

## BBX Broadens REE-Focused Exploration Footprint with Two New Permits REE-Focused Auger Drilling Commences at Ema

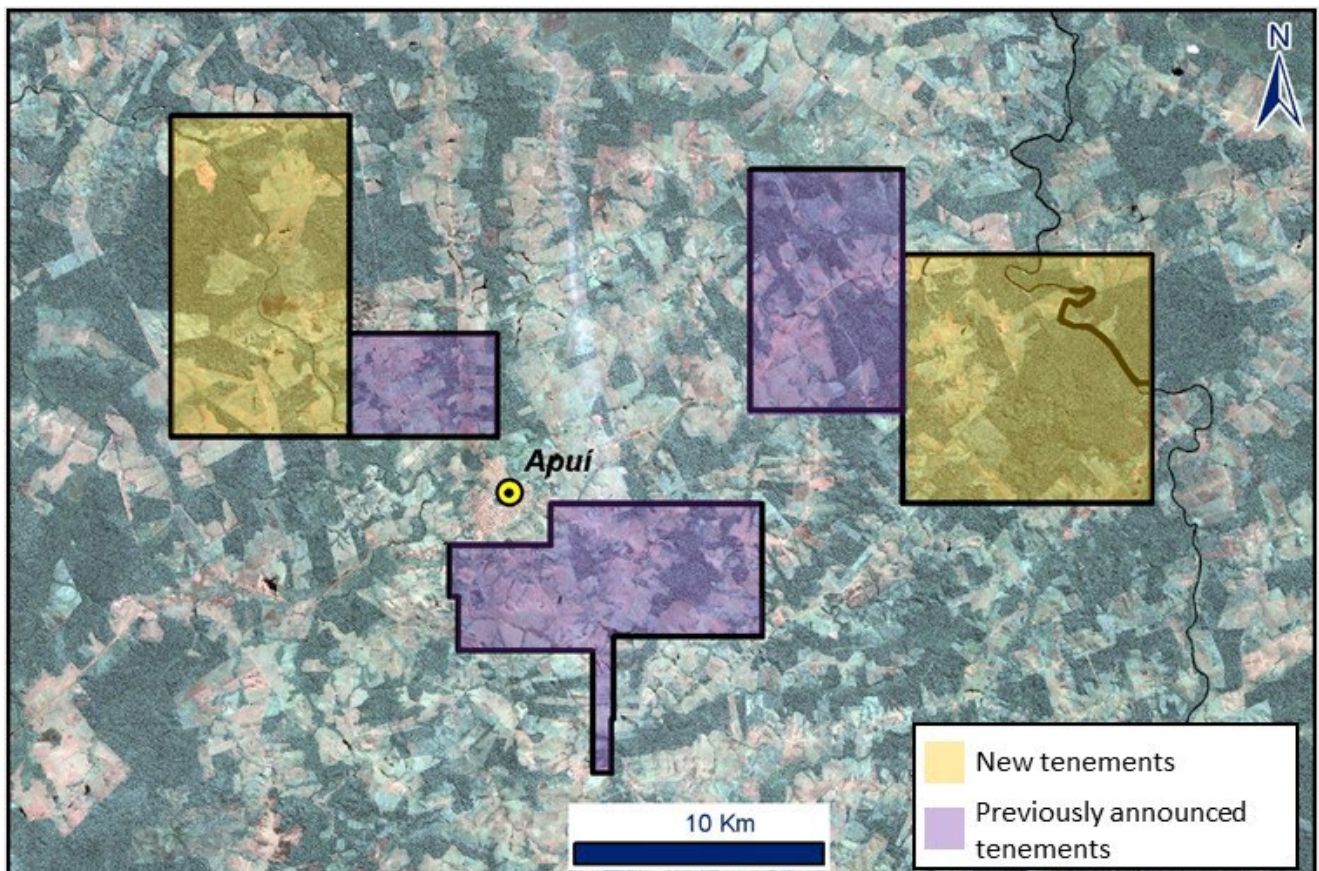
BBX Minerals Limited (ASX: BBX) (“BBX” or the “Company”) is pleased to announce the signing of a purchase agreement to secure exploration permits for two new tenements (Figure 1) within the Apui region in Brazil, encompassing an area of 189 km<sup>2</sup>. Furthermore, the Company wishes to disclose that it has commenced auger drilling for Rare Earth Elements (REEs) at the Ema project.

### Highlights

- Purchase agreement executed to secure two new exploration permits.
- The new tenements, covering an area of 189 km<sup>2</sup>, are located in the Apui region of Brazil.
- Exploration activities for the new tenements planned and ready to commence.
- Auger drilling at Ema project commenced.

The Company has executed a purchase agreement to secure two additional exploration permits within the Apui region in Brazil. These two tenements (Figure 1) cover an area of 189 km<sup>2</sup>. The process of transferring the exploration licenses for these two tenements to BBX is currently underway. These two tenements are in addition to the three exploration permits (Figure 1) that the Company has previously applied for.

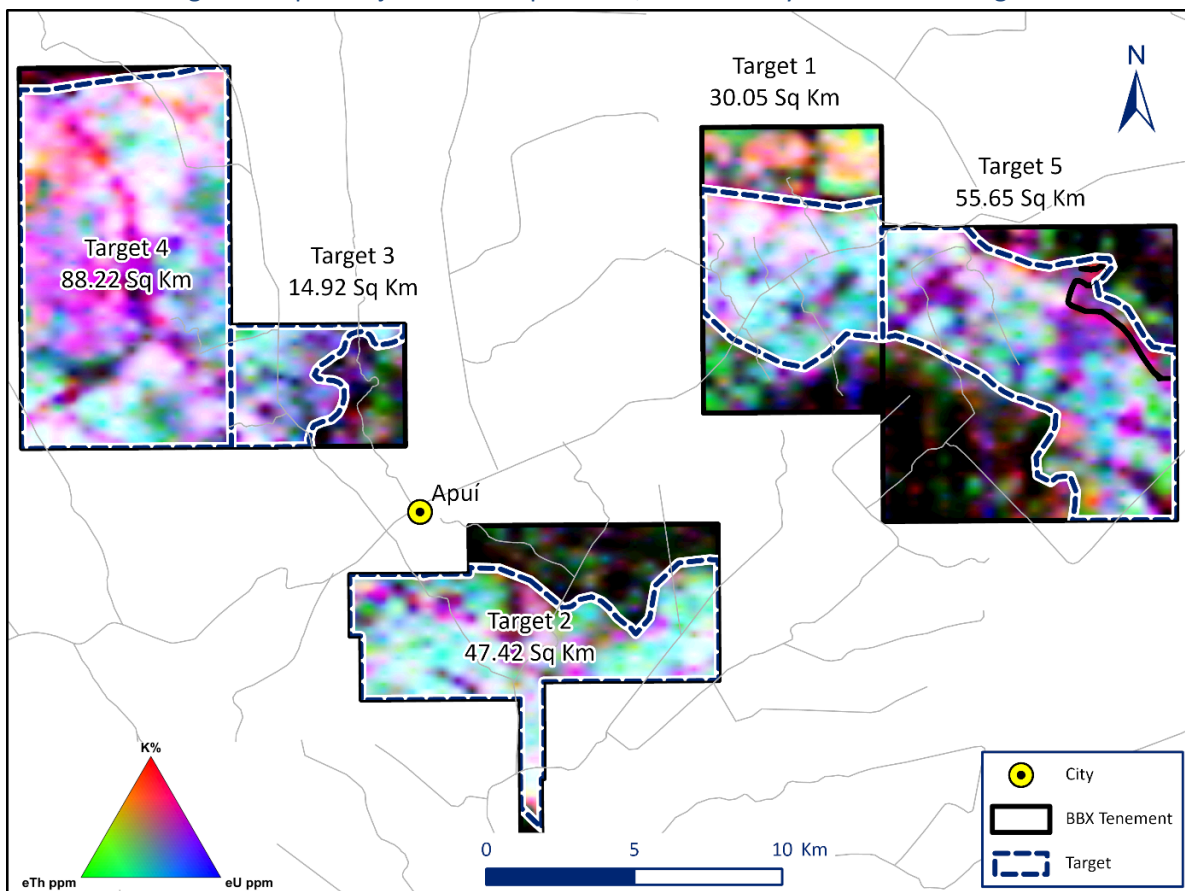
Figure 1: BBX's recently acquired tenements



The addition of these five tenements to BBX's portfolio follows the announcement of significant REE results obtained from the Ema project on 22 May 2023. The Company has identified a specific sedimentary unit consisting of siltstones, fine sandstones, and claystone which shares the same ternary radiometric signature, and geological, climatic, and topographic characteristics with the Makuutu iREE project in Uganda.

The pale blue area depicted in Figure 2 represents the region with the highest potential for hosting an enriched ionic rare earths (iREE) horizon. The Apui project, comprising these five tenements, encompasses an extension of approximately 35 km, as indicated by ternary radiometry in Figure 2, a similar extension to Makuutu.

Figure 2: Apui Project after acquisitions, over ternary radiometric image.



**Ema exploration:**

The Company has initiated its REE exploration activities at the Ema project. As announced on 6 June 2023, BBX has identified 14 high-priority targets to be explored for REEs.

Two drilling teams have been mobilised and have commenced auger drilling. The first hole (EMPR008), situated 200 metres north-east of EMRC011 (6m at 376 ppm TREO), has been drilled to a depth of 20 metres within altered felsic volcanic rocks. The first two metres presented reddish oxidation, followed by grey clays containing kaolin (Figure 3). Samples will be sent for assaying in due course.

Figure 3: Auger hole logging box – hole EMAPR-008



Figure 4: Drilling team at Ema project



Table 1: Drill hole location

Hole ID	East	North	RL	Azimuth	DIP	Depth (m)	Tenement	Method
EMATR-008	185746.00	9177407.00	161.17	0	-90	20.00	880.107/2008	AUGER

### **Exploration Strategy at Ema and Apui Projects:**

The Company will continue to advance its two distinct projects involving REEs, Ema/Ema East and Apui. These near-surface deposits, if ionic adsorbed, are usually characterised by relatively fast drilling and development processes, low capital expenditure and operating costs, straightforward metallurgical processes, and the production of high-value REE off-take products.

Similar exploration strategies will be applied to both prospects, starting with soil sampling in the 5 new leases in the Apui project and intensive auger drilling at Ema/Ema East to quickly define the better mineralised zone and proceed to an MRE, which will be implemented according to the availability of equipment and workforce, based initially on auger drilling to the base of weathering. This campaign has been initiated with reduced personnel and will ramp up to four auger drilling teams fully operating by the end of July.

Given the significant REE results at Ema, BBX considers that its existing tenements and the new surrounding areas within the Apui region provide potential for further low-cost exploration opportunities to add to the Company's existing PGM resource at Três Estados.

### **Commercial terms of purchase agreement**

BBX's wholly owned Brazilian subsidiary, Mineração BBX do Brasil Ltda, has executed a purchase agreement with Cooperativa Extrativista Mineral dos Garimpeiros de Apuí – CEMGA (CEMGA), for two exploration permits in the Apui region in Brazil.

Consideration:

- A purchase agreement has been signed for exploration permits 880.149/2017 and 880.259/2020.
- Payment of BRL 10,000 per permit upon signing the purchase agreement.
- Payment of BRL 10,000 per permit upon the lodgement of the transfer of exploration licence.
- Payment of BRL 40,000 per permit following the official publication of the transfer of exploration permit.
- Payment of BRL 100,000 per permit 12 months after the official publication of the transfer of exploration permits.
- Payment of BRL 150,000 per permit 24 months after the official publication of the transfer of exploration permits.
- Payment of BRL 200,000 per permit 36 months after the official publication of the transfer of exploration permits.
- A Net Smelter Return (NSR) of 3% for each permit, payable to CEMGA. BBX has the right, within five years following the official publication of the transfer of exploration permits, to purchase 1% of the NSR for BRL 2,000,000.

The agreement was entered into on a fair and equitable basis and in adherence to commercial terms. In addition to the consideration described above, the agreement includes general terms one would expect from a purchase agreement of this nature.

Andre J Douchane, CEO, commented, *"With the addition of these two new tenements, the regional exploration potential increases significantly. Although we are eager to commence drilling, it is crucial for us to exercise patience and wait for the formal transfer of the licences to BBX. Meanwhile, the team is currently diligently working on the Ema discovery, where there will be a continuous stream of auger samples sent to SGS for analysis.*

*Testing is ongoing at Ecobiome, where we are currently awaiting assays and nearing the conclusion of the second pilot plant test on Tres Estados drill hole TED 020. The pilot plant test on TED 020 commenced on*



*Monday, June 5th, and will conclude on Wednesday, June 14th, nearly doubling the duration compared to the first test on an Ema drill sample. Although we have not received all the assay results for the Ema test, as part of our testwork, we observed that the recovery curve was still ascending. Based on this observation, a decision was made to almost double the leach time to obtain a more accurate understanding of the overall recovery curve”.*

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

For more information:

**André Douchane**

Chief Executive Officer

adouchane@bbxminerals.com

**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 REE projects at Ema, Ema East and Apui. The company has 419.1km<sup>2</sup> 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

**Appendix 1**

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 drilling**

Item	JORC code explanation	Comments
<p><b>Sampling Techniques</b></p>	<ul style="list-style-type: none"> <li>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.</li> <li>Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No exploration results are announced.</li> </ul>
<p><b>Drilling Techniques</b></p>	<ul style="list-style-type: none"> <li>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 tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>Auger drilling is in progress.</li> </ul>

Item	JORC code explanation	Comments
<b>Drill Sample Recovery</b>	<ul style="list-style-type: none"> <li>• Method of recording and assessing core and chip sample recoveries and results assessed.</li> <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/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>• Auger drilling combining the samples to compose 1-metre intervals.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>• The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>• Auger samples were described.</li> <li>• Logging is qualitative in nature.</li> </ul>
<b>Sub- Sampling Techniques and Sampling Procedures</b>	<ul style="list-style-type: none"> <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 sampled wet or dry.</li> <li>• For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>• Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples.</li> <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 style="list-style-type: none"> <li>• Auger samples collected were dry.</li> <li>• Not sent to Lab yet.</li> </ul>

Item	JORC code explanation	Comments
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	
<b>Quality of Assay Data and Laboratory Tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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</li> </ul>	No assays reported.
<b>Verification of Sampling and Assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	No assays reported.
<b>Location of Data Points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>The UTM WGS84 zone 21S grid datum is used for current reporting. The auger drill holes collar coordinates for the holes reported are currently controlled by hand-held GPS.</li> </ul>



Item	JORC code explanation	Comments
<b>Data Spacing and Distribution</b>	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• 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.</li> <li>• Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>• Auger holes are at 200m and 400m apart, over the targets.</li> </ul>
<b>Orientation of Data in relation to Geological Structure</b>	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <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 style="list-style-type: none"> <li>• The location and depth of the sampling is appropriate for the deposit type.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Samples not sent to laboratory yet.</li> </ul>
<b>Audit or Reviews</b>	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• The sampling techniques and data have been reviewed by the Competent Person and are found to be of industry standard.</li> </ul>

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

<b>Criteria</b>	<b>JORC code explanation</b>	<b>Commentary</b>
<b>Mineral Tenement and Land Tenure Status</b>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Ema/Ema East and Apuí leases are 100% owned by BBX with no issues in respect to native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The company is not aware of any impediment to obtain a licence to operate in the area.</li> </ul>
<b>Exploration done by Other Parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>No exploration by other parties has been conducted in the region.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>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).</li> <li>This adsorbed iREE is the target for extraction and production of REO.</li> </ul>
<b>Drill Hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Auger drilling program and locations and diagrams are presented in the announcement of 6<sup>th</sup> June.</li> <li>Details are tabulated in those announcements.</li> </ul>

Criteria	JORC code explanation	Commentary
	<ul style="list-style-type: none"> <li>• hole length.</li> <li>• 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.</li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Aggregate intercepts were not calculated.</li> </ul>
<b>Relationship between mineralization widths and intercepted lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation 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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• No exploration results were reported.</li> </ul>

Criteria	JORC code explanation	Commentary
<b>Diagrams</b>	<ul style="list-style-type: none"> <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 be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>No exploration results were reported</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>No exploration results were reported.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No other significant exploration data has been acquired by the Company.</li> </ul>
<b>Further Work</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Conduct soil sampling in the targets, 1, 2, 3 ,4 and 5 from the Apui leases.</li> <li>Follow up with auger drilling the iREE mineralised horizons at Ema and test the 14 new targets for iREE defined at Ema/Ema east with use of auger holes.</li> </ul>