Bioleaching testing – the next steps

BBX Minerals Limited (**ASX: BBX**) ("**BBX**" or the "**Company**") wishes to provide shareholders with the following details with respect to its bioleaching activities.

Next Steps

Further pilot plant testing and optimisation

A total of 200 kg of material from four drill holes is being sent to EcoBiome Metals, LLC (**EcoBiome**) for further pilot plant testing and optimisation. The goal is to conduct additional tests now that several enhancements have been made following the first pilot plant test announced on 27 February 2023.

The process will be supervised by BBX's technical manager, Edmar Medeiros, who will be working directly with EcoBiome's team at their facility.

The positive results from the initial pilot plant test work demonstrate the suitability of this bioleaching process. The expectation is that each test will produce more improved results, until the Company is satisfied that it has fully established the ideal conditions and extraction process. It is expected that the process will be fully optimised by no later than Q3 2023.

Subsequent to the improvement process being carried out at EcoBiome's facility in the United States, BBX intends to build its own pilot plant near its existing laboratory in Catalão, Brazil. The Company has initiated the necessary regulatory steps to enable the shipment of the microbes into the country.

It is estimated that setup will commence in late Q2 2023. The pilot plant in Brazil will initially be used to test an existing 13 tonne sample from the Ema project. While operating the newly installed pilot plant will contribute to the continuous improvement of the process recoveries, operating efficiency, and cost profile, its main purpose will be to produce metal that can be analysed, determining the best markets for BBX to sell products into.

Static bioleaching testing

While the pilot plant and bioleaching process are optimised, the Company will initiate bioleaching testing of drill holes in a controlled environment. This will include initially drill holes from the Três Estados MRE, and subsequently drill holes from the Ema project.

The work will commence in Q2 2023 and is expected to be completed within Q4 2023. Analysis from the bio leach reactors will be a continuous part of development and future operations.

The intention is to biologically assess each drill hole to compare results with those from the nickel fusion assays.

Work already completed

Initial bioleaching test work

On 14 November 2022, the Company announced that it had completed initial test work using a surface bulk sample of mafic intrusive from the Ema project (EMB-007) (Figure 1).

This experiment utilised Cultured Gold® microbial formula to demonstrate and prove the ability to extract and recover 5E precious metals from an unprocessed sample. EcoBiome proprietary and patent pending Gold DRIVE™ was utilised to promote the recovery of 5E[1] precious metals. The results are presented in Table 1.

Test results show a significant increase in reported precious metals following bioleaching process.

Follow up test work

On 19 December 2022, BBX announced results from bioleaching test work using a 5 kg sample taken from a homogenised 50.4 kg composite from the TED-015, comprised of hematite altered mafic intrusive from 28m to 64m, typical of the altered gabbro within the Adelar MRE envelope (Figure *2* and Figure *3*).

This experiment utilised Cultured Gold® microbial formula to demonstrate and prove the ability to extract and recover 5E precious metals from an unprocessed ore sample. EcoBiome Metals proprietary and patent pending Gold DRIVE™ was utilised to promote the recovery of 5E precious metals. All tests were conducted for 96 hours at 30% pulp density. The results are presented in Table 2.

Test results show a significant increase in 5E precious metals following the bioleaching process, compared with previously reported assays for the same drill hole.

Pilot plant testing

On 27 February 2023, the Company announced results from initial pilot plant testing, utilising a 45 kg sample taken from a homogenised 50.4 kg composite from TED-015, comprised of hematite altered mafic intrusive from 28 m to 64 m, typical of the altered gabbro within the Adelar MRE envelope (Figure 2 and Figure 3).

A dedicated pilot plant was designed and commissioned by EcoBiome at its facility in The Woodlands, Texas, USA. The objective of this pilot plant test was to simulate a potential production circuit.

The 45 kg sample was reacted with the EcoBiome proprietary technology and EcoBiome Metals Cultured Platinum Group Metals (PGM) microbes. The material was then processed through a Knelson concentrator, followed by filtration and finally electrowinning. Samples were subsequently assayed for gold, platinum, palladium, iridium, and rhodium by ICP-MS by an independent analytical test laboratory in Arizona, USA.

The pilot plant was designed to operate continuously to simulate an industrial process, utilising five reactors in series.

Positive results were achieved by the first pilot plant run and expectations are that every successive run will be optimised to produce progressively more improved results.

The results are presented in Table 3.

[1] 5E precious metals refer to the sum of platinum (Pt), palladium (Pd), iridium (Ir), rhodium (Rh) and gold (Au) expressed in units of g/t.

Announcements referred to in this release:

Date	Title
27/02/2023	Excellent results from initial pilot plant testing
19/12/2022	Bioleaching test work continues to show excellent results
14/11/2022	Initial results from bioleaching test work

This announcement has been authorised for release by the Board of Directors.

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About BBX Minerals Ltd

BBX Minerals Limited is a unique mineral exploration and mineral processing technology company listed on the Australian Securities Exchange.

Its major exploration focus is Brazil, mainly in the southern Amazon, a region BBX believes is vastly underexplored with high potential for the discovery of world class gold and precious metal deposits. BBX's key assets are the Três Estados and Ema Gold Projects. The company has 270.5km² of exploration tenements within the Colider Group, a prospective geological environment for gold, PGM and base metal deposits.

BBX is also developing an environment compatible and sustainable beneficiation process that extracts precious metals using a unique bio leach process. This leading-edge process, that extracts precious metals naturally, is being developed initially for the primary purpose of economically extracting Platinum Group metals from the Tres Estados mineral deposit. It is expected that such technology will be transferable and relevant to many other PGM projects. BBX believes that this processing technology is critical in the environmentally timely PGM space and supports a societal need to move toward a carbon neutral hydrogen fuel economy.

Competent Person Statement

The information in this report that relates to exploration results is based on information compiled by Mr. Antonio de Castro, BSc (Hons), MAusIMM, CREA, who acts as BBX´s Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda. Mr. de Castro has sufficient experience which is relevant to the type of deposit under consideration and to the reporting of exploration results and analytical and metallurgical test work to qualify as a competent person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Castro consents to the report being issued in the form and context in which it appears.

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AusIMM:230624

Appendices

Table 1: test results from initial bioleaching test work

Test using fresh rock	g/t
Au untreated ore grade	1.65
Au EcoBiome treated for 96 hours	14.74
Pd untreated ore grade	15.68
Pd EcoBiome treated for 96 hours	134.99
Pt untreated ore grade	0.06
Pt EcoBiome treated for 96 hours	0.09
Rh untreated ore grade	0.28
Rh EcoBiome treated for 96 hours	0.40
Ir untreated ore grade	-
Ir EcoBiome treated for 96 hours	1.06

Table 2: test results from follow up bioleaching test work

Test using composite DD core	g/t
Au assay Ni fusion	0.04
Au untreated grade	0.82
Au EcoBiome treated for 96 hours	14.13
Pd Ni fusion	0.04
Pd untreated grade	0.39
Pd EcoBiome treated for 96 hours	79.27
Pt Ni fusion	0.71
Pt untreated grade	n/d
Pt EcoBiome treated for 96 hours	0.17
Ir Ni fusion	0.54
Ir untreated grade	n/d
Ir EcoBiome treated for 96 hours	0.72
Rh Ni fusion	0.01
Rh untreated grade	0.10
Rh EcoBiome treated for 96 hours	1.10

Table 3: Pilot plant bioleaching results

Test using composite DD core	g/t
Au assay Ni fusion	0.04
Au EcoBiome treated for 96 hours	0.45
Pd Ni fusion	0.04
Pd EcoBiome treated for 96 hours	1.76
Pt Ni fusion	0.71
Pt EcoBiome treated for 96 hours	0.55
Ir Ni fusion	0.54
Ir EcoBiome treated for 96 hours	0.03
Rh Ni fusion	0.01
Rh EcoBiome treated for 96 hours	0.21

Figures

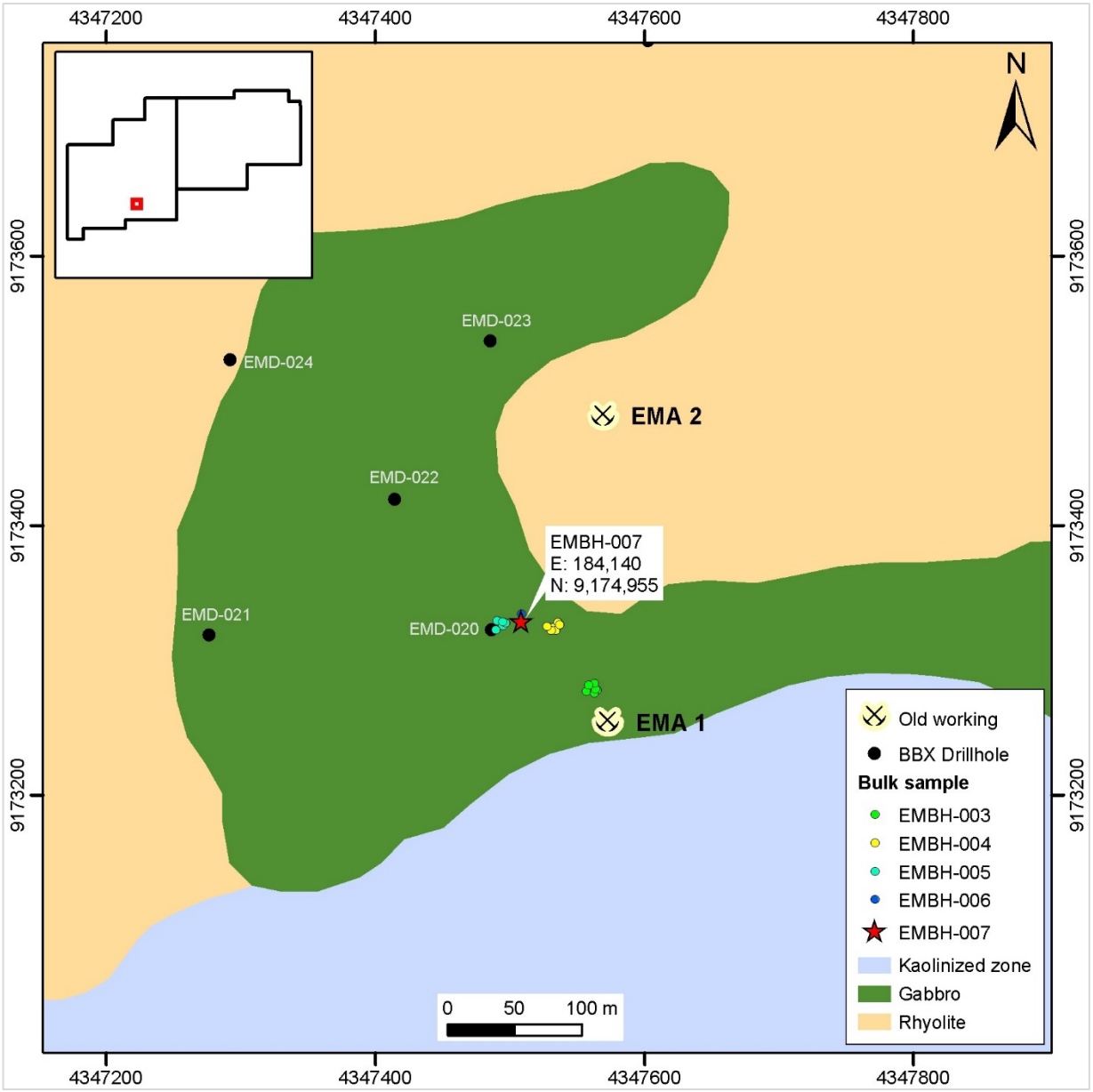

Figure 1: Location of EMB-007 surface sample

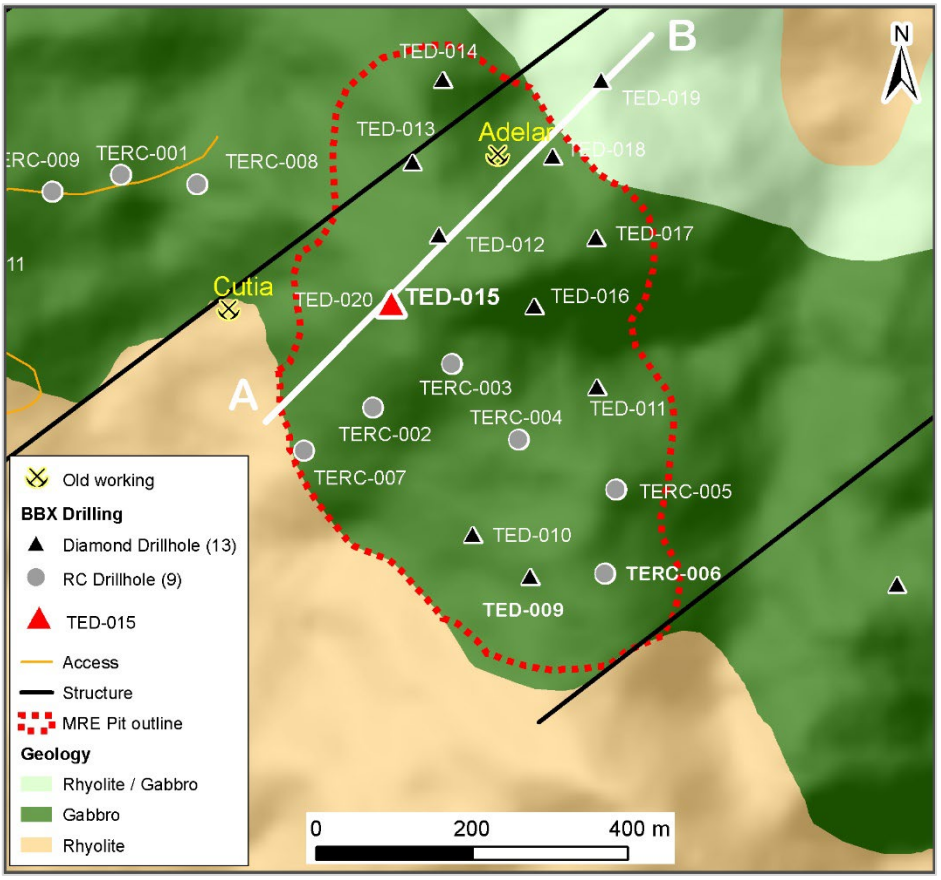

Figure 2: Location of TED-015 & MRE area of influence

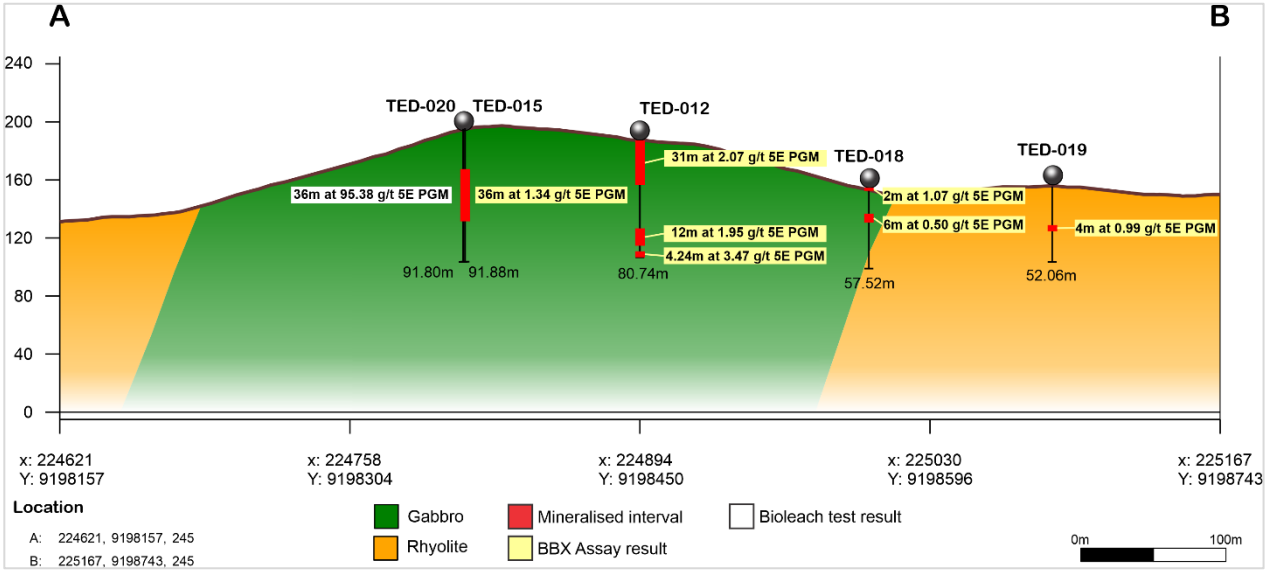

Figure 3: Cross section showing TED-015