

#### **ASX Announcement**

14th March 2018

## GOLD EXTRACTION TEST FROM TABOCAL (TRÊS ESTADOS) BULK SAMPLE RECOVERS 206.9 g/t

## EXPLORATION LICENCES GRANTED AT EMA AND TRÊS ESTADOS

### Highlights:

- Pyrometallurgical tests conducted on a bulk surface outcrop sample from the Tabocal prospect using a variety of flux components yield a maximum value of 206.9 g/t gold, without a pre-leach step
- IPAAM grants exploration environmental licences for 2 years at Ema and Três Estados
- Pilot plant test work commences at Marcelo da Silva Pinto M.E. facility

Brazilian gold explorer, BBX Minerals (ASX: BBX or "the Company") is pleased to announce results of preliminary metallurgical testing from the Company's Tabocal prospect, approximately 2.7km east of the previously sampled areas at the Três Estados Project.

The Company has conducted further metallurgical testwork at the Marcelo da Silva Pinto M.E. facility (Marcelo), using a similar process to that reported on January 9, 2018 for Ema and Três Estados bulk samples, **but without a pre-leach step** and varying the flux mix in the initial fusion. Four tests were conducted on 5kg sub-samples using different combinations of flux components on a homogenised 150kg bulk sample taken from fresh (unweathered) outcropping dolerite (previously classified as gabbro), displaying intense hydrothermal alteration (amphibolitization, chloritization and saussuritization) at the Tabocal prospect (see figs. 2,3,4 and Appendix 1,2). Approximately 150kg of rock samples was collected from a single outcrop over an area of approximately 3 metres by 3 metres (see Appendix 1).

After collection, the sample was sealed and transported directly to the Nomos laboratory in Rio de Janeiro for preparation. After crushing and pulverisation the samples were sent directly to the Marcelo facility in Rio de Janeiro for treatment. 5kg of each sample was smelted with a specific flux and a copper collector to form a copper-rich bar. Each bar was divided into four equal parts, one of which was dissolved in nitric acid and metals precipitated from the solution. The resultant precipitate was fused to form metallic buttons which were analysed by fire assay using a gravimetric finish (fig 1). The other three quarters of each copper bar have been retained for

**BBX Minerals Ltd.** 

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares

66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

> T. +61 8 6955 2955 F. +61 8 6210 1153

**Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

additional testwork. The process was repeated on the slag form each fusion which was crushed, ground and refused and a second copper bar produced. The results from the two fusions, summarised in table 1 indicate that the more complex flux mix used in test TB-T411-1 resulted in significantly higher gold and silver recoveries. Testwork is continuing to confirm these conclusions.

Subsequent to the re-smelt the final slags were crushed, ground, riffle split and assayed by standard fire assay. A result of 14.00g/t Au and minor Pt and Pd was obtained from the final slag for test TB-T411-1 and lower values for the other 3 tests (see table 2).

Test no.	Flux components	Au (g/t)	Ag (g/t)
TB-T411-1 - rock	11	114.27	202.88
- slag	"	92.41	809.87
Total		206.88	1012.75
TB-T411-2 - rock	10	33.00	180.15
- slag	10	20.70	61.74
Total		53.70	241.89
TB-T408-Cu-1 - rock	6	29.79	-
- slag	6	28.61	
Total		58.40	
TB-T408-Cu-2 - rock	5	2.31	-
- slag	5	12.06	-
Total		14.37	-

Table 1. Results from four metallurgical tests of the Tabocal surface bulk samples, back calculated to the original sample weight.

Test no.	Au (g/t)	Pt (g/t)	Pd (g/t)
TB-T411-1	14.00	0.86	0.70
TB-T411-2	1.34		-
TB-T408-Cu-1	5.35	0.11	0.11
TB-T408-Cu-2	1.57	-	

Table 2. Standard fire assay results of final slag after re-smelting, back calculated to the original sample weight.

Based on BBX's experimental results it is now believed that the pre-leach step used in previous tests may enhance the extraction of precious metals. The current results, without a pre-leach, may therefore represent only partial extraction values. Testwork is currently in progress to test the effect of pre-leaching over various timeframes.

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office
Av Jornalista Riccardo Marinho
360 Ed Cosmonolitan Sala

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

T. +55 21 2439 5700





TBT411-1 Gold button 1st smelt

TB-T411-1 Gold button slag smelt

Fig 1. Photographs of gold buttons from the TB-T411-1 initial fusion and re-smelt, recovered from approx.. 25% of the copper collector metal



Fig. 2. Photograph of the sampled outcrop at Tabocal

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 

328.85 million shares 66.43 million options

Registered Office Level 1

Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

T. +55 21 2439 5700



Fig. 3. Example of an individual sub-sample from the Tabocal bulk sample

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office
Av Jornalista Rico

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

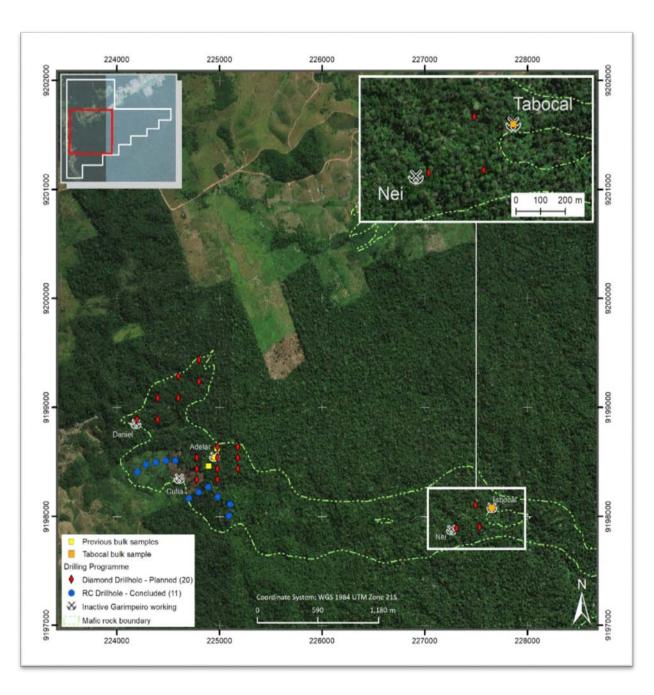


Fig. 4. Location of the Tabocal bulk sample

### **Environmental licencing**

IPAAM (Amazonas state environmental authority) has granted two-year, renewable independent exploration environmental licences for Ema and Três Estados. This will enable the completion of the planned diamond drilling programme at both localities. Drilling at Três

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro Jeff McKenzie Michael Schmulian Will Dix

**Directors** 

T. +55 21 2439 5700

Estados will include a small programme at Tabocal (see fig 4) following the positive extraction results from the sampled outcrop area.

It is anticipated that the environmental licences for the planned trial mining programme will be issued within the coming weeks.

#### Pilot plant testing

As indicated in BBX's investor presentation, construction of a small test furnace and associated peripherals has been finalised. The plant, located at the Marcelo refinery is capable of treating 1-2 tonnes of sample per month. Commissioning of the furnace is currently being finalised, to be followed by scaling up of bulk pilot plant testing of surface samples and Três Estados and Ema RC drill samples.

#### Assaying of drill samples

BBX continues to progress the development of assaying techniques in Australia, Brazil and at SGS laboratory in Belo Horizonte. A number of variations of BBX's analytical methods are currently being tested on a variety of samples. Seven RC drill samples from Três Estados, six from TERC-001 and one from TERC-002 were tested using one of the analytical methods (a nickel fusion) (see table 3 and fig. 5 for hole locations). All these samples were of soil and saprolite rather than from fresh rock, on which all previous work has been conducted. The six intervals tested in TERC-001 were not contiguous and were chosen to cover the full range of weathered material from soil (0-2m) to saprock. These seven samples were divided into three separate batches, comprising two, two and three samples, each of which contained a standard and a blank.

While three of the samples returned positive results for gold (see table 4) the values returned from the certified standard and blanks were unsatisfactory and not in compliance with QA/QC requirements. The Company notes that the same standards used previously by BBX for QA/QC purposes in sample batches assayed at various laboratories (results announced in 2016 and 2017) have consistently returned acceptable values.

The Company notes that only a small number of non-contiguous samples have been utilised from TERC-001 and TERC-002 and that the samples have not come from the fresh rock. The Company does not consider the results achieved as representative either of the holes sampled or of the 37-hole drill programme. The method used to test the samples from the RC drill holes is regarded as unsatisfactory and is no longer being tested.

Hole no	Easting	Northing	RL (m)	Dip (deg)	Azimuth	Depth(m)
TERC-001	224478	224798	125	-90	0	24.0
TERC-002	9198515	9198224	172	-90	0	50.0

Table 3. Três Estados RC drill hole location data

**BBX Minerals Ltd.** ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

**Registered Office** Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tiiuca Rio de Janeiro

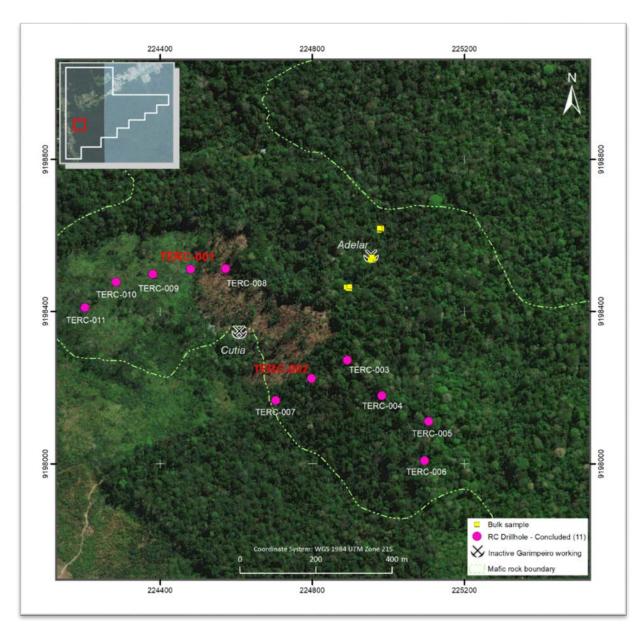


Fig. 5. Três Estados RC drill hole locations (see co-ordinates of TERC-001 and 002 in JORC compliance Table 1 - RC drilling)

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Hole	Batch	From	То	Sample no.	Au g/t	Pt (g/t)	Pd (g/t)
TERC-001	1	6	8	TEP-004	0.03	<0.03	<0.01
		16	18	TEP-10	<0.01	< 0.03	<0.01
		Standard*			84.75	44.75	50.00
		Blank			0.09	<0.03	0.03
	2	12	14	TEP-008	<0.01	< 0.03	<0.01
		20	22	TEP-012	0.20	0.06	0.10
		Standard*			53.50	49.25	52.00
		Blank			0.03	<0.03	<0.01
	3	0	2	TEP-001	2.90	< 0.03	<0.01
		10	12	TEP-007	2.60	< 0.03	<0.01
TERC-002		0	2	TEP-014	2.30	< 0.03	<0.01
		Standard*			67.00	52.50	53.50
		Blank			<0.01	<0.03	<0.01
* certified	d value				80.80	19.07	27.46

Table 4. Assay results from testing of Três Estados RC drill samples (intervening intervals not assayed).

The company will continue its efforts to develop an assay method to allow the systematic assaying of RC and diamond drill hole samples. As outlined above the company intends to commence metallurgical test work on Três Estados and Ema RC drill samples as part of this pilot testing programme.

To gain an insight into issues related to the treatment and normalisation of complex ores not amenable to conventional assay and recovery techniques, investors are referred to a 1990 US patent (see link below).

However, investors are advised that BBX is not using this methodology in the Company's extraction process.

https://patents.google.com/patent/US4892631

#### For more information:

Jeff McKenzie CEO BBX Minerals Ltd +64 22 3421271 Jeff.McKenzie@bbxminerals.com.au

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

#### Competent Person Statement

The information in this report that relates to gold mineralization in the Apui region in Brazil is based on information compiled by Mr. Antonio de Castro, BSc (Hons), MAusIMM, CREA, who acts as BBX's full-time Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda. Mr. de Castro has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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.

CREA/RJ:02526-6D AusIMM:230624

#### **About BBX Minerals Ltd**

BBX Minerals Limited (ASX: BBX) is a mineral exploration and mining company listed on the Australian Securities Exchange. Its major 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 copper deposits.

BBX's key assets are the Juma East, Três Estados and Ema Gold Projects in the Apuí region, Amazonas State. The company has 58.1km² of exploration tenements within the Colider Group, a prospective geological environment for epithermal gold and Cu-Au porphyry deposits. The region is under-explored and has the potential to provide BBX with a pipeline of high-growth, greenfields gold discoveries

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

#### Appendix 1.

UTM coordinates of Tabocal bulk sample centre point (WGS84 zone 21S):

227.653.020 E 9,198,077.749 N

#### Appendix 2.

Geological description of Tabocal bulk sample:

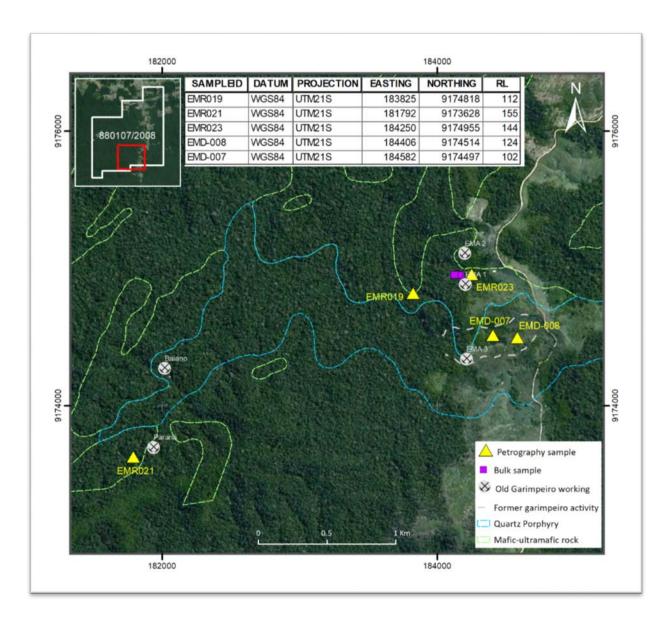
Hand specimen description: Dark grey-green unweathered gabbro, medium to fine-grained, comprising tabular plagioclase, amphibole and minor magnetite. Occasional pyrite (<0.5%).

Petrographic description (Celina M. L. Marchetto, March 6, 2018): A basic intrusive igneous possibly sub-volcanic (shallow intrusion), intensely hydrothermaly (amphibolitization, chloritization & saussuritization), displaying relics from the original igneous subophitic and ophitic textures. The original pyroxene was completely altered to amphiboles (tremolite, actinolite and hornblende), which are all secondary.

The petrographic report emphasises that both mafic and felsic rocks at Ema and Três Estados are hydrothermally altered to varying degrees. BBX believes that such alteration is synchronous with the high and low sulphidation events at Juma East and therefore with the regional gold mineralisation event.

See the link below to the petrographic report on the company's web site:

https://www.bbxminerals.com.au/ema/



Location of Ema petrographic samples

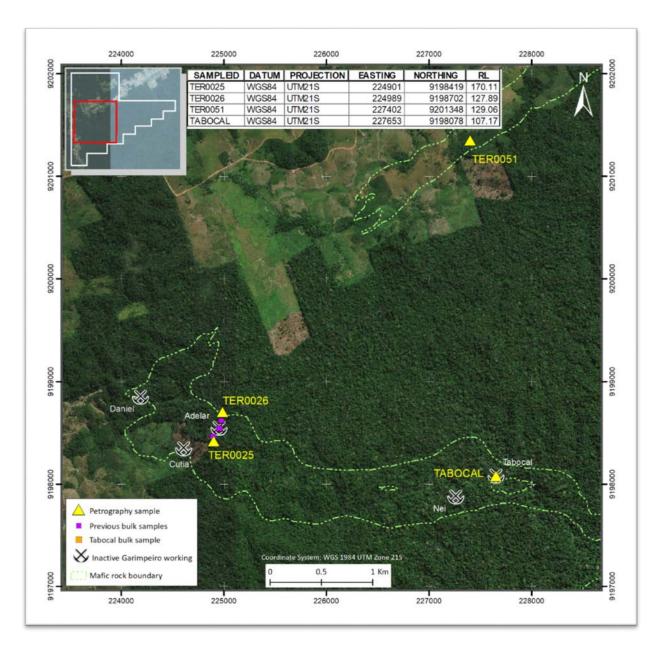
BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro



Location of Três Estados/Tabocal petrographic samples

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 Brazillian Office

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Reference Number	Area	Туре
EMR 19	Ema	Outcrop
EMR 21	Ema	Outcrop
EMR 23	Ema	Outcrop
EMD 8	Ema	Diamond drill hole - 53.75m
EMD7	Ema	Diamond drill hole - 64.7mt
TER 25	Tres Estados	Outcrop
TER 26	Tres Estados	Outcrop
TER 51	Tres Estados	Outcrop
Tabocal	Tabocal (Três Estados)	Outcrop

Sample reference details: Petrographic report dated 6 March 2018

**BBX Minerals Ltd.** ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

T. +55 21 2439 5700

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Jeff McKenzie Michael Schmulian Will Dix

**Directors** 

# The following Table and Sections are provided to ensure compliance with JORC Code (2012 Edition).

**TABLE 1 – Section 1: Sampling Techniques and Data for Bulk Metallurgical Test** 

Criteria	JORC Code	Commentary
	Explanation	
Sampling Techniques	Nature and quality of sampling (e.g. cut channels. random chips. or specific specialised industry standard measurement tools appropriate to the minerals under investigation. such as down hole. gamma sondes. or handheld XRF instruments etc). These examples should not be taken as limiting the broad meaning of sampling.	<ul> <li>The announcement refers to metallurgical testwork conducted on bulk surface chip samples from a large rock outcrop</li> <li>The bulk samples were each taken from outcropping gabbro over an area measuring approximately 3m x 3m. Individual sub-samples weighing 0.5 to1kg were broken from the fresh outcrop and aggregated into a single sample. The sub-samples were taken at a roughly even spacing without bias and without regard for the visual appearance of the sub-sample (which in all cases were visually totally homogeneous).</li> </ul>
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sample representivity was ensured by taking individual sub-samples of an approximate equal size at an approximate equal spacing within the outcropping area, without regard to visual appearance of the rock being sampled.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where "industry standard " work has been done this would re relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay). In other cases more explanation may be required.	The bulk sample used for the metallurgical tests reported in this announcement was obtained by collecting surface chip samples over an area of approximately 3 by 3 metres at the Tabocal prospect at Três Estados. The entire 150kg sample was crushed and pulverised at the Nomos laboratory, Rio de Janeiro. Individual 5kg samples were riffle split for metallurgical testing.

#### **BBX Minerals Ltd.**

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153

#### **Brazillian Office**

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules ) may warrant disclosure of detailed information.	
Criteria	JORC Code Explanation	Commentary
Drilling Techniques	Drill types (e.g. core. reverse circulation. open hole hammer. rotary air blast. auger. Bangka. sonic etc ) and details (e.g. core diameter. triple or standard tube. depth of diamond tails. face-sampling bit or other type. whether core is oriented and if so by what method etc).	Drill results are not included in this announcement
Drill Sample Recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assayed.</li> </ul>	Drill results are not included in this announcement
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	Drill results are not included in this announcement .
	<ul> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine /course material.</li> </ul>	<ul> <li>Drill results are not included in this announcement</li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Surface hip samples have been geologically logged (see appendix 2) .
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean. channel. etc) photography.</li> </ul>	Logging is qualitative

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro **Directors**Jeff McKenzie
Michael Schmulian
Will Dix

T. +55 21 2439 5700

	• The total length and	Drill results are not included in this
	percentages of the relevant intersections logged.	announcement
Sub- Sampling Techniques and Sampling	<ul> <li>If core. whether cut or sawn and whether quarter. half or all core taken.</li> </ul>	<ul> <li>Drill results are not included in this announcement</li> </ul>
Procedures	<ul> <li>If non-core. whether riffled. tube sampled. rotary split etc and whether sample wet or dry.</li> </ul>	<ul> <li>Drill results are not included in this announcement</li> </ul>
	<ul> <li>For all sample types. the nature. quality and appropriateness of the sample preparation technique.</li> </ul>	Sample preparation was conducted at the Nomos laboratory, Rio de Janeiro. Brazil, involving crushing and pulverising of the entire 150kg bulk sample. This methodology is regarded as appropriate for this preliminary metallurgical testwork programme.
	Quality control procedures adopted for all sub – sampling stages to maximise "representivity" of samples.	<ul> <li>Results reported in this announcement refer to metallurgical testwork on 5kg pulverised bulk samples. The entire 150kg sample was crushed, pulverised and homogenised and riffle split</li> <li>The results in this announcement are for indicative metallurgical testwork and do not purport to be in any way representative of an entire geological unit or body. This work is being conducted as a precursor to commencing small-scale trial mining and pilot-scale treatment.</li> <li>The sampling was conducted over the principal area of outcrop within the area of interest. An exploration drilling programme is planned to evaluate the potential of the entire area of interest.</li> </ul>
	<ul> <li>Measures taken to ensure that the sampling is representative of the in situ material collected. including for instance results for field duplicate/second —half sampling.</li> </ul>	The bulk sample was collected at random, without bias from the exposed outcrop, and was not subject to visible signs of mineralisation. No sample duplicates were taken as this is not regarded as applicable for

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

		metallurgical testwork conducted on a single bulk sample.
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The sample size is regarded as adequate for indicative metallurgical tests.</li> </ul>
Quality of Assay Data and Laboratory Tests	The nature quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  The nature quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>The extraction methodology used comprised: fusion with a copper collector, dissolution of the collector in nitric acid, precipitation of a silver-rich precipitate from the solution, fusion of the precipitate and the undissolved residue into a metallic button, assaying of the button by dissolution with nitric acid to form an AgCl precipitate which is fused into a silver button and weighed, and cupellation of the undissolved residue with lead to form a gold button which is weighed, and the grade back calculated to the original sample weight of 5kg. This process is regarded as appropriate for metallurgical extraction tests.</li> <li>Prior to commencing the fusions the furnace was completely re-lined with a new aluminium refractory cement liner. The furnace is currently dedicated to conducting BBX fusions.</li> <li>As the extraction methodology is still in the developmental phase it may represent only a partial recovery method for gold and other precious metals.</li> </ul>
	<ul> <li>For geophysical tools. spectrometers. hand held XRF instruments. etc. the parameters used in determining the analysis including instrument make and model. reading times. calibrations factors applied and their derivation etc.</li> </ul>	<ul> <li>No geophysical tools or electronic device was used in the generation of sample results</li> </ul>
	<ul> <li>Nature of quality control procedures adopted (e.g.</li> </ul>	<ul> <li>The standard quality control procedures for routine assays of 25</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

T		
	standards. blanks. duplicates. external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	to 50 grams is not applicable to 5kg bulk metallurgical tests. As these are initial metallurgical tests utilising a method still under development there is no statistical basis on which to establish an acceptable level of accuracy and precision. No commercial certified standards are available for this type of material where the nature of the mineralisation has yet to be established. The results obtained by extracting physical gold and silver from bulk samples give an indicative value of how much metal may be extracted using BBX's current extraction process technology, which remains under development. No external laboratory checks have been conducted as the methodology, which is regarded as proprietary has yet to be finalised.  • The results in this announcement are for indicative metallurgical testwork and do not purport to be in any way representative of an entire geological unit or body. This work is being conducted as a precursor to commencing small-scale trial mining and pilot-scale treatment.  • The sampling was conducted over the principal area of outcrop within the area of interest. An exploration drilling programme is planned to evaluate the potential of the entire area of interest.
Verification of Sampling and Assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	Not applicable
	The use of twinned holes	<ul> <li>Drill results are not included in this announcement</li> </ul>
	<ul> <li>Documentation of primary data. data entry procedures. data verification. data storage</li> </ul>	<ul> <li>Results for this testwork were supplied digitally, directly to BBX's</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	(physical and electronic) protocols.	Exploration Manager by Marcelo da Silva Pinto ME.
	<ul> <li>Discuss any adjustment to assays</li> </ul>	No adjustments were made.
Location of Data Points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down hole surveys). trenches. mine workings and other locations used in Mine Resource estimation</li> </ul>	Drill results are not included in this announcement
	<ul> <li>Specification of grid system used</li> </ul>	• UTM WGS84 zone 21S.
	<ul> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Topographic control is achieved via the use of government topographic maps in association with GPS and Digital Terrain Maps (DTM's).</li> </ul>
Data Spacing and Distribution	<ul> <li>Data spacing for reporting of Exploration results.</li> </ul>	<ul> <li>The sample subject of the metallurgical tests reported in this announcement was collected over a surface area of approximately 9 square metres.</li> </ul>
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classification applied.	<ul> <li>No representations of extensions, extrapolations or otherwise continuity of grade are made in this announcement.</li> </ul>
	<ul> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill results are not included in this announcement</li> </ul>
Orientation of Data in relation to Geological Structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which is known. considering the deposit type.</li> </ul>	<ul> <li>The sample subject of this announcement was collected without bias from a surface outcrop.</li> </ul>
	<ul> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias. this should be assessed and reported if material.</li> </ul>	<ul> <li>The samples were taken in an unbiased manner from the entire outcrop exposure within the sample area. There are no visual structures or other geological features controlling mineralisation as the host rock is a visually homogeneous mafic intrusive.</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Sample security	The measures taken to ensure sample security.	<ul> <li>The bulk sample was air freighted in sealed bags directly to the Nomos laboratory for sample preparation and riffle splitting. The prepared samples for metallurgical testing were transported to the Marcelo facility by BBX's exploration manager.</li> </ul>
Audit or Reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No audits or external reviews of techniques have been conducted.</li> </ul>

# Section 2: Reporting of Exploration Results for Bulk Metallurgical Test

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	Type. reference name/number. location and ownership including agreements or material issues with third parties such as joint ventures. partnerships. overriding royalties. native title interests. historical sites. wilderness or national park and environmental settings.	The Três Estados lease is 100% owned by BBX with no issues in respect to native title interests. historical sites, wilderness or national park and environmental settings.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area	The company is not aware of any impediment to obtain a licence to operate in the area
Exploration done by Other Parties	Acknowledgment and appraisal of exploration by other parties	No exploration by other parties has been conducted in the region
Geology	Deposit type. geological setting and style of mineralisation	The geological setting of the area reported in this announcement is that of hydrothermally altered mafic intrusives within Proterozoic volcanic and volcanoclastic rocks. The precise nature of this unusual style of igneous rock-hosted precious metal

**BBX Minerals Ltd.** 

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

		mineralisation is currently unknown.
Drill Hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes  Basting and northing of the drill hole collar  Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.  Dip and azimuth of the hole  Down hole length and interception depth  Hole length	Coordinates of the centre point of the 3m x 3m area comprising the bulk sample are included in this announcement (precision of approximately +/- 4m).  UTM coordinates of Tabocal bulk sample centre point (WGS84 zone 21S): 227,653.020 E 9,198,077.749 N
	If the exclusion of this information is justified on the basis that the information is not Material and that this exclusion does not detract from the understanding of the report. the Competent Person should clearly explain why this is the case.	No exclusion of information has occurred.
Data aggregation methods	In reporting Exploration Results. weighting averaging techniques. maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated	The results reported in this announcement refer to a bulk sample collected from a surface outcrop
Data aggregation methods	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results. the procedure used for such aggregation should be stated and some typical	Not applicable – results reported refer to one bulk sample.

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	examples of such aggregations shown in detail.	
Data	• The assumptions used for any	<ul> <li>Not applicable – no</li> </ul>
aggregation methods	reporting of metal equivalent values should be clearly stated.	equivalents were used in this announcement.
Relationship between mineralization widths and intercepted lengths	<ul> <li>These relationships are particularly important in reporting of Exploration Results.</li> <li>If the geometry of the mineralization with respect to the drill hole angle is known. its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported. there should be a clear statement to this effect (e.g. 'down hole length. true width not known').</li> </ul>	Drill results are not included in this announcement
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include. but not limited to plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	A map showing the sample location is included in this announcement.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration Results is not practicable. representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	The Company believes the ASX announcement provides a balanced report of the results of laboratory metallurgical tests conducted on the bulk sample
Other substantive	<ul> <li>Other exploration data. if meaningful and material. should be reported including (but not limited</li> </ul>	<ul> <li>Airborne geophysical results and ground IP results were presented in previous</li> </ul>
exploration data	to): geological observations. geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density. groundwater. geotechnical and rock characteristics; potential deleterious or contaminating substances.	announcements and are not referred to in this announcement.

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Further Work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large- scale step-out drilling).	<ul> <li>Comments on the ongoing work programme are presented.</li> </ul>
	Diagrams clearly highlighting the areas of possible extensions. including the main geological interpretations and future drilling areas. provided this information is not commercially sensitive.	<ul> <li>A map showing the extent of gold in soil anomalies was included in previous announcements.</li> </ul>

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala

360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

# The following Table and Sections are provided to ensure compliance with JORC Code (2012 Edition).

**TABLE 1 – Section 1: Sampling Techniques and Data for the Petrographic Descriptions** 

Criteria	JORC Code	Commentary
	Explanation	
Sampling Techniques	Nature and quality of sampling (e.g. cut channels. random chips. or specific specialised industry standard measurement tools appropriate to the minerals under investigation. such as down hole. gamma sondes. or handheld XRF instruments etc). These examples should not be taken as limiting the broad meaning of sampling.	<ul> <li>The announcement refers to petrographic descriptions of seven surface and two drill core samples, comprising five thin sections and four polished thin sections</li> <li>The samples were taken from outcropping gabbro at Ema and Três Estados (incl. Tabocal) and diamond drilling at Ema.</li> </ul>
	<ul> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	Samples were selected to represent the principal rock types encountered to date at Ema and Três Estados (incl. Tabocal)
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where "industry standard " work has been done this would re relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay). In other cases more explanation may be required. such as where there is coarse	The samples were selected by the site geologist to represent each of the rock types encountered in surface mapping at Ema and Três Estados and diamond drilling at Ema.  Ema.

**BBX Minerals Ltd.** 

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules ) may warrant disclosure of detailed information.	
Criteria	JORC Code Explanation	Commentary
Drilling Techniques	Drill types (e.g. core. reverse circulation. open hole hammer. rotary air blast. auger. Bangka. sonic etc ) and details (e.g. core diameter. triple or standard tube. depth of diamond tails. face-sampling bit or other type. whether core is oriented and if so by what method etc).	The two samples obtained from drill core were collected from drill holes EMD-007 (64.7 m) and EMD- 008 (53.75m) at Ema (see map in appendix)
Drill Sample Recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assayed.</li> </ul>	<ul> <li>Core recoveries are not applicable to petrographic samples</li> </ul>
	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul> <li>The samples were selected based on the visual description as being representative of the principal rock types encountered</li> </ul>
	<ul> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine /course material.</li> </ul>	<ul> <li>Core recoveries are not applicable to petrographic samples</li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Core samples have been logged in detail .
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean. channel. etc) photography.</li> </ul>	Logging is qualitative

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Sub- Sampling Techniques and Sampling Procedures	<ul> <li>The total length and percentages of the relevant intersections logged.</li> <li>If core. whether cut or sawn and whether quarter. half or all core taken.</li> <li>If non-core. whether riffled. tube sampled. rotary split etc and whether sample wet or dry.</li> </ul>	<ul> <li>Drill intersections are not included in this announcement</li> <li>Drill results are not included in this announcement</li> <li>Drill results are not included in this announcement</li> </ul>
	<ul> <li>For all sample types. the nature. quality and appropriateness of the sample preparation technique.</li> </ul>	The petrographic samples were prepared using standard procedures for thin and polished thin sections
	<ul> <li>Quality control procedures adopted for all sub – sampling stages to maximise "representivity" of samples.</li> </ul>	<ul> <li>Representivity of samples was ensured by collecting one sample from each of the rock types identified in surface mapping and core logging</li> </ul>
	<ul> <li>Measures taken to ensure that the sampling is representative of the in situ material collected. including for instance results for field duplicate/second —half sampling.</li> </ul>	<ul> <li>The samples were collected from material regarded as typical of each identified rock type.</li> </ul>
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>The sample size is regarded as adequate for preliminary petrographic work</li> </ul>
Quality of Assay Data and Laboratory Tests	<ul> <li>The nature quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> </ul>	Assay results are not reported
	<ul> <li>For geophysical tools. spectrometers. hand held XRF instruments. etc. the parameters used in determining the analysis including instrument make and model. reading times.</li> </ul>	<ul> <li>No geophysical tools or electronic device was used in the generation of sample results</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Г		
	calibrations factors applied	
	and their derivation etc.	
	Nature of quality control	he Standard quality control
	procedures adopted (e.g.	procedures are not applicable for
	standards. blanks. duplicates.	petrographic work.
	external laboratory checks)	
	and whether acceptable levels	
	of accuracy (i.e. lack of bias)	
	and precision have been	
	established.	
Verification of	The verification of significant	Not applicable
Sampling and	intersections by either	• •
I	independent or alternative	
Assaying	company personnel.	
	55pa) poissimien	
	The use of twinned holes	Not applicable
	- The age of twinited notes	. Not applicable
	Documentation of primary	• The material was bid and a strong
	data. data entry procedures.	The petrographic report was
	data verification. data storage	supplied digitally by the
	(physical and electronic)	petrographer, Celina Marchetto to
		BBX's Exploration Manager
	protocols.  • Discuss any adjustment to	
	assays	<ul> <li>No assays are reported</li> </ul>
<b>Location of Data</b>	Accuracy and quality of	Drill holes and surface sample
Points	surveys used to locate drill	locations were surveyed by GPS
	holes (collar and down hole	with an estimated accuracy of 4m.
	surveys). trenches. mine	·
	workings and other locations	
	used in Mine Resource	
	estimation	
	Specification of grid system	UTM WGS84 zone 21S.
	used	- 01111 W0307 ZONC 213.
	<ul> <li>Quality and adequacy of</li> </ul>	Topographic control is achieved via
	topographic control.	the use of government topographic
		maps in association with GPS and
		Digital Terrain Maps (DTM's).
Data Spacing	Data spacing for reporting of	The samples subject of the
and Distribution	Exploration results.	petrographic work were collected
	,	from 2 drill holes at Ema, 3 surface
		•
		outcrops at Ema and 4 surface
		outcrops at Três Estados (see map
	Whether the data spacing and	in appendix 2)
	distribution is sufficient to	<ul> <li>Not applicable.</li> </ul>
	establish the degree of	
1	3	
	geological and grade continuity appropriate for the	

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Orientation of Data in relation to Geological	Mineral Resource and Ore Reserve estimation procedure(s) and classification applied.  • Whether sample compositing has been applied.  • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to	<ul> <li>Not applicable</li> <li>The samples were collected from rocks devoid of any visible geological structures</li> </ul>
Structure	which is known. considering the deposit type.  If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias. this should be assessed and reported if material.	The samples were taken in an unbiased manner from outcrops and drill core. There are no visual structures or other geological features controlling mineralisation as the host rock is a visually homogeneous mafic intrusive.
Sample security	The measures taken to ensure sample security.	<ul> <li>The samples were air freighted in a sealed bag directly to the petrographer thin and polished thin section preparation and subsequent description.</li> </ul>
Audit or Reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No audits or external reviews of techniques have been conducted.</li> </ul>

## **Section 2: Reporting of Exploration Results for Petrography Report**

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	Type. reference name/number. location and ownership including agreements or material issues with third parties such as joint ventures. partnerships. overriding royalties. native title interests. historical sites. wilderness or national park and environmental settings.	The Três Estados lease is 100% owned by BBX with no issues in respect to native title interests. historical sites, wilderness or national park and environmental settings.

BBX Minerals Ltd. ASX: BBX

www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area	The company is not aware of any impediment to obtain a licence to operate in the area
Exploration done by Other Parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties</li> </ul>	No exploration by other parties has been conducted in the region
Geology	Deposit type. geological setting and style of mineralisation	The geological setting of the area reported in this announcement is that of hydrothermally altered mafic intrusives within Proterozoic volcanic and volcanoclastic rocks. The precise nature of this unusual style of igneous rock-hosted precious metal mineralisation is currently unknown.
Drill Hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes         <ul> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.</li> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul> </li> </ul>	Coordinates of the sampled drill holes and surface samples are included in appendix 2
	• If the exclusion of this information is justified on the basis that the information is not Material and that this exclusion does not detract from the understanding of the report. the Competent Person should clearly explain why this is the case.	No exclusion of information has occurred.

BBX Minerals Ltd. ASX: BBX

www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Data aggregation methods	<ul> <li>In reporting Exploration Results.         weighting averaging techniques.         maximum and/or minimum grade         truncations (e.g. cutting of high         grades) and cut-off grades are         usually material and should be         stated</li> </ul>	Not applicable
Data aggregation methods	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results. the procedure used for such aggregation should be stated and some typical examples of such aggregations shown in detail.	Not applicable
Data aggregation methods	The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable
Relationship between mineralization widths and intercepted lengths	<ul> <li>These relationships are particularly important in reporting of Exploration Results.</li> <li>If the geometry of the mineralization with respect to the drill hole angle is known. its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported. there should be a clear statement to this effect (e.g. 'down hole length. true width not known').</li> </ul>	Assay results are not included in this announcement
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include. but not limited to plan view of drill hole collar locations and appropriate sectional views.	Maps showing the sample locations is included in appendix 2.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable. representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The Company believes the ASX announcement provides a balanced report of the results of the petrographic work conducted at Ema and Três Estados  Três Estados

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Other substantive exploration data	Other exploration data. if meaningful and material. should be reported including (but not limited to): geological observations. geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density. groundwater. geotechnical and rock characteristics; potential deleterious or contaminating substances.	Airborne geophysical results and ground IP results were presented in previous announcements and are not referred to in this announcement.
Further Work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large- scale step-out drilling).	<ul> <li>Comments on the ongoing work programme are presented.</li> </ul>
	<ul> <li>Diagrams clearly highlighting the areas of possible extensions. including the main geological interpretations and future drilling areas. provided this information is not commercially sensitive.</li> </ul>	<ul> <li>A map showing the extent of gold in soil anomalies was included in previous announcements.</li> </ul>

### The following Table and Sections are provided to ensure compliance with JORC Code (2012 Edition).

**TABLE 1 – Section 1: Sampling Techniques and Data – RC drilling** 

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels. random chips. or specific specialised industry standard measurement tools appropriate to the minerals under investigation. such as down hole. gamma sondes. or handheld XRF instruments etc). These examples should not be taken as limiting the broad meaning of sampling.</li> </ul>	<ul> <li>In August 2017, 13 RC holes were drilled in the Tres Estados project. Drilling was vertical.</li> <li>This announcement refers to partial results for 2 holes, TERC-001 and the top 2 metres of TERC-002</li> <li>RC samples were collected at onemetre interval via a vertically mounted cyclone.</li> <li>Each sample was riffle split to generate two samples, one of 1kg retained in the company files and one of 0.5kg, used to form a two metre composite.</li> </ul>

**BBX Minerals Ltd.** 

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

**Registered Office** Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

T. +55 21 2439 5700

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

- Include reference to measures taken to ensure sample representivity and appropriate calibration of any measurement tools systems used.
- Sample representivity was ensured by taking 0.5 kg individual subsamples riffle split from each 1 meter interval and homogenised in a 2m composite.
- Aspects of the determination of mineralisation that are Material to the Public Report. In cases where "industry standard " work has been done this would re relatively simple 'reverse (e.g. circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay). In other cases more explanation may be required. such as where there is coarse aold that has inherent sampling problems. Unusual commodities mineralisation types (e.g. submarine nodules ) may warrant disclosure of detailed information.
- RC drill holes were sampled at onemetre intervals and split at the rig to generate a 0.5kg sample prior to compositing on 2m intervals. Samples were dried, crushed, riffle split and approximately 300g pulverized to 95% minus150mesh at SGS in Belo Horizonte prior to despatch to Nomos Laboratory in Rio de Janeiro for analytical testwork.
- TERC-001 sample recovery was poor with 50% to 60% logged by the supervising geologist due to high water pressure at the soil/rock interface, resulting in termination of the hole.
- TERC-002 0-2m sample recovery was poor with 50% to 60% logged by the supervising geologist.

### **Criteria Drilling Techniques**

### **JORC Code Explanation**

#### Commentary Drill types (e.g. core. reverse circulation. open hammer. rotary air blast.

- auger. Bangka. sonic etc ) and details (e.g. core diameter. triple or standard tube. depth diamond tails. sampling bit or other type. whether core is oriented and if so by what method etc).
- RC drilling was undertaken by Unidrilling Serviços de Sondagem de Solos Eireli utilizing a VG-100 RC rig, a MWM 4 cylinder Chicago Pneumatic compressor, 200PSI and 750CFM, with capacity to 60m depth with 3 1/2" hammer.

#### Drill Sample Recovery

- Method of recording and assessing core and chip sample recoveries and results assayed.
- RC sample recovery for TERC-001 and the top 2m of TERC-002 were poor as logged by the supervising geologist. The holes were predominantly wet with up to 30% moisture and extremely wet close at the water table level on top of the fresh rock.

#### **BBX Minerals Ltd.**

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

**Registered Office** Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153

#### **Brazillian Office**

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tiiuca Rio de Janeiro

	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine /course material.</li> </ul>	<ul> <li>Drilling was conducted slowly in the soil profile to maximize recovery and ensure sample representation.         <ul> <li>The poor recovery experienced in TERC-001 and on the top 2m of TERC-002 could have introduced a sampling bias.</li> </ul> </li> </ul>
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	RC chips and soil were geologically logged using predefined lithological, mineralogical and physical characteristic (colour, weathering etc) logging codes. RC logging was completed on one metre intervals at the rig by the geologist. RC chips were collected in trays for each interval and stored in the company's site office.
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean. channel. etc) photography.</li> <li>The total length and percentages of the relevant intersections logged.</li> </ul>	<ul> <li>Logging was predominantly qualitative in nature.</li> <li>100% of the recovered intervals were geologically logged.</li> </ul>
Sub- Sampling Techniques and Sampling	If core. whether cut or sawn and whether quarter. half or all core taken.	• N/A
Procedures	If non-core. whether riffled. tube sampled. rotary split etc and whether sample wet or dry.	<ul> <li>RC samples were collected from the interval at the drill rig through s cyclone. Most of the samples in the weathering profile were wet due to the high water table level but dry when drilling below water table in the fresh rock.</li> </ul>
	For all sample types. the nature. quality and appropriateness of the sample preparation technique.	Sample preparation was conducted at the SGS laboratory, Belo Horizonte. Brazil. Samples were dried, crushed, split and approximately 300g pulverized to 95% minus150mesh. This methodology is considered appropriate for RC drill samples.
	<ul> <li>Quality control procedures adopted for all sub – sampling</li> </ul>	<ul> <li>The sample preparation technique by SGS includes drying at 105 deg.</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	stages to maximise "representivity" of samples.	C, crushing to nominal 3mm, riffle splitting and pulverisation of 300g to achieve a grind size of 95% passing 150 mesh.
	<ul> <li>Measures taken to ensure that the sampling is representative of the in situ material collected. including for instance results for field duplicate/second —half sampling.</li> </ul>	<ul> <li>Field QA/QC procedures include the field insertion of blanks, standards and collection of field duplicates. These were inserted at a rate of 1 in 20 of each reference material sample.</li> </ul>
	<ul> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	The sample sizes collected are in line with standard practice and adequate for the style of mineralisation.
Quality of Assay Data and Laboratory Tests	The nature quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	<ul> <li>The results presented were obtained from a non-conventional fire assay procedure which is in development stage, comprising a nickel fusion, dissolution in HCL in the presence of AgCl to collect precious metals from the solution to obtain a silver button, which is then assayed by conventional fire assay.</li> <li>The technique is in the experimental phase and results cannot be considered reliable.</li> </ul>
	For geophysical tools. spectrometers. hand held XRF instruments. etc. the parameters used in determining the analysis including instrument make and model. reading times. calibrations factors applied and their derivation etc.	No geophysical tools or electronic device was used in the generation of sample results
	<ul> <li>Nature of quality control procedures adopted (e.g. standards. blanks. duplicates. external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house procedures. In the tests reported, 1 blank and 1 standard were inserted in each batch of 2 or 3 RC samples. The test results failed in terms of accuracy and precision</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

		due to the high variation in the value of the standard.
Verification of Sampling and Assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	<ul> <li>The results presented were not verified by independent or alternative company personnel.</li> </ul>
	The use of twinned holes	No twinned holes were used
	Documentation of primary data. data entry procedures. data verification. data storage (physical and electronic) protocols.	<ul> <li>Geological data is logged into Excel spreadsheets at the drill rig for transfer into the drill hole database. Microsoft Access is used for database storage and management and incorporates numerous data validation and integrity checks. All assay data is imported directly into the Microsoft Access database.</li> </ul>
	<ul> <li>Discuss any adjustment to assays</li> </ul>	No adjustments were made.
Location of Data Points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down hole surveys). trenches. mine workings and other locations used in Mine Resource estimation</li> </ul>	<ul> <li>Drill collar locations were surveyed by GPS, at an estimated accuracy of 4m.</li> </ul>
	<ul> <li>Specification of grid system used</li> </ul>	• UTM WGS84 zone 21S.
	<ul> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Topographic control is achieved via the use of government topographic maps. in association with GPS and Digital Terrain Maps (DTM's).</li> </ul>
Data Spacing and Distribution	<ul> <li>Data spacing for reporting of Exploration results.</li> </ul>	<ul> <li>The sample subject to the T995 test represents a 2-metre composite from different weathering profile from TERC-001 and the top 2m from TERC-002.</li> </ul>
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classification applied.	<ul> <li>The data spacing and distribution is not sufficient to establish any degree of geological and grade continuity appropriate for Mineral Resource and Ore Reserve estimation procedures.</li> </ul>

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	Whether sample compositing has been applied.	<ul> <li>Samples are 2m composites; no subsequent compositing was applied.</li> </ul>
Orientation of Data in relation to Geological Structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which is known. considering the deposit type.</li> </ul>	<ul> <li>The orientation of the sampling achieves unbiased sampling considering the deposit type.</li> </ul>
	<ul> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias. this should be assessed and reported if material.</li> </ul>	<ul> <li>No structural control of mineralisation has been observed.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>The bulk sample was air freighted in sealed bags directly to the SGS laboratory in Belo Horizonte for sample preparation and the pulverised fraction subsequently air freighted to Nomos laboratory in Rio de Janeiro</li> </ul>
Audit or Reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>No audits or external reviews of techniques have been conducted.</li> </ul>

## Section 2: Reporting of Exploration Results - RC drilling

Criteria	JORC Code Explanation	Commentary
Mineral Tenement and Land Tenure Status	Type. reference name/number. location and ownership including agreements or material issues with third parties such as joint ventures. partnerships. overriding royalties. native title interests. historical sites. wilderness or national park and environmental settings.	<ul> <li>The Três Estados lease is 100% owned by BBX with no issues in respect to native title interests. Historical sites, wilderness or national park and environmental settings.</li> </ul>

BBX Minerals Ltd. ASX: BBX

www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area	The company is not aware of any impediment to obtain a licence to operate in the area
Exploration done by Other Parties	Acknowledgment and appraisal of exploration by other parties	No exploration by other parties has been conducted in the region
Geology	Deposit type. geological setting and style of mineralisation	The geological setting of the area reported in this announcement is that of hydrothermally altered mafic intrusive within Proterozoic volcanic and volcanoclastic rocks. The precise nature of this unusual style of igneous rock-hosted precious metal mineralisation is currently unknown.
Drill Hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes         <ul> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar.</li> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul> </li> </ul>	<ul> <li>TERC-001         224478 E         9198515 N         Dip - 90         Azimuth – 0         RL 125         Down hole length 24m     </li> <li>TERC-002.         224798 E         9198224 N         Dip - 90         Azimuth – 0         RL 172         Down hole length – 50m</li> </ul>
	<ul> <li>If the exclusion of this information is justified on the basis that the information is not Material and that this exclusion does not detract from the understanding of the report. the Competent Person should clearly explain why this is the case.</li> </ul>	No exclusion of information has occurred.

BBX Minerals Ltd. ASX: BBX

www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

Data aggregation methods	In reporting Exploration Results. weighting averaging techniques. maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated	No data weighting or aggregation was carried out
Data aggregation methods	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results. the procedure used for such aggregation should be stated and some typical examples of such aggregations shown in detail.	Not applicable – results reported refer to 2m composites.
Data aggregation methods	<ul> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No metal equivalents were reported
Relationship between mineralization widths and intercepted lengths	<ul> <li>These relationships are particularly important in reporting of Exploration Results.</li> <li>If the geometry of the mineralization with respect to the drill hole angle is known. its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported. there should be a clear statement to this effect (e.g. 'down hole length. true width not known').</li> </ul>	The results reported cannot be used to define mineralisation widths or geometry
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include. but not limited to plan view of drill hole collar locations and appropriate sectional views.	A map showing the sample locations is included in this announcement.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The Company believes the ASX announcement provides a balanced report of the results of laboratory tests still in development conducted on selected 2m composite samples from TERC-001 and TERC-002

ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro

	<u></u>	
Other substantive exploration data	Other exploration data. if meaningful and material. should be reported including (but not limited to): geological observations. geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density. groundwater. geotechnical and rock characteristics; potential deleterious or contaminating substances.	Airborne geophysical results and ground IP results were presented in previous announcements and are not referred to in this announcement.
Further Work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large- scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions. including the main geological interpretations and future drilling areas. provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Key work is to develop in house and/or at a commercial Lab a reliable analytical method for this complex style of mineralisation and recommence diamond drilling over the hydrothermally altered dolerite.</li> <li>A map showing the extent of the hydrothermally altered dolerite is presented.</li> </ul>

BBX Minerals Ltd. ASX: BBX www.bbxminerals.com.au

**Issued Capital** 328.85 million shares 66.43 million options

Registered Office Level 1 35 Havelock Street West Perth WA

T. +61 8 6955 2955 F. +61 8 6210 1153 **Brazillian Office** 

Av Jornalista Riccardo Marinho 360 Ed Cosmopolitan Sala Barra da Tijuca Rio de Janeiro