AMENDMENT TO FIELD PERMEABILITY AND LAB TESTING INDICATE PATH TO IN-SITU LEACHING IS FEASIBLE FOR EMA PROJECT

Brazilian Critical Minerals Limited (**ASX: BCM**) ("**BCM**" or the "**Company**") refers to the announcement lodged with ASX on 19 August 2024 titled "Field Permeability and Lab Testing Indicate Path To In-Situ Leaching Is Feasible For Ema Project".

The Company provides additional information regarding the prior competent person statements on page 6 of the announcement attached.

FIELD PERMEABILITY AND LAB TESTING INDICATE PATH TO IN-SITU LEACHING IS FEASIBLE FOR EMA PROJECT

Highlights

- Strong and rapid response to, down the hole water permeability field trials, results in high clay zone percolation rates
- Bench scale diffusion testing (mimics in-situ leach) of a high-grade sample, utilising magnesium sulfate at 0.1M and 0.5M concentration has produced very positive MREE recoveries
- Positive metallurgical[2] and mineral resource estimate[3] studies have result in a decision to commence a formal Scoping Study to define the economic and technical pathway to production for Ema project
- Scoping Study will be led by Ausenco Ltd based on the current Mineral Resource Estimate of >1Bt
- Re-commencement of environmental baseline assessment to be conducted by CERN
- Ongoing infill drill program now one-third complete with first results expected in September

Andrew Reid, Managing Director, commented:

"BCM now has a clear vision, to evaluate in-situ recovery (ISR) as the viable path towards development of the Ema project. To create, utilising in-situ recovery coupled with magnesium sulfate leaching solution the greenest most environmentally protective, cost-efficient, rare earth operation in the world.

The recent field trials completed over an initial set of holes to assess the ability of water to permeate through the clay zone which would mimic that needed for in-situ leaching, has produced a compelling response that ISR is the right direction for this project.

The lab diffusion tests have also shown that high recovery of MREE's without any crushing, grinding, agitation, screening or agglomeration can be extracted from the mineralisation.

The work front is now four-fold, the infill drilling program is approximately one-third complete, ANSTO are continuing with their test program around impurity removal and precipitation towards generating a final MREC product, Ausenco have been selected to lead the scoping study for Ema which will commence immediately, and CERN are about to re-commence environmental base line studies over Ema."

Brazilian Critical Minerals Limited (**ASX: BCM**) ("**BCM**" or the "**Company**") is pleased to provide an update on work programs with respect to the Ema Rare Earths Project which hosts an Inferred Mineral Resource[1] of **1.02Bt @ 793ppm** TREO.

BCM now has a clear strategy in place in relation to the continued development of the Ema rare earth project. The unique physical and chemical properties of the mineralisation are allowing the company to evaluate in-situ leaching which we anticipate can withstand the current rare earth pricing conditions and related rare earth oversupply in the market.

Field Permeability Trials

A series of preliminary controlled field experiments (slug tests) performed by the BCM team were recently completed on 10 dry drill holes (Figure 1). These tests estimate the hydraulic properties of aquifers, in which the water level in a controlled open dry drill hole is caused to rise suddenly and the subsequent water-level response (change from static) is measured through time at regular intervals.

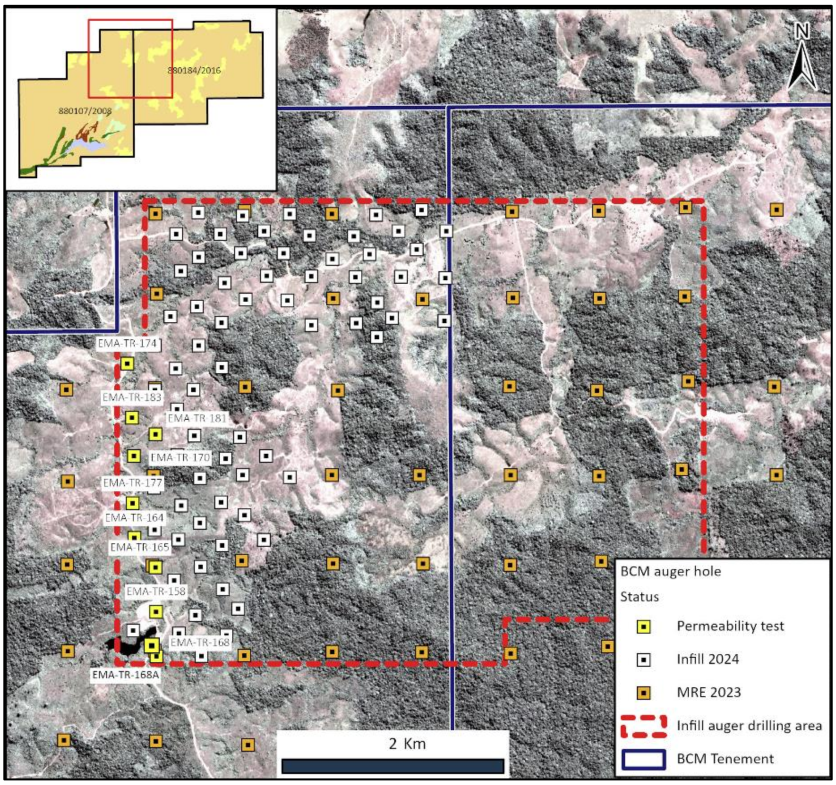

Figure 1. Location map of the 10 drill holes which were tested for permeability.

The slug tests were designed as a rising-head test, in which a measured volume of 50l of water was placed into 10 holes, instantaneously raising the water level in the well by a known amount.

The goal of a slug test, is to estimate the hydraulic properties of an aquifer system such as hydraulic conductivity.

Percolation data shows that the majority of the water inserted into each hole was lost or permeated into the surrounding walls within the first 60 minutes (Figure 2). The second phase is the stable percolation stage, where the water adsorption nears completion, and the percolation rate gradually decreases.

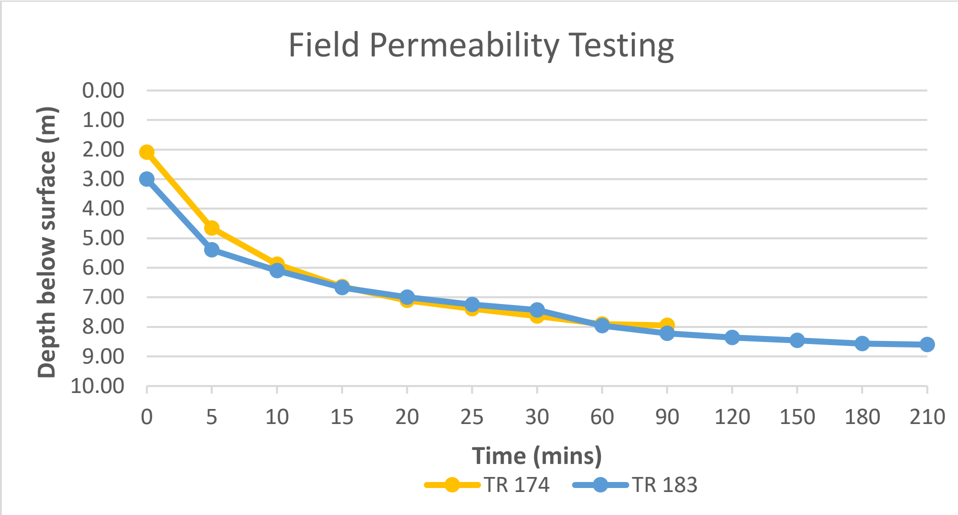

Figure 2. Hydraulic conductivity results from drill holes (TR174 & TR183). Tests show a rapid fall in water level over the first 60 mins post the water insertion. Data from the 10 holes is collated in table 1.

Percolation rates varied from 0.98m/hr to 2.34m/hr and show that there is a **high degree** of permeability within the clay horizons containing the rare earths. Field pumping trials are scheduled to commence during Q4 2024.

The percolation characteristics of clay minerals are influenced by multiple factors, including ore composition, pore structure, permeability, and the properties of the leaching solution.

Time (mins)	TR 158	TR 168	TR 168A	TR 164	TR 165	TR 177	TR 170	TR 181	TR 174	TR 183
0	4.42	7.35	5.95	5.40	5.82	9.92	0.70	0.35	2.09	3.00
30	9.00	10.94	6.58	8.55	10.63	9.95	4.84	5.40	7.63	7.43
60	9.52	12.13	7.90	8.77	11.32		5.06	5.82	7.90	7.96
90	9.82	12.46	8.18	8.80	11.64		5.20	5.98	7.95	8.22
120	9.94	12.58	8.35	8.86	11.78		5.26	6.09		8.36
150	9.98	12.70	8.39		11.88			6.12		8.46
180					11.97					8.57
210										8.60
Static Water level (m)	9.98	12.70	dry	8.86	12.30	9.95	dry	dry	7.95	8.60
Percolation m/hr	2.22	2.14	0.98	1.73	2.05	n/a	2.28	2.31	2.34	2.24
Hole Depth (m)	12.00	19.80	8.39	12.00	15.00	13.00	5.26	6.50	12.00	19.80

Table 1. Hydraulic conductivity results from the 10 dry drill holes tested. Tests show a rapid fall in water level over the first 60 mins post the water insertion.

Lab Diffusion Testing

Agitated elution tests allow rapid access of reagent to the mineral surface and thus rapid desorption of the eluted species, however, in an in-situ scenario this access is limited by solution flow through discrete channels in the ore bed and diffusion through interstitial spaces.

While macroscopic solution flow in in-situ operations can be modelled with hydrological models based on field observations, the local transport reaction kinetics of the elution process needs to be tested separately.

A series of diffusion tests were conducted in a stagnant bed leach apparatus developed by Petersen [1] as shown in Figure 3. A bed of 100 g of clay mineralisation was carefully moulded into the bottom of a beaker to a height of about 10 mm, and 200 mL of lixiviant (0.5 M and 0.1 M $MgSO_4$) was very carefully poured on top of the bed so to not stir up solids. The solution was gently agitated with an overhead stirrer. Liquid samples (3–5 mL) were taken every day for 30 days. The samples were analysed by ICP-MS.

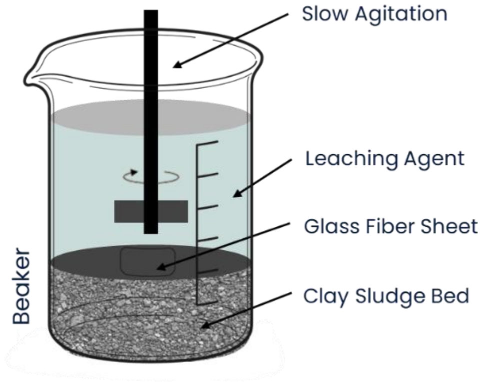

Figure 3. Stagnant bed diffusion test developed by Petersen.

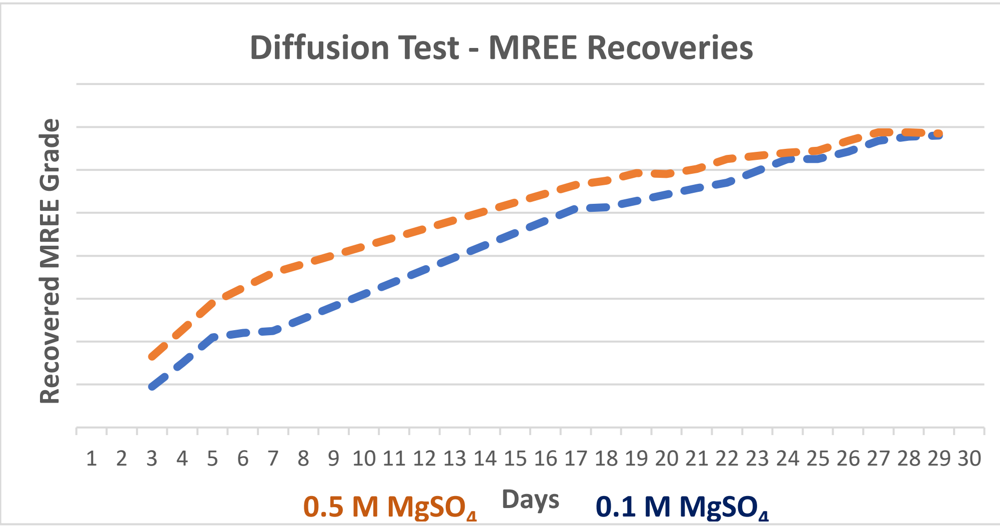

Figure 4. Overall cumulative recoveries from diffusion testing utilising magnesium sulfate at 0.5 M and 0.1 M concentrations over 30 days.

The results of the stagnant bed diffusion test are shown in Figure 4. All of the magnet rare earth elements leached in significant quantities (Nd, Pr, Dy, Tb) are shown. The curves show the characteristic profiles for a diffusion-governed process, reaching equilibrium extraction (that is the extraction to be expected if solid and liquid were perfectly mixed) over 30 days.

ISR is a proven cost effective and environmentally acceptable extraction process, which accounts for approximately 57% of world uranium mined, and is used in Australia, USA, Kazakhstan, and Uzbekistan.

Scoping Study

The company has now engaged several specialist companies to commence activities with respect to the Ema rare earth scoping study. The team all have extensive experience in rare earths that will cover project aspects including heritage, environmental, metallurgy, mining engineering, geology and hydrogeology.

The scoping study will assess potential in-situ leach processing of the Ema project. It is estimated that the bulk of the data gathering will be concluded by years end.

- Ausenco: to provide engineering services for high-level scoping engineering outputs;
- WSP: to demonstrate the suitability of ISR and to gather hydraulic data (aquifer properties, pumping/injection rates to access ISR feasibility and to provide information for the development of a numerical groundwater model based on field trials.
- GE21: to complete an updated mineral resource estimate based on JORC 2012 Code standards; and
- CERN: to conduct baseline environmental assessment with a view to preparation of Environmental Studies report for submission of a preliminary licence.

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

References

1. Petersen J (2016) Heap Leaching as a key technology for recovery of values from low-grade ores–a brief overview. Hydrometallurgy 165:206–212
2. Brazilian Critical Minerals (ASX:BCM) World Class REE Recoveries at Ema Project on 13.03.24
3. Brazilian Critical Minerals (ASX:BCM) Massive Maiden Mineral Resource for Ema Project 22.04.24

Competent Person Statement

The information in this announcement relates to previously reported exploration results for the Ema/Ema East Project released by the Company to ASX on 22 May 2023, 17 July 2023, 19 July 2023, 31 July 2023, 13 Sep 2023, 19 Oct 2023, 06 Dec 2023, 06 Feb 2024, 22 Feb 2024, 13 Mar 2024 and 02 Apr 2024. The Company confirms that is not aware of any new information or data that materially affects the information included in the above-mentioned releases. Mr. de Castro is a member of the Australasian Institute of Mining and Metallurgy and consents to the inclusion of the information in this announcement.

The information in this announcement that relates to the Ema/Ema East Mineral Resource and the reported leaching results in this announcement is based on and fairly represents information compiled by Mr. Antonio de Castro (acts as BCM´s Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda) and Mr. Leonardo Rocha, (employee of GE21 Consultoria Mineral Ltda). Mr. de Castro is a member of the Australasian Institute of Mining and Metallurgy, and Mr. Rocha is a member of Australasian Institute of Geoscientists. Both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserve Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specially, Mr. de Castro is the Competent Person for the database (including all drilling information), the geological and mineralisation model plus completed the site visits with Mr. Rocha. Mr. Rocha is the Competent Person for the construction of the 3D geology/mineralisation model plus the estimation. Mr. de Castro and Mr. Rocha consent to the inclusion in this report of the matters on their information in the form and context in which they appear.

About Brazilian Critical Minerals Ltd

Brazilian Critical Minerals Limited (BCM) is a mineral exploration company listed on the Australian Securities Exchange.

Its major exploration focus is Brazil, in the Apuí region, where BCM has discovered a world class Ionic Adsorbed Clay (IAC) Rare Earth Elements deposit. The Ema IAC project is contained within the 781 km² of exploration tenements within the Colider Group.

BCM has defined an inferred MRE of **1.02Bt** of REE's with metallurgical recoveries averaging **68%** MREO some of the highest for these types of deposits anywhere in the world.

The Company is currently converting this MRE from Inferred into the Indicated category with an extensive drill program which will inform the scoping study and economic analysis due for completion in late 2024.

Appendix 4

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	• 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	• Diffusion test results are for a 195 kg composite sample of 12 auger holes, from the drilling conducted by BCM´s exploration team during 2023, conducted at BCM´s Lab in Catalão, Brazil. • 3 kg of the homogenized sample from each interval, was used to make the composite. • The preparation of the composite was supervised by a BCM geologist. • Holes were sampled using a powered auger drill (open hole) conducted by BCM´s exploration team. • Sampling was supervised by a BCM 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 1 kg sent to SGS for preparation and analysis and a similar amount stored on site. • 1 certified blank sample. 1 certified reference material (standard) samples and 1 field duplicate sample were inserted into the sample sequence for each 25 samples.

Item	JORC code explanation	Comments
	commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	
Drilling Techniques	• 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).	• 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. • The maximum depth achieved with the powered auger was 31m, and this was only achievable if the hole did not encounter fragments of rocks/boulders etc. sitting within the weathered profile, and/or the water table. Final depths were recorded accordingly to the length of the rods in the hole.
Drill Sample Recovery	• 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.	• No recoveries are recorded. • The operator observes the volume of each metre and notes any discrepancy. • When recovery is below 75% in two sequential one metre interval, the field crew stops the drill hole. • No relationship is believed to exist between recovery and grade.
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. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• All holes were logged by BCM 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.

Item	JORC code explanation	Comments
	• The total length and percentage of the relevant intersections logged.	
Sub-Sampling Techniques and Sampling Procedures	• 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. • 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.	• The composite sample was prepared in the Apui exploration facility with 3.0 kg of each mineralized interval previously homogenized from 12 auger holes, then homogenised and split in six plastic bags which were then sealed prior to shipment to Catalão. • The 3.0 kg sample size is adequate to represent each individual samples in the composite. • At CATALAO the homogenised sample was split into representative portions for head assay, and desorption testing at SGS. • 4 aliquots were used for the diffusion tests with magnesium sulfate leaching, under different parameters for concentration, all for 34 days in ambient temperature and pressure. • 2 aliquots of 50Kg were used for 2 column leach tests, without agglomeration, in progress, one with ammonium sulfate and the other with magnesium sulfate, in ambient temperature and pressure with Ph 4.5. • 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. • The composite sample was from the 1 kg sample stored on site. • Sample preparation for the composite, such as pulverization and homogenization of the 49.6 kg was conducted at ANSTO. • Sample preparation for assay the auger samples was conducted at SGS Vespasiano (greater Belo Horizonte) comprising oven drying, crushing of entire sample to 75% < 3 mm followed by rotary splitting and pulverisation of 250 to 300 g at 95% minus 150# • The <3 mm rejects and the 250-300 g pulverised sample were returned to BCM for storage, after all assays were reported.
Quality of Assay Data and	• The nature, quality and appropriateness of the assaying and laboratory procedures used and	• The assays for REE in the ammonium and magnesium solution from the 4 diffusion tests and the column leach tests were conducted in BCM´s Catalão Lab.

<table>
<tr><th>Item</th><th>JORC code explanation</th><th>Comments</th></tr>
<tr><td>Laboratory Tests</td><td>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</td><td>All data reported were in elemental form and presented in this announcement as received.
QA/QC controls, incorporating standards, blanks and duplicates for the PLS readings.
The method for analysis of REEs in solution was by ICP-MS.
1 blank sample. 1 certified reference material (standard) sample and 1 field duplicate sample were inserted by BCM into each 25-sample sequence.
Standard laboratory QA/QC procedures were followed. including inclusion of standard. duplicate and blank samples.
The assay results of the standards fall within acceptable tolerance limits and no material bias is evident.
The assay technique at SGS used for REE's was lithium tetaborate fusion / ICP-MS finish (SGS code ICP95A and IMS95A). This is a recognised industry standard analysis technique for REE suite and associated elements. Elements analysed at ppm levels:
<table><tr><td>Ba</td><td>Ce</td><td>Co</td><td>Cs</td><td>Dy</td><td>Er</td><td>Eu</td><td>Ga</td></tr><tr><td>Gd</td><td>Hf</td><td>Ho</td><td>La</td><td>Lu</td><td>Nb</td><td>Nd</td><td>Pr</td></tr><tr><td>Rb</td><td>Sm</td><td>Sn</td><td>Sr</td><td>Ta</td><td>Tb</td><td>Th</td><td>Tm</td></tr><tr><td>U</td><td>V</td><td>W</td><td>Y</td><td>Yb</td><td>Zr</td><td>Zn</td><td>Co</td></tr><tr><td>Cu</td><td>Ni</td></tr></table>The sample preparation and assay techniques used are industry standard and provide total analysis.
The ICP95A reports the major elements oxides used to calculate the Chemical Index of Alteration (CIA) at % levels:
<table><tr><td>Al2O3</td><td>CaO</td><td>Cr2O3</td><td>F2O3</td></tr><tr><td>K2O</td><td>MgO</td><td>MnO</td><td>Na2O</td></tr><tr><td>P2O5</td><td>SiO2</td><td>TiO2</td><td></td></tr></table>
The SGS laboratory used for the RRE assays is ISO 9001 and 14001 and 17025 accredited.
Analytical standard for REE ITAK-705 was used as CRM material in the batches sent to SGS.
The assay results for the standards were consistent with the certified levels of accuracy and precision and no bias is evident.
The blanks used contain some REE. with critical elements Ce. Nd. Dy and Y present in small quantities.</td></tr>
</table>

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Item	JORC code explanation	Comments
		• Duplicate samples were allocated separate sample numbers and submitted with the same analytical batch as the primary sample. Variability between duplicate results is considered acceptable and no sampling bias is evident. • Laboratory inserted standards. blanks and duplicates were analysed as per industry standard practice. There is no evidence of bias from these results.
Verification of Sampling and Assaying	• 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.	• No independent or alternative verification of sampling and assaying procedures was carried out. • The diffusion test report was sent directly to BCM´s MD in Australia. • Analytical results for REE were supplied digitally, directly from the SGS laboratory in Vespasiano to BCM's Exploration Manager in Rio de Janeiro. • No twinned holes were used. • 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).

Element ppm	Conversion Factor	Oxide Form
Ce	1.2284	CeO2
Dy	1.1477	Dy2O3
Er	1.1435	Er2O3
Eu	1.1579	Eu2O3
Gd	1.1526	Gd2O3
Ho	1.1455	Ho2O3
La	1.1728	La2O3
Lu	1.1371	Lu2O3
Nd	1.1664	Nd2O3

Item	JORC code explanation	Comments
		<table><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><tr><td>Y</td><td>1.2699</td><td>Y2O3</td></tr><tr><td>Yb</td><td>1.1387</td><td>Yb2O3</td></tr></table> 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: TREO (Total Rare Earth Oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3 + Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3 LREO (Light Rare Earth Oxide) = La2O3 + CeO2 + Pr6O11 + Nd2O3 HREO (Heavy Rare Earth Oxide) = Sm2O3 + Eu2O3 + Gd2O3 + Tb4O7 + Dy2O3 + Ho2O3 + Er2O3 + Tm2O3 + Yb2O3 + Y2O3 + Lu2O3 CREO (Critical Rare Earth Oxide) = Nd2O3 + Eu2O3 + Tb4O7 + Dy2O3 + Y2O3 (From U.S. Department of Energy, Critical Material Strategy, December 2011) MREO (Magnetic Rare Earth Oxide) = Nd2O3 + Pr6O11 + Tb4O7 + Dy2O3 NdPr = Nd2O3 + Pr6O11 DyTb = Dy2O3 + Tb4O7 In elemental from the classifications are: TREE: La+Ce+Pr+Nd+Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Tb+Lu+Y HREE: Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Tb+Lu+Y CREE: Nd+Eu+Tb+Dy+Y LREE: La+Ce+Pr+Nd
Location of Data Points	• 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.	• Auger collar locations were surveyed initially by GPS, at an estimated accuracy of 2m. • Posterior to the end of the drilling campaign, the collar locations were picked up by a licensed surveyor using a Trimble total station (+/- 5cm), referenced to a government survey point. All drill holes have been checked spatially in 3D.

Item	JORC code explanation	Comments
	• Quality and adequacy of topographic control.	• The grid system used for all data types in a UTM projection is SIRGAS Zone 21 Southern Hemisphere. No local grids are used. • The auger holes collar coordinates for the holes used in the resource estimation were surveyed to sub-decimetre accuracy by a licenced surveyor.
Data Spacing and Distribution	• 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.	• Auger holes were over 200m to 800m apart, designed for testing iREE mineralisation over the mapped felsic volcanics. • 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 appropriate for a Mineral Resource. • No sample composition was applied.
Orientation of Data in relation to Geological Structure	• 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.	• 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. • No relationship between mineralisation and drilling orientation is known at this stage.
Sample security	• The measures taken to ensure sample security.	• 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	• The results of any audits or reviews of sampling techniques and data.	• 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 Result

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 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 Ema and Ema East leases are 100% owned by BCM 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	• Acknowledgment and appraisal of exploration by other parties.	• Some non-listed entities have conducted limited exploration in the region. No results are publicly available.
Geology	• Deposit type, geological setting and style of mineralisation.	• 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	• 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:
	    • easting and northing of the drill hole collar
	    • elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
		• Auger hole locations and diagrams were presented in previous announcements.
		• Details were tabulated in the announcements.

Criteria	JORC code explanation	Commentary
	- 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	- 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.	- Weighted averages were calculated for all intercepts and announced. - No metal equivalent values reported.
Relationship between mineralisation widths and intercepted lengths	- 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').	- Significant values of desorbed REE were reported for the auger samples. - 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	• 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.	• Maps and tables of the auger hole location and target location are inserted.
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.	• Relevant REE mineralisation with grades higher than 500ppm TREO in auger holes was reported and previously announced. • All mineralized intercepts used in the composite were previously reported. • Only the relevant diffusion test recoveries are published in table 1 in body of report.
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.	• No other significant exploration data has been acquired by the Company. • A maiden Inferred resource was published to the ASX on 22nd April 2024.
Further Work	• 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	• Infill drilling to upgrade the MRE is in progress. • Additional metallurgical test work is in progress at ANSTO – Sydney.

Criteria	JORC code explanation	Commentary
	interpretations and future drilling areas, provided this information is not commercially sensitive.	• Additional hydrogeological work will continue within the 2,000Ha infill drilling area under WSA guidelines.