WORLD LEADING RARE EARTH RECOVERIES CONFIRMED IN TESTWORK FOR EMA PROJECT

Highlights

- Outstanding magnetic REO (Nd, Pr, Dy, Tb) recoveries averaging **68%** overall
- World class recoveries averaging **69% NdPr** and **48% DyTb** from a bulk sample analysed at ANSTO[1] confirmed at Ema rare earth project
- Results are some of the **highest ever** recorded recoveries from an ionic clay rare earth deposit
- Recoveries achieved using standard, weak ammonium sulphate leaching solution at **0.5M** concentration, **pH 4.5**, at ambient temperatures, over short leach duration times
- Leachability response confirms rare earths are present in ionic form and leachable at low operating cost
- Downstream production to a final product, a mixed rare earth carbonate (MREC), has been produced at **99%** purity[2]
- JORC 2012 compliant Inferred Mineral Resource Estimate (MRE) of **1.02Bt @ 793ppm TREO,** including a higher-grade portion of **331Mt @ 977ppm TREO**[6]
- Places Ema as one of the largest[3] tonnage fully **ionic clay**, rare earth deposits in the world
- High magnetic REO element proportion of **27 – 31%** of basket positioning it as one of Brazil's most enriched MREO deposits

Andrew Reid, Managing Director, commented:

"Today's results are amongst the highest ever recorded for an ionic rare earth deposit, confirm previous recovery announcements[5] and exceed our own expectations for the Ema project. The base parameters which ANSTO have used to confirm the high recoveries of desorbable rare earth elements are the holy grail for ionic clay rare earth projects.

These results confirm this as a significant rare earth deposit that can be placed on the path towards development and allows BCM to now move ahead full steam with the next phase of our project implementation.

BCM has ambitious future plans, which include additional infill mineral resource drilling, continuing with metallurgical test work to identify and help strategize the processing path forward and the commencement of a scoping study to enable it to be ready for the anticipated rise in rare earth pricing in the near future."

[1] Australian Nuclear Science and Technology Organisation

Brazilian Critical Minerals Limited (**ASX: BCM**) ("**BCM**" or the "**Company**") is pleased to announce the results from the initial metallurgical work completed by ANSTO (Australian Nuclear Science and Technology Organisation).

World leading recoveries have resulted from the work recently completed by ANSTO. The Ema project (Figure 2) now has some of the best, if not the best, recoveries for any ionic clay rare earth project inside of Brazil and perhaps anywhere in the world (Figure 1).

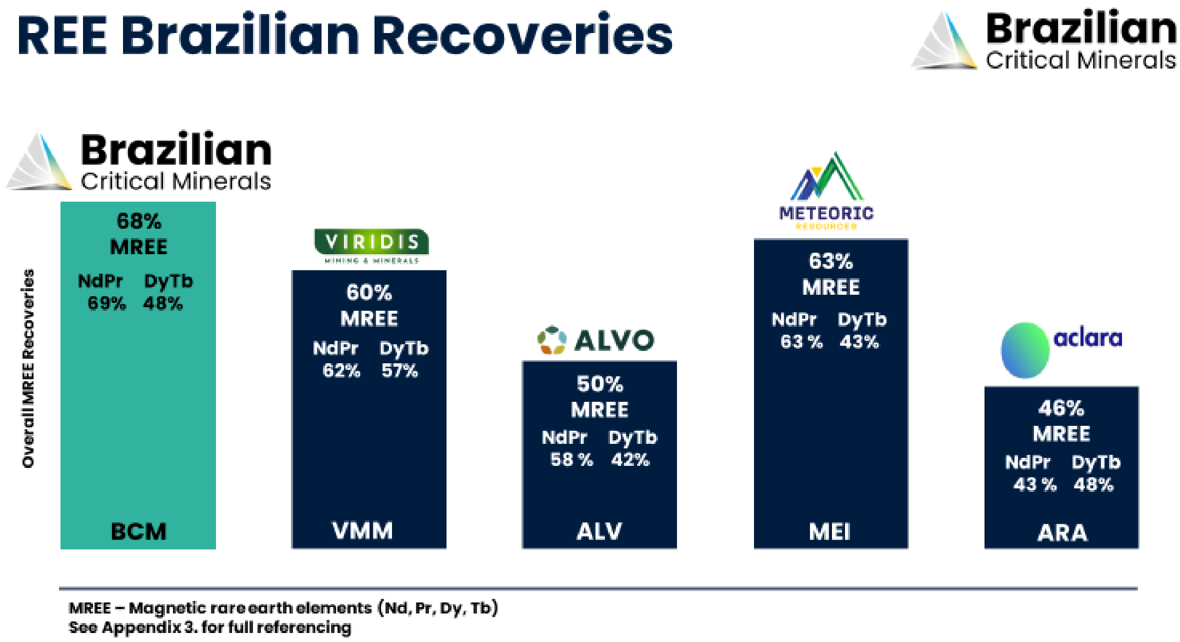

Figure 1. Rare earth recovery comparison of ionic clay hosted deposits currently defined within Brazil

Figure 2. Ema project location in the Apui region of Brazil.

BCM has now completed the first metallurgical testwork phase from ANSTO on samples obtained from drilling at the Ema project during 2023. This testwork utilised a 49.6Kg composite sample collected from 12 auger holes over 62 samples drilled at Ema (Table 1).

Table 1. Hole and sample information which was sent to ANSTO for analysis. See appendix 1 for details.

No. of Holes	No. of Samples	Sample Quantity (kgs)
12	62	49.6

The scope of work that ANSTO performed was designed to provide a deeper understanding of the following:

- The potential to extract REE mineralisation from shallow clay horizons;
- Characterise the mineralogy and leachability from the samples which comprise highly weathered rhyolitic material; and
- Determining the recovery percentages of the important magnet REE elements and under what conditions will be required to maximise their recovery.

This testwork applied the same parameters and standard analysis methods as were utilised in the SGS testing works recently conducted in Brazil[2]. The ANSTO results confirm the very high recovery results obtained from SGS analysis and more importantly confirm the rare earths are able to be leached over short duration times, at pH 4-4.5, 0.15-0.5M ammonia sulphate, checking all the critical boxes needed for a fully ionic clay rare earth deposit.

These results now clearly indicate that the Ema project is a large body of mineralisation which has been defined at very low cost inside of 12 months since first results were released. The Company intends to move into a scoping study phase which will determine the optimal route for the project to the developed. At this stage a number of different paths are available to the Company for development.

ANSTO Results

Through a series of tests, the optimal conditions which maximised recovery were found to be pH 4.5, ambient temperature, 2-hour desorption leach times with 0.5M ammonium sulphate $(NH_4)_2SO_4$ (Table 2).

ANSTO also conducted desorption tests with duration times of 1 and 0.5 hours, with the overall MREE recovery results showing only a slight decrease at 0.5 hours.

Auger holes and samples used in the bulk sample (Figure 3) were distributed within lower grade portions of the mineral resource. Cerium average recovery results were very low at only 12% which is always viewed as a positive for ionic rare earth deposits as cerium generally contributes a significant portion of final product volumes but for which it receives very little in revenue and is normally discarded as a waste product.

Table 2. Sample conditions which maximised MREE recoveries at pH 4.5

TREY Head grade (ppm)	Reagent	Target pH	Temp °C	Leach Duration (h)	MREE (%)	Nd/Pr Recovery (%)	Dy/Tb Recovery (%)
965	0.5M $(NH_4)_2SO_4$	4	ambient	2	67	68	47
965	**0.5M $(NH_4)_2SO_4$**	**4.5**	**ambient**	**2**	**68**	**69**	**48**

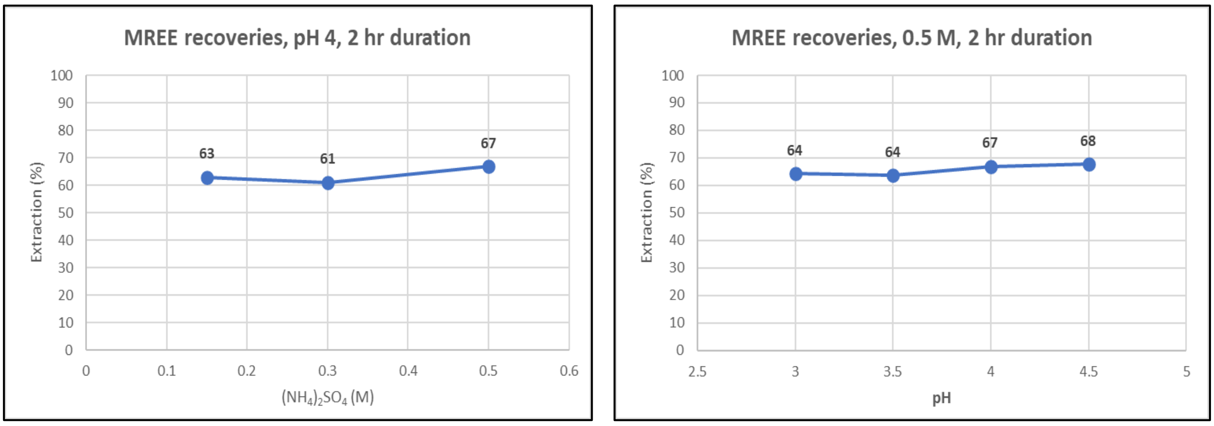

Figure 3. Chart on left showing MREE recoveries with differing ammonium sulphate concentration rates with chart on right displaying MREE recoveries over varying pH conditions.

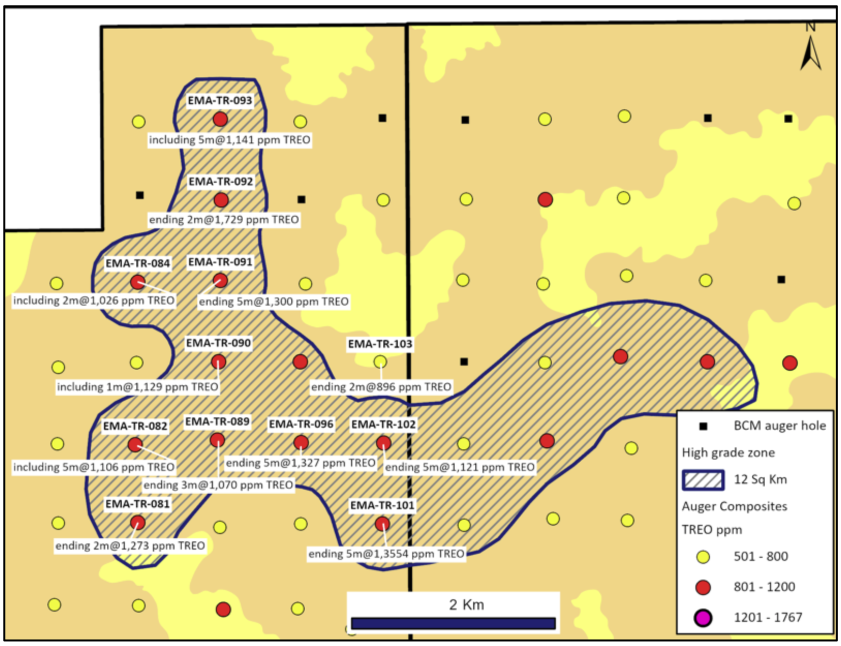

Figure 4. Ema detailed location map showing location of auger holes used to make the composite sample sent to ANSTO

Ema REE Project

The EMA REE project (Ema and Ema East leases) is unique amongst Brazilian REE projects in that it shares almost identical characteristics with the REE deposits developed over felsic volcanic rocks in the southwest of China, the world´s largest known ionic clay rare earth region.

Ionic clay deposits are low-grade low-cost, high margin operations owing to their simple mining and processing methodology, non-radioactive products and waste, and attractive mineralogy and saleable product composition.

The Ema-Ema East REE project comprises 189 km^2 of felsic volcanics over which 194 auger holes totalling 2,749 metres have been drilled to date, covering approximately 82 km^2. BCM has received and announced the full assay results for 191 holes of the total holes drilled to date, utilising a lithium borate fusion assay methodology.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcement and, in the case of mineral resource estimate, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Refer to ASX announcement dated 22 April 2024 and below:

Table 3. Ema REE Project 2024 Mineral Resource Estimate – by cut-off grade

JORC Category	cut-off ppm TREO	Tonnes Mt	TREO ppm	NdPr ppm	DyTb ppm	MREO ppm	MREO:TREO %
Inferred	0	1,340	694	163	15	178	26
Inferred	**500**	**1,017**	**793**	**199**	**17**	**216**	**27**
Inferred	600	863	836	218	18	236	28
Inferred	700	685	885	237	20	257	29
Inferred	800	494	936	259	21	280	30
Inferred	900	331	977	278	22	300	31

Notes:

1. TREO = total rare earth oxides (CeO_2, Dy_2O_3, Er_2O_3, Eu_2O_3, Gd_2O_3, Ho_2O_3, La_2O_3, Lu_2O_3, Nd_2O_3, Pr_6O_{11}, Sm_2O_3, Tb_4O_7, Tm_2O_3, Yb_2O_3) + Y_2O_3
2. NdPr=Pr_6O_{11}+Nd_2O_3
3. DyTb= Dy_2O_3 + Tb_4O_7
4. Totals may not balance due to rounding of figures.
5. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant factors.
6. Mineral resources were classified as Inferred.
7. Mineral Resources were prepared in accordance with Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012) incorporating drilling data acquired by 2023.
8. Blocks estimated by ordinary kriging at support of 100 m × 100 m × 4 m with sub-blocks 25 m × 25 m × 2m.

9. The results are presented in-situ and undiluted, are constrained within optimized open pit shell, and are considered to have reasonable prospects of economic viability, using the following parameters:
    a. Pit slope angle: 25°.
    b. Selling Prices: estimated by element oxide.
    c. Costs: Mining: 2.13US$/t mined; Process: 7.23 US$/t processed; Royalties: 2% of revenue; Selling costs: 7.03US$/kg REO.
    d. Metallurgical Efficiencies estimated by element.

Future work at Ema

1. Completion of phase 1 of the metallurgical study in ANSTO.
2. Commence infill drilling in around the high-grade inferred zone containing 331Mt @ 977ppm with the aim of upgrading the Mineral Resource to the indicated category
3. Select a suitable engineering partner for scoping study works and start a program of works to define the optimal path forward for the Ema project
4. Initiate work on commencing environmental studies with regards to advancing all necessary permits to progress the Ema project towards development

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

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About Brazilian Critical Minerals Ltd

Brazilian Critical Minerals Limited (BCM) 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 BCM 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. BCM'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 718km² of exploration tenements within the Colider Group and adjacent sediments, a prospective geological environment for gold, PGM, base metal and iREE deposits.

BCM is also developing an environmentally friendly and sustainable beneficiation process to extract precious metals using a unique bio leach pre-treatment 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. BCM 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 BCM´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.

References

2. Brazilian Critical Minerals (ASX:BCM) World Class REE Recoveries at Ema Project on 13.03.24
3. Brazilian Critical Minerals (ASX:BCM) CETEM Ammonium Sulphate Leach Ionic Adsorbed Clay Ree Test 29.01.24
4. Brazilian Critical Minerals (ASX:BCM) Massive Maiden Mineral Resource for Ema Project 22.04.24
5. Brazilian Critical Minerals (ASX:BCM) World Class RERE Recoveries at Ema Project 13.03.24
6. Brazilian Critical Minerals (ASX:BCM) Massive Maiden Mineral Resource for Ema Project 22.04.24

Appendices

Appendix 1. Results for the intersections of auger holes used to compile the EMA composite.

HoleID	From	To	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm
EMA-TR-081	14	15	948	20	32	**281**	18
EMA-TR-081	15	16	1,328	21	33	**414**	26
EMA-TR-081	16	17	1,218	22	33	**381**	26
EMA-TR-082	14	15	705	18	26	**169**	13
EMA-TR-082	15	16	954	15	22	**195**	14
EMA-TR-084	3	4	857	12	14	**109**	10
EMA-TR-084	4	5	749	14	18	**125**	10
EMA-TR-084	5	6	953	12	18	**157**	12
EMA-TR-084	6	7	782	17	27	**199**	13
EMA-TR-084	7	8	1,019	21	32	**310**	19
EMA-TR-084	8	9	1,032	24	33	**316**	23
EMA-TR-084	9	10	961	24	30	**271**	21
EMA-TR-089	9	10	752	18	22	**150**	13
EMA-TR-089	10	11	963	18	25	**221**	17
EMA-TR-089	11	12	1,096	21	28	**288**	20
EMA-TR-089	12	13	1,109	22	29	**300**	22
EMA-TR-089	13	14	1005	21	27	**249**	19

HoleID	From	To	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm
EMA-TR-090	11	12	852	18	25	**203**	13
EMA-TR-090	12	13	1,129	18	27	**291**	18
EMA-TR-090	13	14	998	21	31	**296**	19
EMA-TR-090	14	15	862	22	31	**250**	17
EMA-TR-090	15	16	680	22	29	**182**	14
EMA-TR-091	11	12	747	15	31	**217**	11
EMA-TR-091	12	13	906	15	31	**271**	13
EMA-TR-091	13	14	838	15	33	**262**	12
EMA-TR-091	14	15	823	16	33	**257**	12
EMA-TR-091	15	16	869	17	35	**287**	14
EMA-TR-091	16	17	1,345	17	37	**478**	20
EMA-TR-091	17	18	1,180	19	36	**398**	22
EMA-TR-091	18	19	1,282	22	34	**414**	27
EMA-TR-091	19	20	1,362	27	34	**422**	36
EMA-TR-091	20	21	1,329	25	27	**328**	32
EMA-TR-092	15	16	852	21	32	**252**	18
EMA-TR-092	16	17	1577	27	36	**522**	45
EMA-TR-092	17	18	1,880	31	34	**587**	57
EMA-TR-093	12	13	751	20	19	**128**	15
EMA-TR-093	13	14	1,332	15	15	**180**	19
EMA-TR-093	14	15	1,171	22	29	**315**	24
EMA-TR-093	15	16	1,031	26	29	**271**	26
EMA-TR-093	16	17	1,137	28	29	**304**	29
EMA-TR-093	17	18	1,035	28	29	**271**	26
EMA-TR-093	18	19	714	28	27	**171**	18
EMA-TR-096	7	8	751	17	21	**142**	12
EMA-TR-096	8	9	897	14	20	**169**	12
EMA-TR-096	9	10	1,064	14	24	**244**	15
EMA-TR-096	10	11	1,047	17	34	**343**	17
EMA-TR-096	11	12	1,375	16	40	**531**	21
EMA-TR-096	12	13	1,669	16	39	**620**	26
EMA-TR-096	13	14	1,478	17	38	**540**	24
EMA-TR-101	14	15	701	24	31	**203**	17
EMA-TR-101	15	16	1,058	24	31	**307**	25
EMA-TR-101	16	17	1,418	28	33	**437**	39
EMA-TR-101	17	18	1,382	30	31	**388**	41
EMA-TR-101	18	19	1,385	33	30	**368**	45
EMA-TR-101	19	20	1,526	37	31	**415**	57
EMA-TR-102	9	10	1,291	11	15	**181**	13
EMA-TR-102	10	11	1,095	17	26	**263**	18

HoleID	From	To	TREO ppm	% HREO	% MREO	NdPr ppm	DyTb ppm
EMA-TR-102	11	12	1,034	20	29	**284**	19
EMA-TR-102	12	13	1,157	23	29	**316**	25
EMA-TR-102	13	14	898	24	32	**267**	20
EMA-TR-103	17	18	810	20	29	**221**	15
EMA-TR-103	18	19	990	21	32	**295**	20

Appendix 2. Auger drill-hole locations

Hole ID	East	North	RL (m)	Depth	Azimuth	Dip	Tenement
EMA-TR-081	185194.31	9180014.35	151.15	17	0	-90	880.107/2008
EMA-TR-082	185170.49	9180781.52	161.10	16	0	-90	880.107/2008
EMA-TR-084	185196.6	9182383.12	141.59	10	0	-90	880.107/2008
EMA-TR-089	185978.85	9180825.3	168.31	14	0	-90	880.107/2008
EMA-TR-090	185989.34	9181599.09	139.86	16	0	-90	880.107/2008
EMA-TR-091	186008.85	9182396.4	187.56	21	0	-90	880.107/2008
EMA-TR-092	186014.72	9183188.14	137.33	18	0	-90	880.107/2008
EMA-TR-093	186006.12	9183984.73	138.16	19	0	-90	880.107/2008
EMA-TR-096	186804.1	9180800.56	178.84	14	0	-90	880.107/2008
EMA-TR-101	187605.18	9180000.22	146.56	20	0	-90	880.107/2008
EMA-TR-102	187615.76	9180798.82	147.98	14	0	-90	880.107/2008
EMA-TR-103	187582.69	9181598.22	155.54	19	0	-90	880.107/2008

Appendix 3. Company data in relation to MREE recoveries and conditions for leaching

Code	Company	Project	Head Grade (ppm)	MREO:TREO (%)	MREE recovery (%)	NdPr recovery (%)	DyTb recovery (%)	Leaching Agent	pH	Temperature	No. of Samples	Lab	Reference
BCM.ASX	BCM	Ema	965	31	68	69	48	$(NH_4)_2SO_4$	4.5	ambient	62	ANSTO	this announcement
ARA.TSX	Aclara	Carina	1,510	23	46	43	48	$(NH_4)_2SO_4$	3	ambient	1418	SGS	Aclara (TSX:ARA) Aclara announces discovery of 168Mt ionic clay mineral resource at its Carina Module in Goias, Brazil 12.12.24
ALV.ASX	Alvo Minerals	Blue Brush	1,014	24	50	58	42	$(NH_4)_2SO_4$	4	ambient	13	SGS	Alvo (ASX:ALV) Metallurgical Tests Confirm Bluebush as Ionic Adsorption Clay REE Project 02.11.23
VMM.ASX	Viridis	Colossus	4,665	31	60	62	57	$(NH_4)_2SO_4$	4	ambient	91	SGS	Viridis (ASX:VMM) Colossus Acheives Highest Overall Bulk Ionic Recoveries Globally 18.04.24
MEI.ASX	Meteoric	Caldeira	3,642	23	63	63	43	$(NH_4)_2SO_4$	4	ambient	101	ANSTO	Meteoric Resources (ASX:MEI) Metallurgical Testwork Confirms Outstanding Ionic Clay Recoveries for Caldeira REE Project 07.12.23

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 commodities or mineralisation types (eg	• Metallurgical results are for a 49.6 Kg composite sample of 12 auger holes, from the drilling conducted by BCM´s exploration team during 2023, conducted at ANSTO, Sydney, Australia. • 0.8kg 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.

BRAZILIAN CRITICAL MINERALS

Item	JORC code explanation	Comments
	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. • The total length and percentage of the relevant intersections logged.	• 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
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 homogenised sample was screened/crushed to 100% passing 1 mm and rotary split into representative portions for head assay, screening and desorption testing. Samples for head assay and desorption testing were pulverised. • The composite sample was prepared in the Apui exploration facility with 0.8kg of each mineralized interval previously homogenized from 12 auger holes, then homogenised and split in three plastic bags which were then sealed prior to shipment to Catalão and then to ANSTO by regular mail. • The 0.8kg sample size is adequate to represent each individual samples in the composite. • The homogenised sample was screened/crushed to 100% passing 1 mm and rotary split into representative portions for head assay, screening and desorption testing. Samples for head assay and desorption testing were pulverised. • 6 aliquots used for the first diagnostic ammonium sulphate leaching, under different parameters for the ammonium sulphate concentration and pH, all for 2 hours in ambient temperature and pressure. • 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 1kg sample stored on site. • Sample preparation for the composite, such as pulverization and homogenization of the 49.6kg was conducted at ANSTO. • 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# • The <3mm rejects and the 250-300 grams pulverised sample were returned to BCM for storage, after all assays were reported.
Quality of Assay Data	• The nature, quality and appropriateness of the assaying and laboratory	• The assays for REE in the ammonium solution from the 6 leaching tests and for the head grade were conducted by ANSTO.

Item	JORC code explanation	Comments
and Laboratory Tests	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	• All data reported from ANSTO were in elemental form including the TREY and presented in this announcement as received. • ALS introduced its own QA/QC controls, incorporating standards, blanks and duplicates. • • The ALS method for analysis of REEs in solution was ME-MS02 (ICP-MS) and for head assay was ME-MS81 (lithium tetraborate fusion digest/ICP-MS finish). Gangue elements in solution were assayed by ICP-OES at ANSTO and gangue elements in the head sample by XRF at ANSTO. • 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 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: Ba, Ce, Co, Cs, Dy, Er, Eu, Ga Gd, Hf, Ho, La, Lu, Nb, Nd, Pr Rb, Sm, Sn, Sr, Ta, Tb, Th, Tm U, V, W, Y, Yb, Zr, Zn, Co Cu, Ni 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: Al2O3, CaO, Cr2O3, F2O3 K2O, MgO, MnO, Na2O P2O5, SiO2, TiO2 • 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.

Item	JORC code explanation	Comments
		• 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. • 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 metallurgical 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

<table>
<tr><th>Item</th><th>JORC code explanation</th><th>Comments</th></tr>
<tr><td></td><td></td><td>
<table>
<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>
<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
</td></tr>
<tr><td>Location of Data Points</td><td>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine</td><td>• 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</td></tr>
</table>

Item	JORC code explanation	Comments
	workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	Trimble total station (+/- 5cm), referenced to a government survey point. All drill holes have been checked spatially in 3D. • 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 are presented in this announcement.
		• Details are tabulated in the announcement.

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 are reported. • Only the relevant metallurgical 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 interpretations and future drilling areas, provided this information is not commercially sensitive.	• Infill drilling to upgrade the MRE. • Additional metallurgical test work is planned at ANSTO – Sydney.