

Ammonium Sulphate Leach Assays confirm REE recoveries comparable with Chinese deposits

BBX Minerals Limited (ASX: BBX) (“BBX” or the “Company”) is pleased to announce the results of a standard ammonium sulphate leach test conducted on Ema auger samples by SGS Geosol Laboratories in Brazil. Selected intervals from 4 drill holes (Figures 2 and 3) announced on 13 September were subjected to an assay for Rare Earth Elements (REEs) via an ammonium sulphate leach to determine their ionic adsorption REE content.

Highlights

- **Exceptional Nd+Pr oxides recoveries up to 61% and up to 46% for Tb+Dy oxides in hole TR-016.**
- **Ionic rare earths present along the regolith profile with recoveries in the high TREO grade zones compatible with the Chinese deposits developed on top of felsic rhyolites.**

The analytical procedure at SGS is a simple 2% ammonium sulphate leach performed on a 50g sample to assess its ionic adsorption characteristics and potential baseline recoveries. The resulting solution is then analysed for multiple elements, including REEs. This test is designed to demonstrate that this mineralisation is typical of ionic adsorbed clay REE deposits, amenable to recoveries via low capex and opex treatment methods. This standard, unoptimised test is merely indicative and does not fully reflect ultimate anticipated metallurgical recoveries under optimised conditions.

The results demonstrate the presence of ionic REEs within the regolith in all holes with a close correlation between higher recoveries and higher-grade zones, generally located at depth (see Appendix 1), with the highest absolute values and recoveries in the sap-rock zone rich in kaolin overlying the fresh rhyolite, as seen in auger hole TR-016 (Table 1). It is probable that the highest grade ionic-recoverable zones were not reached in holes TR-015, 017 and 018, which failed to reach the fresh rhyolite interface.

Rare earth recoveries achieved in TR-016 are comparable to typical Chinese ionic REE (iREE) deposits developed on top of felsic volcanics (rhyolites).

It is important to note that the ammonium leach characteristics of this zone are similar to the enriched zone in EMD-017, where ionic REEs were confirmed by a positive ammonium sulphate leach test (see media release of 19th July 2023). Similar characteristics would be expected in REE enriched zones in the sap-rock overlying the rhyolites throughout Ema and Ema East.

The reconnaissance auger hole programme is progressing in parallel with infill drilling around the highest-grade holes to the base of the sap-rock, to ultimately generate the geological data required for an MRE estimate.

The backlog of results from samples sent to the laboratory for REE assays is increasing due the number of companies currently exploring for REEs in Brazil. BBX has announced the full assay results for 13 holes out of the 66 holes drilled to date (Figure 4).

Andre J. Douchane, CEO, commented: *“We are extremely pleased to see excellent sulphate leach test results with material from other areas within the Ema discovery. We are now fully committed to developing a qualified resource at Ema; however, we are also poised to place some effort toward reconnaissance at BBX’s Apui discoveries for which we hope to have assay results in a month or so. These leases cover an extremely large area, approximately 300 square kilometres, which will take a considerable amount of time to evaluate. Especially since there is evidence of REEs on all of the leases.*

The Catalão Lab is finishing the last of the post precious metal bioleach test work on TED020, which will be put in a report scheduled to be released in November. The final leach test that was completed by Ecobiome has had QA/QC issues caused by transportation of samples and customs problems, which unfortunately has rendered the test unacceptable for JORC and reporting purposes. Despite our disappointment with the outcome, the test did provide data which will be invaluable for the pilot plant work that continues in Brazil.”

Ema-Ema East REE project

Ema-Ema East, comprising one of BBX’s REE projects (Figure 1) is unique amongst Brazilian REE projects in that it shares identical characteristics with the iREE deposits developed over felsic volcanic rocks in southwest China, with an area of 189 sq km to be explored.

Ionic REE deposits are hosted in clays within the lateritic profile, commonly up to 20 meters thick, with economic TREO grades generally above 600 ppm. The weathered portions of the 2021 drill holes returned values up to 8 times higher than those in the fresh rock, which is typical of the ionic REE adsorbed clay deposits found in China developed on top of rhyolites. These results indicate the presence of a lateritic regolith at Ema-Ema East with REE-enriched horizons potentially at economic grades. Ionic adsorption-type REE deposits associated with felsic volcanic rocks account for 38% of the total deposits of this type in southwest China.

The high-grade TREO in hole EMD-017, over 9m from 10m to 19m is in the in sap-rock immediately overlying the fresh rhyolite, with the lower 7 metres showing good ammonium sulphate leach recoveries. This would suggest a high probability of encountering higher grades (800-1200 TREO) with good ionic recoveries in the equivalent zone in other drill holes, as seen in TR-016.

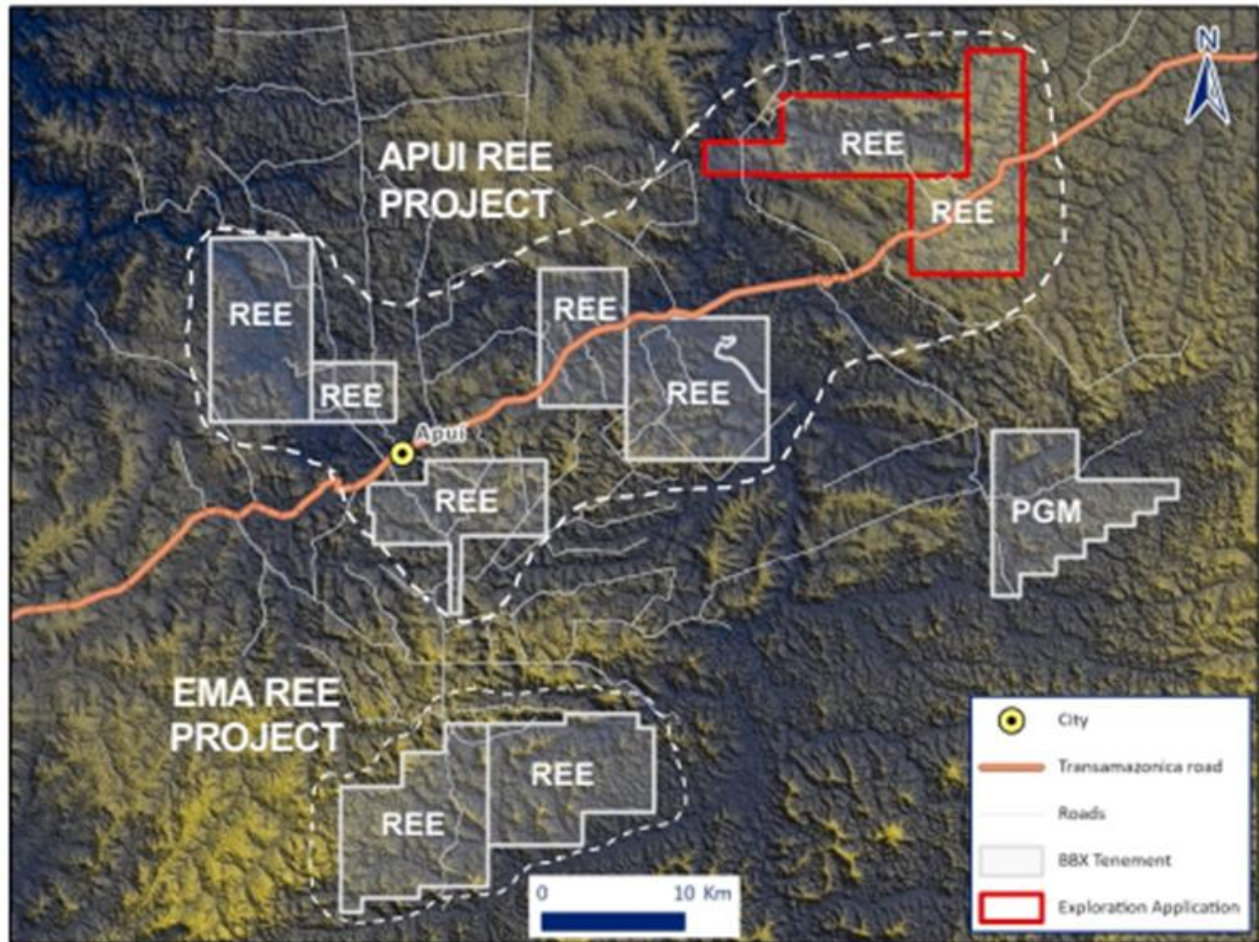


Figure 1 - BBX's REE projects

TR-016 auger hole results

Table 1: Auger hole TR-016 REO's recoveries down hole

Interval (m)	Head grade TREO ppm	Recovered TREO ¹ ppm	REC %	Recovered NdPr ppm	REC %	Recovered DyTb ppm	REC %
11-12	632	231	37	92	56	3	30
12-13	640	217	34	91	56	2	22
13-14	760	327	43	141	61	5	38
14-15	1233	503	41	>170 ²	>42²	10	43

¹ TREO (Total Rare Earth Oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3

² Nd assay result above upper detection limit (>100 ppm)

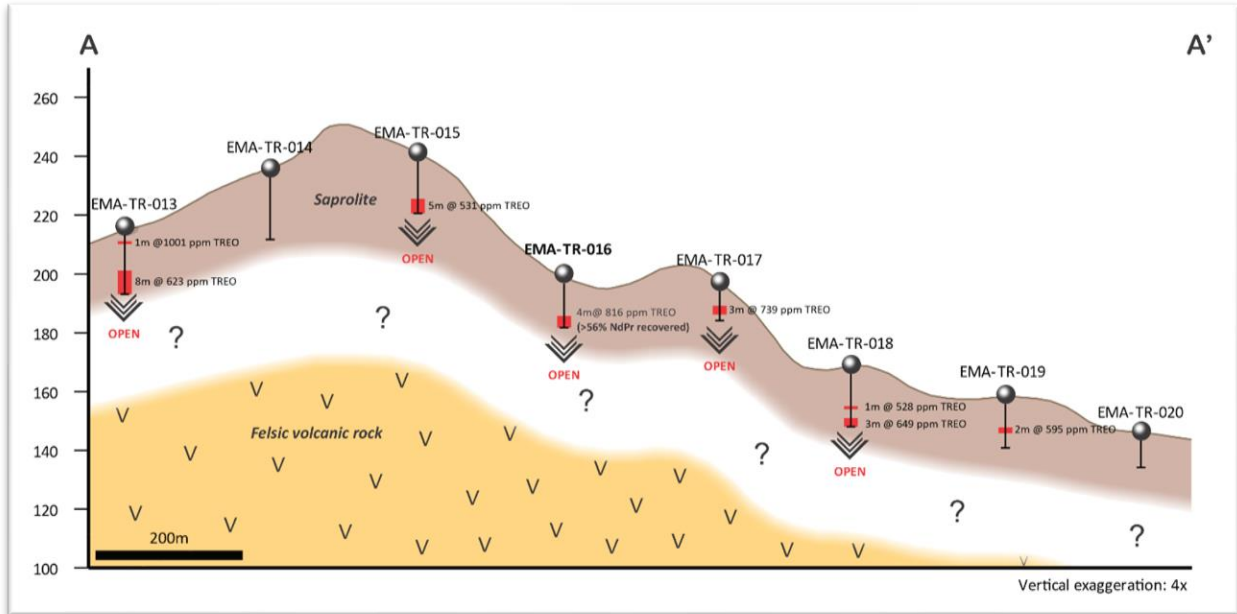


Figure 2 - Cross section A-A' at the Ema REE project

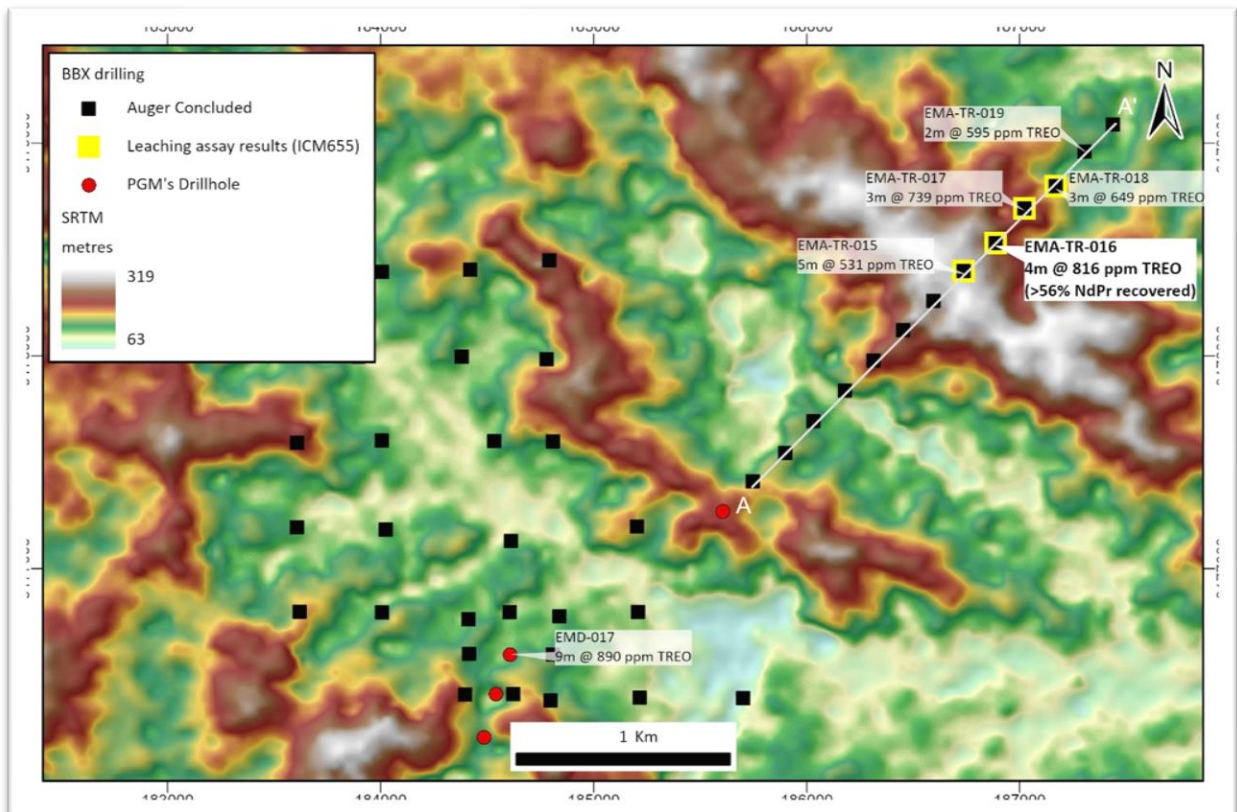


Figure 3 - EMA auger status.

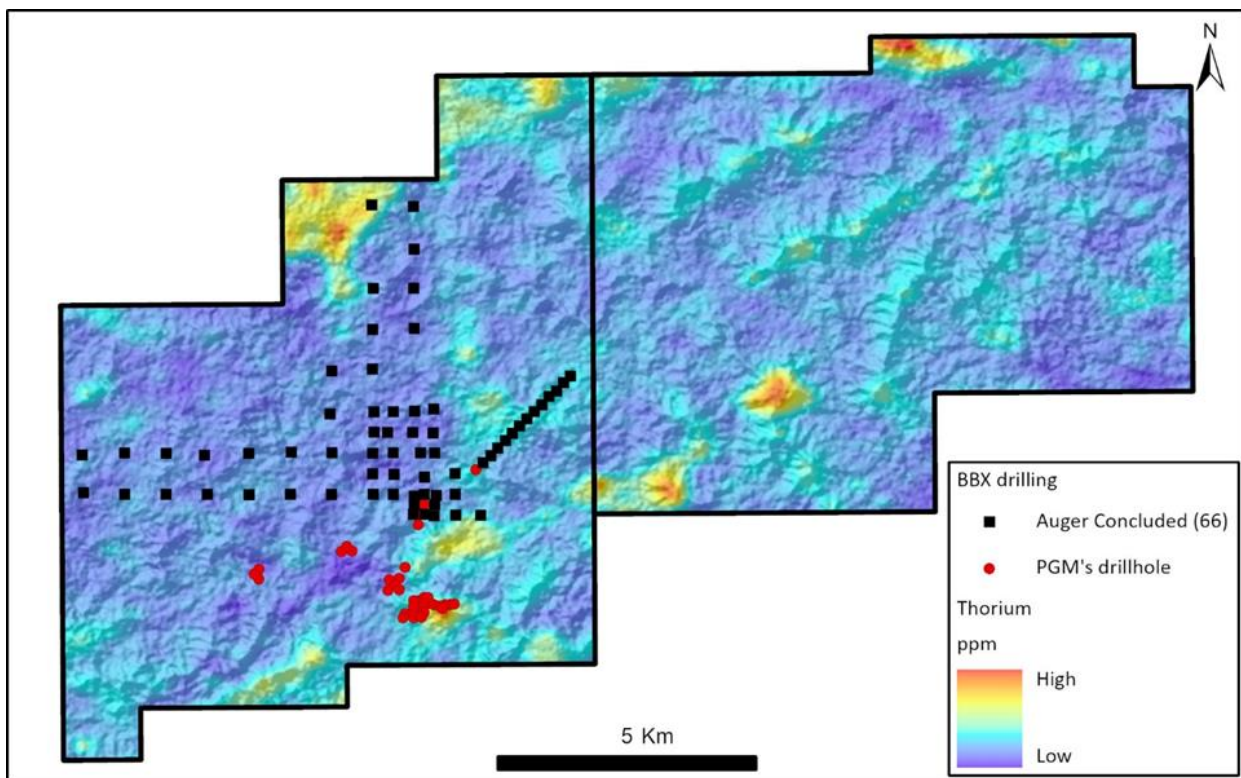


Figure 4 - Ema-Ema East REE project – drilling status

Exploration strategy and future work at Ema/Ema East

The ongoing programme of broad-spaced auger drilling is progressing to further investigate the REE distribution within the weathered zone to assist in identifying the highest-grade zones. This drilling campaign aims to obtain a more detailed understanding of the REE high grade distribution within the 189 sq km area and define potentially enriched zones within the regolith with the highest recovery rates by ammonium sulphate leach, and the potential areal extent of high-grade mineralisation (800-1200ppm TREO). In parallel, follow-up infill drilling will be conducted around EMD-017 and TR-016, with the objective of advancing to an initial MRE.

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

For more information:

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Chief Executive Officer

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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-PGM, base metal and Ionic Adsorbed Clay (IAC) Rare Earth Element deposits. BBX's key assets are the Três Estados and Ema gold-PGM projects and the iREE projects at Ema, Ema East and Apui. The company has 718km² of exploration tenements within the Colider Group and adjacent sediments, a prospective geological environment for gold, PGM, base metal and iREE deposits.

BBX is also developing an environmentally friendly and sustainable beneficiation process to extract 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 Três 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 towards a carbon neutral 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.

CREA/RJ:02526-6D
AusIMM:230624

Appendices

Appendix 1: Auger hole REO recoveries down hole

HoleID	Interval (m)	Head grade TREO ppm	Recovered TREO ³ ppm	REC %	Recovered NdPr ppm	REC %	Recovered DyTb ppm	REC %
EMA-TR-015	10-11	372	48	13	7	13	0	0
EMA-TR-015	11-12	411	56	14	9	14	0	0
EMA-TR-015	12-13	406	62	15	11	17	0	0
EMA-TR-015	13-14	534	70	13	14	19	0	0
EMA-TR-015	14-15	573	74	13	15	20	0	0
EMA-TR-015	15-16	508	91	18	20	24	1	11
EMA-TR-015	16-17	539	98	18	26	29	1	11
EMA-TR-015	17-18	502	86	17	23	25	1	11
EMA-TR-016	5-6	337	30	9	5	12	0	0
EMA-TR-016	6-7	396	51	13	10	19	0	0
EMA-TR-016	7-8	440	46	10	11	18	0	0
EMA-TR-016	8-9	424	80	19	24	32	1	17
EMA-TR-016	9-10	448	88	20	29	35	1	14
EMA-TR-016	10-11	484	107	22	39	39	1	13
EMA-TR-016	11-12	632	231	37	92	56	3	30
EMA-TR-016	12-13	640	217	34	91	56	2	22
EMA-TR-016	13-14	760	327	43	141	61	5	38
EMA-TR-016	14-15	1233	503	41	>170 ⁴	> 42 ⁴	10	43
EMA-TR-017	5-6	504	75	15	17	43	0	0
EMA-TR-017	6-7	829	262	32	67	57	2	13
EMA-TR-017	7-8	885	187	21	54	45	2	14
EMA-TR-017	8-9	495	103	21	32	35	1	13
EMA-TR-017	9-10	498	94	19	28	32	1	11
EMA-TR-018	8-9	389	69	18	14	34	0	0
EMA-TR-018	9-10	405	79	20	21	32	0	0
EMA-TR-018	10-11	428	75	18	22	29	0	0
EMA-TR-018	11-12	528	139	26	43	39	1	14
EMA-TR-018	12-13	491	116	24	36	39	1	14
EMA-TR-018	13-14	413	77	19	23	33	0	0
EMA-TR-018	14-15	489	85	17	26	29	1	13
EMA-TR-018	15-16	559	106	19	35	31	1	11
EMA-TR-018	16-17	676	133	20	47	31	1	10
EMA-TR-018	17-18	713	126	18	46	29	1	8

³ TREO (Total Rare Earth Oxide) = La₂O₃ + Ce₂O₃ + Pr₆O₁₁ + Nd₂O₃ + Sm₂O₃ + Eu₂O₃ + Gd₂O₃ + Tb₄O₇ + Dy₂O₃ + Ho₂O₃ + Er₂O₃ + Tm₂O₃ + Yb₂O₃ + Y₂O₃ + Lu₂O₃

⁴ Nd assay result above upper detection limit (>100 ppm)

Appendix 2: Auger drill-hole locations

Hole ID	East	North	RL (m)	Depth	Azimuth	Dip	Tenement
EMA-TR-015	186737.44	9178398.35	234.18	18.00	0	-90	880.107/2008
EMA-TR-016	186887.31	9178529.37	187.77	15.00	0	-90	880.107/2008
EMA-TR-017	187022.38	9178693.16	174.51	10.00	0	-90	880.107/2008
EMA-TR-018	187170.42	9178797.38	152.60	18.00	0	-90	880.107/2008

Appendix 3

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

JORC (2012) Table 1 – Section 1: Sampling Techniques and Data for auger hole drilling

Item	JORC code explanation	Comments
Sampling Techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg 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. Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Exploration results are based on auger drilling conducted by BBX’s exploration team. The data presented is based on the assay of soils and saprolite by auger drilling at 1m sample intervals. Sampling was supervised by a BBX geologist or field assistants. Every 1-metre sample was collected in a raffia bag in the field and transported to the exploration shed to be dried in the sun, prior to homogenisation. Samples were homogenised and subsequently riffle split with about 2 kg sent to SGS for analysis and a similar amount stored.
Drilling Techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond 	<ul style="list-style-type: none"> Auger drilling was completed by a hand held-mechanical auger with a 3” auger bit. The drilling is an open hole, meaning there is a significant chance of contamination from surface and other parts of the auger hole. Holes are vertical and not oriented.

Item	JORC code explanation	Comments
	<p>tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</p>	
Drill Sample Recovery	<ul style="list-style-type: none"> • Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> • No recoveries are recorded. • The operator observes the volume of each metre and notes any discrepancy. • No relationship is believed to exist between recovery and grade.
Logging	<ul style="list-style-type: none"> • 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. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. • The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> • All holes were logged by BBX geologists or field technicians, detailing the colour, weathering, alteration, texture and any geological observations. Care is taken to identify transported cover from in-situ saprolite/clay zones and the moisture content. Logging was done to a level that would support a Mineral Resource Estimate. • Qualitative logging with systematic photography of the stored box. • The entire auger hole is logged.
Sub- Sampling Techniques and Sampling Procedures	<ul style="list-style-type: none"> • If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples. 	<ul style="list-style-type: none"> • Auger sampling procedure is completed in the exploration shed in Apui. • The entire one metre sample is bagged on site, in a raffia bag which is transported to the exploration shed, where it is naturally dried prior to homogenisation, then quartered to about 1kg to go to SGS and another 1kg to store on site. • Sample preparation for the auger samples was conducted at SGS Vespasiano (greater Belo Horizonte) comprising oven drying, crushing of entire sample to 75% < 3mm followed by rotary splitting and pulverisation of 250 to 300 grams at 95% minus 150#

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	<ul style="list-style-type: none"> 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> The <3mm rejects and the 250-300 grams pulverised sample were returned to BBX for storage. 																																																																
Quality of Assay Data and Laboratory Tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established 	<ul style="list-style-type: none"> The assay technique used for iREE was a 2% ammonium sulphate leach with ICPOES/MS reading (SGS code ICM655). This is a recognised industry standard analysis technique for ionic REE suite and associated elements amenable to be leached. Elements analysed at ppm levels: <table border="1" data-bbox="1223 703 2056 1002"> <tbody> <tr><td>Ag</td><td>Al</td><td>As</td><td>Au</td><td>B</td><td>Ba</td><td>Be</td><td>Bi</td></tr> <tr><td>Ca</td><td>Cd</td><td>Ce</td><td>Co</td><td>Cr</td><td>Cs</td><td>Cu</td><td>Dy</td></tr> <tr><td>Er</td><td>Eu</td><td>Fe</td><td>Ga</td><td>Gd</td><td>Ge</td><td>Hf</td><td>Hg</td></tr> <tr><td>Ho</td><td>In</td><td>K</td><td>La</td><td>Li</td><td>Lu</td><td>Mg</td><td>Mn</td></tr> <tr><td>Mo</td><td>Na</td><td>Nb</td><td>Ni</td><td>P</td><td>Pb</td><td>Pd</td><td>Pr</td></tr> <tr><td>Pt</td><td>Rb</td><td>Re</td><td>S</td><td>Sb</td><td>Sc</td><td>Se</td><td>Si</td></tr> <tr><td>Sm</td><td>Sn</td><td>Sr</td><td>Ta</td><td>Tb</td><td>Te</td><td>Th</td><td>Ti</td></tr> <tr><td>Tm</td><td>U</td><td>V</td><td>W</td><td>Y</td><td>Yb</td><td>Zn</td><td>Zr</td></tr> </tbody> </table> <p>The sample, comprising dominantly clay minerals, was assayed without pulverization, 50 grams are mixed with 80 ml of 2% ammonium sulphate 2% during 20 minutes.</p> <p>The pulp is filtered and the reject washed with distilled water.</p> <p>An aliquot of the solution is extracted and diluted 25 times with HNO3 2%. The solution is analysed by ICP-MS.</p>	Ag	Al	As	Au	B	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Pd	Pr	Pt	Rb	Re	S	Sb	Sc	Se	Si	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tm	U	V	W	Y	Yb	Zn	Zr
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		<p>The sample preparation and assay techniques used are industry standard and provide partial analysis; total analysis is achieved with the lithium metaborate fusion.</p> <ul style="list-style-type: none"> • The SGS laboratory used for the RRE assays is ISO 9001 and 14001 and 17025 accredited. • Analytical Standards for iREE <p>There were no standards inserted by BBX for this specific analytical procedure.</p> <ul style="list-style-type: none"> • Blanks <p>There were no blanks inserted by BBX for this specific analytical procedure.</p> <ul style="list-style-type: none"> • Duplicates <p>There were no duplicates inserted by BBX for this specific analytical procedure.</p> <ul style="list-style-type: none"> • Laboratory did not insert standards and blanks, only duplicates for this analytical procedure which were analysed as per industry standard practise. There is no evidence of bias from these results.
<p>Verification of Sampling and Assaying</p>	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> • There are no routine QA/QC procedures by the Company and the laboratory for this analytical procedure, there was no other independent or alternative verification of sampling and assaying procedures. • Analytical results for REE were supplied digitally, directly from the SGS laboratory in Vespasiano to the BBX's Exploration Manager in Rio de Janeiro. • No twinned holes were used.

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		<ul style="list-style-type: none"> Geological data was logged onto paper and transferred to Excel spreadsheets at end of the day and then transferred into the drill hole database. Microsoft Access is used for database storage and management and incorporates numerous data validation and data integrity checks. All assay data is imported directly into the Microsoft Access database. No adjustments were made to the data. All REE assay data received from the laboratory in element form is unadjusted for data entry. Conversion of elements analysis (REE) to stoichiometric oxide (REO) was undertaken by spreadsheet using defined conversion factors. (Source:https://www.jcu.edu.au/advanced-analytical-centre/resources/element-to-stoichiometric-oxide-conversion-factors). <table border="1" data-bbox="1223 892 2056 1412"> <thead> <tr> <th>Element ppm</th> <th>Conversion Factor</th> <th>Oxide Form</th> </tr> </thead> <tbody> <tr><td>Ce</td><td>1.2284</td><td>CeO₂</td></tr> <tr><td>Dy</td><td>1.1477</td><td>Dy₂O₃</td></tr> <tr><td>Er</td><td>1.1435</td><td>Er₂O₃</td></tr> <tr><td>Eu</td><td>1.1579</td><td>Eu₂O₃</td></tr> <tr><td>Gd</td><td>1.1526</td><td>Gd₂O₃</td></tr> <tr><td>Ho</td><td>1.1455</td><td>Ho₂O₃</td></tr> <tr><td>La</td><td>1.1728</td><td>La₂O₃</td></tr> <tr><td>Lu</td><td>1.1371</td><td>Lu₂O₃</td></tr> <tr><td>Nd</td><td>1.1664</td><td>Nd₂O₃</td></tr> <tr><td>Pr</td><td>1.2082</td><td>Pr₆O₁₁</td></tr> <tr><td>Sm</td><td>1.1596</td><td>Sm₂O₃</td></tr> <tr><td>Tb</td><td>1.1762</td><td>Tb₄O₇</td></tr> <tr><td>Tm</td><td>1.1421</td><td>Tm₂O₃</td></tr> </tbody> </table>	Element ppm	Conversion Factor	Oxide Form	Ce	1.2284	CeO ₂	Dy	1.1477	Dy ₂ O ₃	Er	1.1435	Er ₂ O ₃	Eu	1.1579	Eu ₂ O ₃	Gd	1.1526	Gd ₂ O ₃	Ho	1.1455	Ho ₂ O ₃	La	1.1728	La ₂ O ₃	Lu	1.1371	Lu ₂ O ₃	Nd	1.1664	Nd ₂ O ₃	Pr	1.2082	Pr ₆ O ₁₁	Sm	1.1596	Sm ₂ O ₃	Tb	1.1762	Tb ₄ O ₇	Tm	1.1421	Tm ₂ O ₃
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Tm	1.1421	Tm ₂ O ₃																																										

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		<table border="1" data-bbox="1223 339 2056 416"> <tr> <td data-bbox="1223 339 1498 375">Y</td> <td data-bbox="1498 339 1776 375">1.2699</td> <td data-bbox="1776 339 2056 375">Y2O3</td> </tr> <tr> <td data-bbox="1223 375 1498 410">Yb</td> <td data-bbox="1498 375 1776 410">1.1387</td> <td data-bbox="1776 375 2056 410">Yb2O3</td> </tr> </table> <p data-bbox="1223 416 2056 523">Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling REO into their reporting and evaluation groups:</p> <p data-bbox="1223 539 2056 646">TREO (Total Rare Earth Oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3</p> <p data-bbox="1223 662 2056 691">LREO (Light Rare Earth Oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3</p> <p data-bbox="1223 707 2056 770">HREO (Heavy Rare Earth Oxide) = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3</p> <p data-bbox="1223 786 2056 850">CREO (Critical Rare Earth Oxide) = Nd2O3 + Eu2O3 + Tb4O7 + Dy2O3 + Y2O3</p> <p data-bbox="1223 866 2056 930">(From U.S. Department of Energy, Critical Material Strategy, December 2011)</p> <p data-bbox="1223 946 2056 1010">MREO (Magnetic Rare Earth Oxide) = Nd2O3 + Pr6O11 + Tb4O7 + Dy2O3</p> <p data-bbox="1223 1026 2056 1054">NdPr = Nd2O3 + Pr6O11</p> <p data-bbox="1223 1070 2056 1099">DyTb = Dy2O3 + Tb4O7</p> <p data-bbox="1223 1115 2056 1144">In elemental from the classifications are:</p> <p data-bbox="1223 1160 2056 1189">TREE: La+Ce+Pr+Nd+Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Lu+Y</p> <p data-bbox="1223 1204 2056 1233">HREE: Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Lu+Y</p> <p data-bbox="1223 1249 2056 1278">CREE: Nd+Eu+Tb+Dy+Y</p> <p data-bbox="1223 1294 2056 1323">LREE: La+Ce+Pr+Nd</p>	Y	1.2699	Y2O3	Yb	1.1387	Yb2O3
Y	1.2699	Y2O3						
Yb	1.1387	Yb2O3						

Item	JORC code explanation	Comments
Location of Data Points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • The UTM WGS84 zone 21S grid datum is used for current reporting. The drill holes collar coordinates for the holes reported are currently controlled by hand-held GPS.
Data Spacing and Distribution	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • 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 classifications applied. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • Auger holes were over 200m apart, designed for reconnaissance testing over a single target area. • The data spacing and distribution is sufficient to establish the level of REE elements present in the target area and its continuity along the regolith profile. • No sample composition was applied.
Orientation of Data in relation to Geological Structure	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this 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. 	<ul style="list-style-type: none"> • The location and depth of the sampling is appropriate for the deposit type. • Relevant REE values are compatible with the exploration model for ionic REEs. • Drill holes are vertical and the mineralised structure is considered flat following the landform inclination, therefore should not have introduced a sampling bias.
Sample security	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • The auger samples in sealed plastic bags were sent directly to SGS by bus and then airfreight. The Company has no reason to believe that sample security poses a material risk to the integrity of the assay data.
Audit or Reviews	<ul style="list-style-type: none"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • The sampling techniques and data have been reviewed by the Competent Person and are found to be of industry standard.

JORC (2012) Table 1 - Section 2: Reporting of Exploration Results

Criteria	JORC code explanation	Commentary
Mineral Tenement and Land Tenure Status	<ul style="list-style-type: none"> 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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> The EMA and EMA EAST leases are 100% owned by BBX with no issues in respect to native title interests, historical sites, wilderness or national park and environmental settings. The company is not aware of any impediment to obtain a licence to operate in the area.
Exploration done by Other Parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> No exploration by other parties has been conducted in the region.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The REE mineralisation at EMA is contained within the tropical lateritic weathering profile developed on top of felsic rocks, rhyolites as per the Chinese deposits. The REE mineralisation is concentrated in the weathered profile where it has dissolved from the primary mineral, such as monazite and xenotime, then adsorbed on to the neo-forming fine particles of aluminosilicate clays (e.g. kaolinite, illite, smectite). This adsorbed iREE is the target for extraction and production of REO.
Drill Hole Information	<ul style="list-style-type: none"> 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 style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar 	<ul style="list-style-type: none"> Auger locations and diagrams are presented in this announcement. Details are tabulated in the announcement.

Criteria	JORC code explanation	Commentary
	<ul style="list-style-type: none"> • dip and azimuth of the hole • down hole length and interception depth • hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	
Data aggregation methods	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. • 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 should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • No metal equivalent values reported.
Relationship between mineralization widths and intercepted lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • Mineralisation orientation is not known at this stage, although assumed to be flat. • The downhole depths are reported, true widths are not known at this stage.

Criteria	JORC code explanation	Commentary
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> Maps and tables of the soil auger holes location and target location are inserted.
Balanced reporting	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Relevant REE mineralisation in auger holes is reported, confirmation of IAC (Ionic Adsorbed Clay) type mineralisation as obtained in selected intervals is reported.
Other substantive exploration data	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No other significant exploration data has been acquired by the Company.
Further Work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). 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 style="list-style-type: none"> Conduct reconnaissance auger holes 800m apart over the leases to define targets with high recovery rates for follow up and infill. Refine the main targets amenable to auger drill testing for enriched REE zones, using detailed topography and radiometry as a subsidiary exploration tool. High grade intercepts will be tested consistently for their ionic clay potential based on the simple analytical procedure at SGS prior to optimisation metallurgical test work on a bulk sample with ammonium sulphate leach.