, as amended. Forward-looking statements are frequently characterized by words such as "plan," "expect," "project," "intend," "believe," "anticipate" and other similar words, or statements that certain events or conditions "may" or "will" occur. Forward-looking statements are based on the opinions and estimates of management at the date the statements are made, and are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking statements. These factors include the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drilling results and other ecological data, fluctuating metal prices, the possibility of project cost overruns or unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future and other factors described in the section entitled "General Development of the Business of the Company - Risks of the Business" in the Corporation's annual information form dated May 17, 2004. Circumstances or management's estimates or opinions could change. The reader is cautioned not to place undue reliance on forward-looking statements.

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The TSX Venture Exchange has not reviewed and does not accept any responsibility for the adequacy or accuracy of this release.

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PRESS RELEASE: June 23, 2004 **PR-040623**
TSX-V: BM

BACTECH PROCEEDS WITH MCKINNON CREEK FIELD PROGRAM

Toronto, Canada, June 23, 2004 - BacTech Mining Corporation ("BacTech") announced today its development program for 2004 on the McKinnon Creek project is in progress. The 2004 program includes environmental field work, drilling, laboratory testing and project engineering and evaluation. The total budget for 2004 is approximately CDN$1.6 million.

The objective of the program is to further develop the project towards a production decision from an independent pre-feasibility study, and provide the necessary information and engineering for permit applications. The program is being managed by an independent consultant based in Kamloops, British Columbia, and the primary field contractor is Golder Associates Ltd. ("Golder"), headquartered in Vancouver, B.C..

Environmental Program

A permitting schedule has been recommended by Golder towards a goal of completing project approvals in 2006. The main activities planned in the 2004 program include initial meetings with the Environmental Assessment Office, First Nations and public consultation. In addition, Golder will prepare permit applications for the 2004 field work and develop the project Description and Terms of Reference to initiate the review process.

The field work planned for 2004 will be directed toward review and collection of site information to support the baseline Studies and reporting necessary to complete an Environmental Assessment Report in 2005. The field studies will include fisheries and water quality data, an aquatic field program, a terrestrial field program, air quality assessment, acid rock drainage and metals leaching studies, and compile existing socio-cultural and archaeological information.

Drilling Program

A diamond drill program is planned for later in the summer, subject to permits, to complete approximately 1,000 meters of drilling to provide information and samples to support the environmental assessment work, as well as provide fresh core samples to conduct metallurgical test work. The mineralized zone is open at depth and this program will also include drilling to determine potential additions down dip.

Production Concept

The production concept, based on previous studies completed on the property, is to produce separate zinc and lead concentrates for shipment and sale to a smelter, as well as produce a high grade gold and silver concentrate that can be treated at BacTech's Tonkin Springs project in Nevada for gold and silver recovery. Initial production estimates are based on a 1,000 tonne per day underground mine operation with the mill tailings reporting to the

underground mine as backfill. Under this scenario, the project would produce approximately 8,000 tonnes of zinc, 6,000 tonnes of lead, 60,000 ounces of gold and 600,000 ounces of silver per year. Engineering work planned during 2004 will provide an independent economic analysis of the production concept.

The McKinnon Creek property is located 45 km north of Revelstoke, British Columbia. There are two main deposits on the property; the Main Zone that hosts the gold resource and is the focus of BacTech's attention, and the Yellowjacket Zone, which is a lead-zinc carbonate replacement deposit. The Main Zone is a continuous, tabular, structurally controlled arsenopyrite-precious metal bearing massive sulphide body hosted in a low angle, intensely sheared structure. It has been traced on surface and underground for over 3 km and currently has a drill-indicated strike length of 1.8 km. The average thickness is 2.5 metres and swells to 10 metres in places. High gold content is associated with arsenopyrite. Drill indicated geological resources for the Main Zone, as published by H. A. Simons in 1996, show a total resource of 3.6 million tonnes grading 7.24g Au and 81.0g Ag.

CORPORATE PROFILE

BacTech has developed and patented bioleach technology for the treatment of refractory ores and concentrates to enhance the recovery of gold, silver, and base metals. BacTech has commissioned three commercial bioleach plants for gold, and in 2000, successfully demonstrated its technology in the selective recovery of base metals from complex sulphide concentrates.

BacTech acquired a 55% stake in Tonkin Springs LLC, the owner of the Tonkin Springs gold project in north central Nevada, in July 2003. BacTech has also acquired an option on 100% of the McKinnon Creek polymetallic deposit near Revelstoke, British Columbia. Finally, BacTech entered into a series of agreements that will see the Company participating in the Chinese gold industry through equity and project participation.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING INFORMATION

Except for statements of historical fact relating to the Corporation, certain information contained herein constitutes "forward-looking statements" within the meaning of Section 21E of the United States Securities Exchange Act of 1934, as amended. Forward-looking statements are frequently characterized by words such as "plan," "expect," "project," "intend," "believe," "anticipate" and other similar words, or statements that certain events or conditions "may" or "will" occur. Forward-looking statements are based on the opinions and estimates of management at the date the statements are made, and are subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking statements. These factors include the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drilling results and other ecological data, fluctuating metal prices, the possibility of project cost overruns or unanticipated costs and expenses, uncertainties relating to the availability and costs of financing needed in the future and other factors described in the section entitled "General Development of the Business of the Company – Risks of the Business" in the Corporation's annual information form dated May 17, 2004. The Corporation undertakes no obligation to update forward-looking statements if circumstances or management's estimates or opinions should change. The reader is cautioned not to place undue reliance on forward-looking statements.

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PR-031112

PRESS RELEASE: NOV 12, 2003
TSX-V: BM

BACTECH ACQUIRES OPTION TO PURCHASE 100% OF MCKINNON CREEK GOLD DEPOSIT IN B.C.

Toronto, Canada, November 12, 2003: BacTech Enviromet Corporation ("BacTech") today announced that the Estate of the late T. E. Arnold has granted BacTech the option to acquire 100% of the McKinnon Creek polymetallic deposit in southeast British Columbia.

There are two main deposits on the property; the Main Zone that hosts the gold resource and is the focus of BacTech's attention and the Yellowjacket Zone, which is a lead-zinc carbonate replacement deposit. The Main Zone is a continuous, tabular, structurally controlled arsenopyrite-precious metal bearing massive sulphide body hosted in a low angle, intensely sheared structure. It has been traced on surface and underground for over 3km and currently has a drill-indicated strike length of 1.8km. The average thickness is 2.5 metres with a maximum thickness of 10 metres. High gold content is associated with arsenopyrite. Drill indicated geological resources for the Main Zone, as published by H. A. Simons in 1996, show a total resource of 3.6 million tonnes grading 7.24g Au and 81.0g Ag. This equates to a gold equivalent resource of 960,000 oz/Au based on a gold/silver price ratio of 0.0136 (US$360/oz gold, US$4.90 oz/silver). In BacTech's opinion, the H.A. Simons historical estimate of resources is relevant and reliable. However, BacTech advises that this is historical information that has yet to be verified in detail and there is no certainty that economic resources will exist on the McKinnon Creek property. The historical resources estimated by H.A. Simons use resource categories that do not conform to National Instrument 43-101 standards. To the knowledge of BacTech, the resource estimate cited in this press release is the most recent estimate available.

The terms of the letter agreement with the Estate require BacTech to pay US$100,000 for a six-month option which will be used for title verification, environmental and permit due diligence, independent resource verification and pre-feasibility level production planning. A further US$150,000 will be paid after a positive decision has been made to proceed to a feasibility study. This decision is expected to be made within 6 months of the signing of this agreement. Finally, there will be a closing payment calculated at US$10 per ounce of gold equivalent reserves based on the independent feasibility study. All payments are at the option of BacTech and are non-refundable.

The McKinnon Creek property is located 45 km north of Revelstoke, British Columbia. The property is comprised of 28 mineral claims totalling 68.5sq.km. McKinnon Creek has a long history of exploration dating back to 1865. Over the years, roughly 1,900 metres of underground drifts, crosscuts, raises and shafts have been excavated in addition to several bulk samples extracted for metallurgical test work and piloting.

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Between 1983 and 1993 over $12.5 million was spent on exploration for gold by numerous groups. In 1989 Equinox Resources completed a Mining and Milling Study with detailed cost estimates that was followed by additional work from 1994 to 1999 by Weymin Resources.

The McKinnon Creek ores are polymetallic and have a complex mineralogy. BacTech envisions run-of-mine material being crushed, wet screened, with the screen oversize subject to heavy metal separation. The float material would be rejected as tailings and the sink material, combined with the wet screen fines, would be transported to Tonkin Springs, Nevada for bioleaching at the Company-owned facility.

Prior to signing the option agreement, BacTech engaged Rescan Environmental Services Ltd. to conduct an environmental assessment of the property. The purpose of the study was to identify any environmental liability associated with the mineral claims and also assess the permit requirements for production. BacTech has received a favourable report from Rescan.

CORPORATE PROFILE

On August 5, 2003, BacTech announced the closing of its acquisition of a 55% interest in the Tonkin Springs Gold Mine located in north-central Nevada on the prolific Cortez Trend.

BacTech has developed and patented bioleach technology for the treatment of refractory ores and concentrates to enhance the recovery of gold, silver and base metals. BacTech has commissioned three commercial bioleach plants for the recovery of gold and more recently has successfully demonstrated its technology in the selective recovery of precious and base metals from complex sulphide concentrates. Bioleaching is a commercially accepted and environmentally friendly alternative to conventional smelting operations and provides BacTech with a distinct market advantage in the acquisition and operation of mineral properties. BacTech's business is to own and operate mining projects independently or in joint venture.

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The TSX Venture Exchange has not reviewed and does not accept any responsibility for the adequacy or accuracy of this release.

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TECHNICAL SUMMARY OF BIOLEACHING AND BACTECH PROCESSING

Why Use Bioleaching?

Over the last two decades, the application of bioleaching to the treatment of refractory gold deposits has been of major interest to mining companies throughout the world. The majority of the gold in these deposits is locked up in a sulphide matrix within the ore, and provides for very poor gold recoveries unless the sulphide minerals are removed first. The minerals of pyrite and arsenopyrite are the two most common sulphides associated with these refractory gold ores. In the past, the treatment method used has first involved making a sulphide concentrate that contains the gold, and then roasting this concentrate at a high temperature to drive off the sulphides as gases. This is then followed by recovery of the gold from the residue that is left behind. Roasting is, however, becoming increasingly unacceptable due to the production of sulphurous gases, i.e., emissions that often contain arsenic and cause damage to the environment. Bioleaching is an environmental alternative technique to roasting that does not create gaseous emissions, and is often a cheaper alternative to both roasting and other methods (such as pressure leaching) that might also be considered. In the commercial gold applications for which bioleaching has been used to date, the technique has shown that improvements in gold recovery from 20% without bioleaching pretreatment, to greater than 90% are readily achievable.

As well as the demonstrated use of bioleaching for the pretreatment of refractory gold concentrates, bioleaching also has potential application for the treatment of refractory base metal sulphides. Bioleaching can be used to oxidize metal-containing sulphides into soluble sulphate forms, and metals such as copper, nickel, cobalt and zinc can be extracted and purified into a saleable form directly at the minesite. Of particular current interest is the use of this technique for extracting copper from extremely refractory sulphides such as chalcopyrite. Traditionally, extraction of base metals from sulphides has been undertaken by the transport of concentrates from a mine site to an off-site smelter, which, similar to a roasting operation, can create severe environmental problems due to toxic gaseous emissions. For many mine sites, it also means the loss of control of the saleable metal production.

Therefore, bioleaching could be considered as an all-encompassing process for the treatment of very complex deposits containing multiple metals, and it can also be adapted to a variety of scales for different mines. The treatment of complex copper/gold deposits by bioleaching is a good example of how bioleaching may be applied in the future for treating deposits containing more than one metal of value.

What is Bioleaching and BacTech's Commercial Process Technology?

The terms bioleaching, biooxidation and bacterial oxidation are all used to describe the process for metal extraction that harness specific types of bacteria that degrade sulphide minerals naturally. BacTech's technology takes bacteria cultured from the environment and applies them in a way that speeds up the natural process of sulphide degradation by up to 500,000 times. There is no "re-engineering" or manipulation of these natural bacteria, but BacTech uses its' knowledge and experience of how to isolate and apply the bacteria, and create the perfect environment for them to operate effectively. This converts a slow natural process into a commercial economic process for metal extraction, while protecting the environment by not using the alternative techniques such as roasting. The only byproduct of bioleaching is an inert iron or iron arsenate precipitate, which is environmentally benign.

What are Bioleach Bacteria Like and How Do They Work?

The types of bacteria used in bioleaching are quite unique in that, unlike most living things that derive energy for growth from organic carbon, they gain energy for growth by oxidising sulphide minerals. They

are not harmful to animals or plant life and are only visible using a microscope, being about 1um to 2 um in size. Some types of bioleach bacteria are rod shaped, while others are spherical, and yet others are spiral in form. In a typical bioleaching process, the culture grows and divides rapidly, resulting in the presence of millions of cells for each gram of sulphide to be oxidised. As they live in an aqueous environment, the technique of bioleaching is known as a hydrometallurgical method of extraction.

How these "rock-eating" bacteria actually work has been the subject of investigation by scientists since the 1940's when they were first isolated in the laboratory. A number of theories have been advanced, and the knowledge base is growing in evaluating the mechanisms involved in which both chemical and biological forces work together to give the individual reactions for sulphide oxidation. The bacteria work both directly on the sulphide minerals, as well as being active in solution. They live as mixed populations, with different types having slightly different requirements and abilities, thereby creating symbiotic and competitive relationships to degrade the sulphide substrates.

How are the Bacteria Employed in a BacTech Commercial Process?

The bacteria must be provided with air, small amounts of simple fertililser type nutrients and be in good contact with the minerals to be oxidised. For this reason a series or chain of stirred aerated tanks are used. A ground pulp of the minerals (or a concentrate) is introduced into the first tank with the oxidized product withdrawn from the last tank. Oxidation of the sulphides occurs as the pulp progresses through the series of tanks over a period typically lasting between 4 to 6 days.

Bacteria are lost continuously from the system during oxidation. By choosing the correct residence time, the bacteria can grow and divide quickly enough to maintain a high population within the tanks in order to oxidize the fresh incoming sulphide feed.

The overall process is exothermic, which means that heat is generated, and the tanks must be cooled with water to maintain an optimum temperature for the bacteria to operate at. This means that the technology can be used in a variety of both hot and very cold climates, as the actual temperature of the process is well controlled. Sometimes reagents additions are added to the tanks to control the level of acidity of the pulp. Overall, it is a very simple process using non-sophisticated equipment. This makes it ideal for use at a variety of scales, and also in a variety of remote regions of the world where skill levels of operation may be lower.

What's BacTech's Commercial Experience?

BacTech was a pioneer in the early application of bioleaching processes using specially isolated bacterial cultures for treatment of refractory gold concentrates. It is one of only two companies in the world that have commercially demonstrated bioleach technology of this type.

BacTech's technology was first proven commercially at the Youanmi mine in Western Australia in 1994, and in this first application a "thermophilic" culture was used. As the name suggests, it was a culture that operated well by degrading minerals at a slightly higher temperature (around 50°c). Thermophiles and other bacteria are often found in acidic environments produced by the oxidation of sulphur, for example, in and around hot springs, volcanic regions and sulphide- rich areas.

Since the first application of BacTech technology in Western Australia, two other gold operations, one in Tasmania and one in China, have used BacTech technology for treatment of concentrates. These latter applications have both used "mesophiles" which operate at a lower temperature and demonstrate robustness for treating a wide range of sulphide minerals.

It is clear that one of the skills BacTech has developed over time is in matching the best natural culture to the type of minerals to be degraded for different applications. However, it is also the knowledge of how to apply these bacteria at a commercial scale that has provided the main focus for BacTech's technical expertise.

BacTech has also made considerable advancements in base metal leaching which, despite excess current smelter capacity, continues to be recognised by many as the future environmentally friendly alternative to smelting. The technology for the treatment of complex and "dirty" copper concentrates has been progressed by BacTech in partnership (Penoles-Mexico) on a demonstration scale plant in which the technical viability of a process integrating bioleaching with down stream metal recovery has been proven at 200 tpa annum cathode copper scale. This type of technology has been tested for treating extremely refractory copper Chalcopyrite that contain smelter penalty elements such as arsenic, zinc and bismuth, and it has now been shown that such concentrates are readily treatable by bioleaching.

What are the Attributes and Characteristics of a Bioleach Process?

Bioleaching is a natural process that has a remarkable ability to adapt to treating a variety of sulphide minerals from a single deposit. This gives it a unique quality in comparison to competing processes in being able to treat a variety of minerals through the life of a project. Importantly, bioleaching can often treat a lower grade of sulphide feed more economically than competing techniques, and this can allow an increase in overall metal recovery for a project.

Generally, the process tends to be self-managing and, once established, it is relatively simple to operate, which is in contrast to other techniques.

Bioleaching can also be uniquely selective in terms of the sulphides that are oxidized. This can be of particular value to some gold projects in which only a partial oxidation is required to maximize the release of gold values (arsenopyrite). As the cost of oxidation is directly related to the quantity of sulphide to be oxidised, bioleaching has further economic advantages to offer in cases where only a partial oxidation is necessary.

How Does Bioleaching Compare With Other Processes?

Roasting

Roasting has traditionally been used as the method for treating refractory ore and concentrates and, as already mentioned, is often environmentally damaging due to the production of sulphurous gases. Roasting employs temperatures of up to 600°c - 800°c to convert the sulphide values to sulphur gas. If arsenopyrite is present, a two-stage roaster is often required to drive off the arsenic as arsenic trioxide, and then oxidise the remaining sulphides. Gas scrubbers are essential to contain sulphur dioxide and arsenic trioxide emissions, which are both of environmental concern. Two-stage roasters and emission control devices greatly increase capital costs. Securing permits for roasters is now much more difficult due to environmental concerns, and is a lengthy, burdensome and costly process. The only disposal alternative for recovered arsenic may be hazardous waste landfills due to the purity standard of the arsenic and the existing global market surplus of the metal. Landfill disposal increases operating costs and may result in perpetual liability for the then current landowner. Roasting arsenopyrite ores and concentrates also creates health and safety issues that must be addressed with increased vigilance.

Pressure Leaching

If there is a high enough grade of gold present, then an autoclave process involving the use of oxygen under high pressure and temperature can be used to oxidize the sulphide minerals. If there are large quantities of sulphides to be oxidized, then the use of pressure oxidation can be prohibitively expensive, as a larger oxygen plant is needed. This increases both operating and/or capital costs. Unlike bioleaching, pressure oxidation is not selective in the sulphides that are oxidized. As already mentioned, for some projects, it is only necessary to oxidize a portion of the sulphide values to maximise precious metal recovery. As the cost of oxidation is directly related to the quantity of sulphide to be oxidized, bioleaching has further economic advantages to offer in such cases. Even if a total sulphide oxidation is

required, then bioleaching is usually the cheapest option to employ for oxidation, both in terms of capital and operating costs.

Autoclaves are capital and maintenance intensive because of the advanced materials needed for their construction and complexity of operation. They can require long lead times for fabrication and installation. The pressure leaching costs are further increased by the need for high operating skill labour requirements and increased safety requirement. In more recent times, these types of considerations have led to a greater preference for bioleach plants in comparison to considering the use of pressure oxidation.

July 8, 2004