QUARTERLY ACTIVITIES REPORT

For the period ending 30th June 2025

Highlights

- 74% magnet (MREE) recovery and 62% (TREE + Y) recovery from ISR (in-situ recovery) column test at ANSTO (Australian Nuclear Science and Technology Organisation) significantly higher than recent scoping study base parameters
- ISR recoveries were achieved over only 28 days of leaching, resulting from permeability flow rates sufficient for commercial extraction achieved using low strength 0.5M MgSO4, pH 4.5, at ambient temperatures
- The Amazonas state Environmental Protection Institute (IPAAM) approved the use of magnesium sulphate for the Ema field pilot trial
- In-situ recovery (ISR) mining field pilot trial injecting magnesium sulphate into shallow clay horizon commenced at the Ema Project
- Field pilot trial was supervised by global industry ISR leader WSP Brazil and overseen by CERN environmental following successful lab trials conducted at ANSTO[1]
- Injected solution recorded in all downslope monitoring holes after only 72 hours, exceeding internal expectations
- Injection test validated hydraulic connectivity in the test wells within the mineralised zone
- Solution breakthrough, measured water levels and pressure readings within the mineralised zone provided evidence of the deposit's exceptional hydraulic conditions
- Chemical changes in the solution confirmed that magnesium sulphate has migrated from the injection holes to the extraction holes in the field trial locations
- pH levels reduced significantly in the extraction solution with the addition of low concentration $MgS0_4$ (0.5M) to the level of pH 4.0, the level required to leach rare earths into solution via in-situ recovery
- Solution flows through the clay zone exceeded laboratory estimates and both the injection and extraction wells as well as showing a steady rise in solution levels over time indicating the basement rock is largely impermeable
- Heavily oversubscribed placement raises $4.0 million to advance ema rare earths project
- Cash and cash equivalents as of June 30th 2025 of A$1.70M

Brazilian Critical Minerals Limited (**ASX: BCM**) ("**BCM**" or the "**Company**") is pleased to provide details of activities during the quarter ended 30 June 2025 at the Ema project in the Apuí region of Brazil.

Safety

No accidents or incidents were reported during the quarter.

ANSTO ISR Test

The Company requested ANSTO to conduct a standard ISR column test on the Ema material. The test involved packing the ore into a column to achieve a bulk density as close as possible to that underground and feeding the $MgSO_4$ lixiviant through the mineralised material at a pressure equivalent to that at the depth of the orebody, with the column in a vertical configuration.

Results

A head grade analysis of the sample was determined at ALS Geochemistry Laboratory, Brisbane to contain **829ppm** TREY (15 REE elements + Yttrium) of which **30% or 250ppm** were of the elements Nd, Pr, Dy and Tb.

Over the course of 28 days, the $MgSO_4$ lixiviant at pH 4.5 was injected through the column which resulted in high recoveries of TREY and MREE relative to the recent values used in the Ema scoping study[1] (table 1).

Key takeaways;

- High recoveries of MREE achieved over the test period (table 1), with most of the recovery occurring over only 17 days
- <2 pore volumes (the ratio of the material's air volume to total volume) required to achieve final recoveries (Figure 1.)
- Individual MREE recoveries were;
    - Praseodymium 85%;
    - Neodymium 72%;
    - Terbium 70%; and
    - Dysprosium 63%

Table 1. Comparison of Scoping Study recoveries vs ANSTO Column recoveries

	TREY (%)	MREE (%)
Scoping Study Recoveries[1]	**48**	**62**
ANSTO Column Recoveries	**62**	**74**

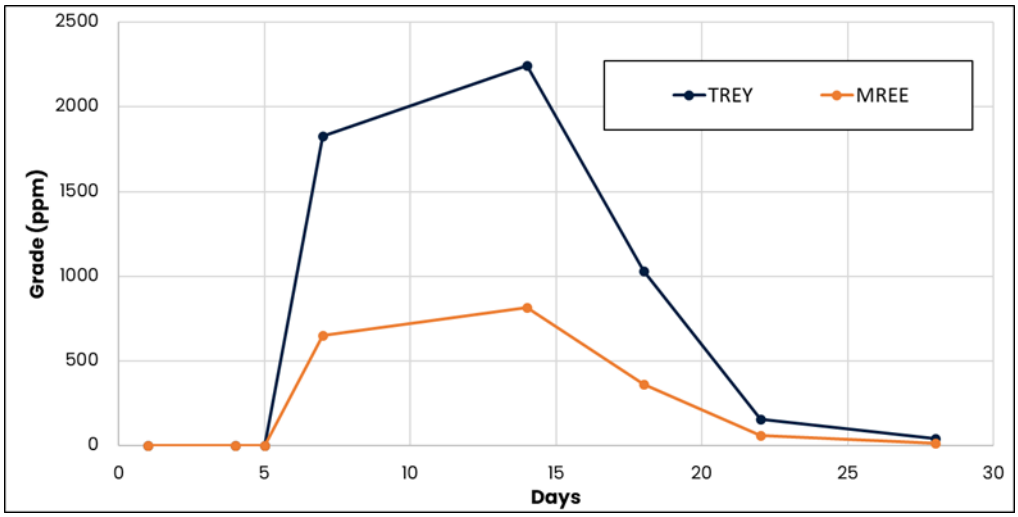

Figure 1. Solution concentration of rare earth elements in (ppm) over the 28-day test period.

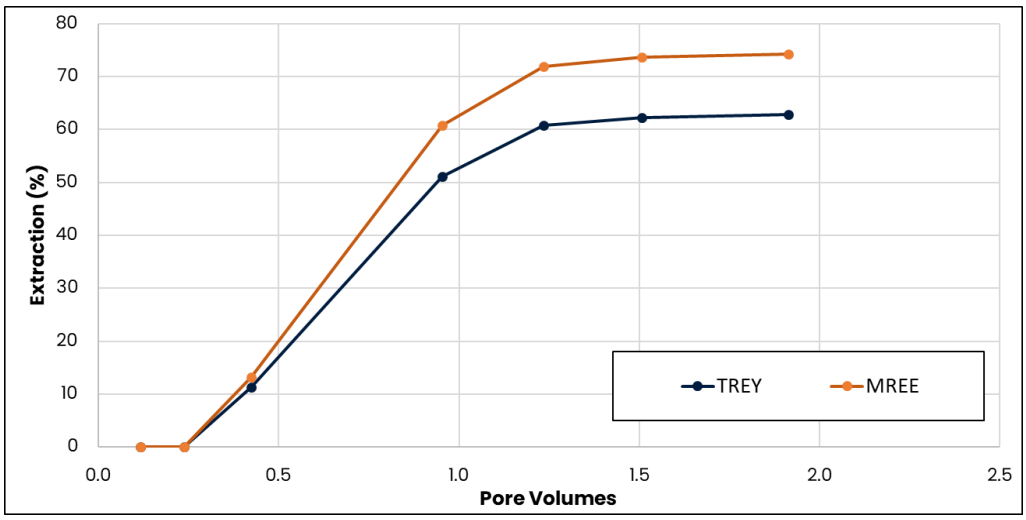

Figure 2. Cumulative extraction of rare earth elements in (%) over the 28-day test period

Field Pilot Trial

BCM commenced a series of ISR field trials (Figure 1.) at the Ema rare earths project which allowed the Company to assess the hydrogeological conditions, obtain valuable information on the leach characteristics of the rare earths, whilst collecting solutions rich in rare earths able to generate a final mixed rare earth carbonate product.

The field pilot trial included the installation of injection and extraction holes drilled a set distance apart, with the time taken for the solution to be recorded in the extraction holes is used to determine and calculate the hydraulic permeability.

After only 72hrs of commencement of the first injection trial, all the extraction holes recorded significant influx of solution demonstrating the suitability of the chosen method for leaching at the Ema deposit.

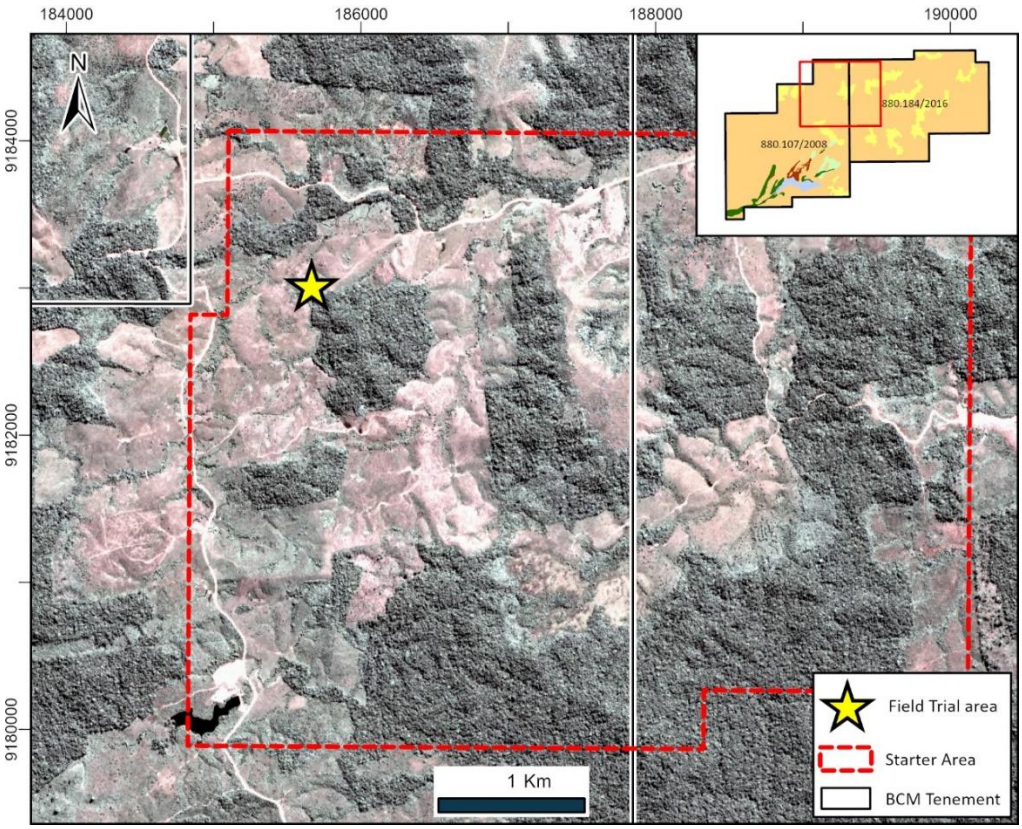

Figure 1. Field trial location within the central starter zone location

Clay Permeability

The injection and extraction/monitoring holes (Figure 2.) were drilled at site location 2 in order to be able to determine the time taken for solution to percolate through the clay horizon.

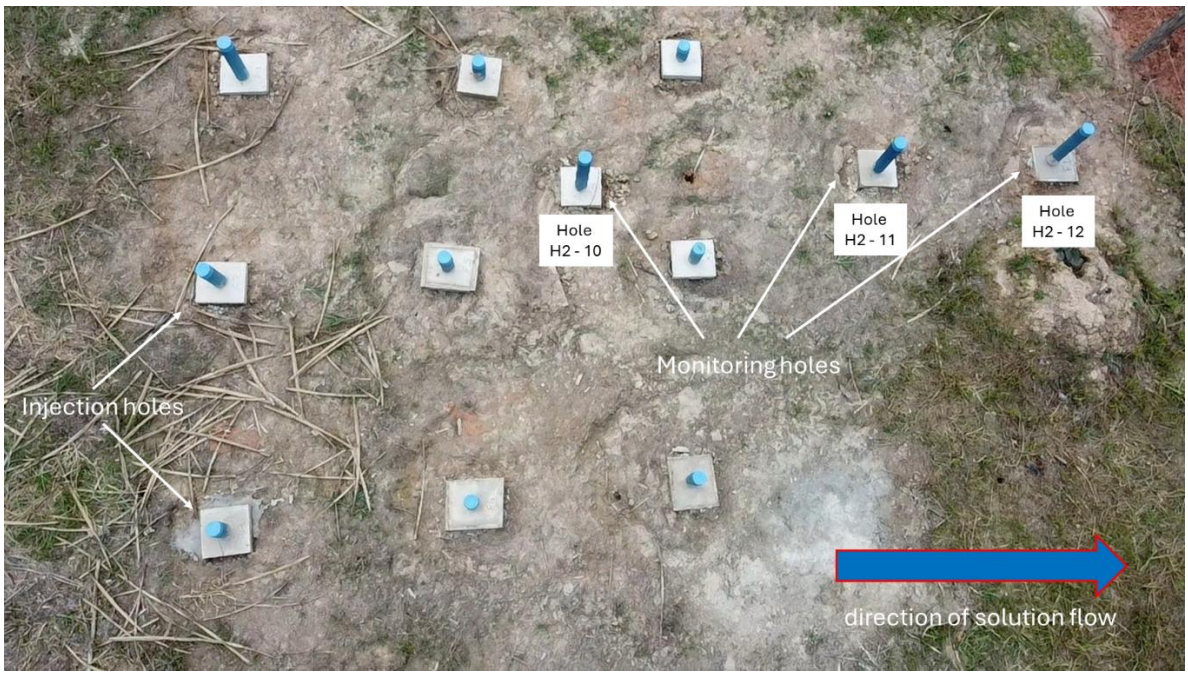

Figure 2. Injection and extraction/monitoring hole setup over a selective field trial area.

For each of the monitoring holes, the solution level was measured several times daily. Figure 3 shows the time taken for the initial solution to reach the monitoring holes;

- H2-10 – achieved breakthrough inside of 3hrs
- H2-11 – achieved breakthrough inside of 26hrs; and
- H2-12 – achieved breakthrough inside of 46hrs.

The time taken for solution to be recorded in the wells is in direct proportion to their distance from the injection wells. This data suggests strong percolation of fluids through the clay horizon with the information captured to be collated and used for hydrogeological modelling as part of the upcoming bankable feasibility study and as part of our environmental permitting application which is directed by CERN.

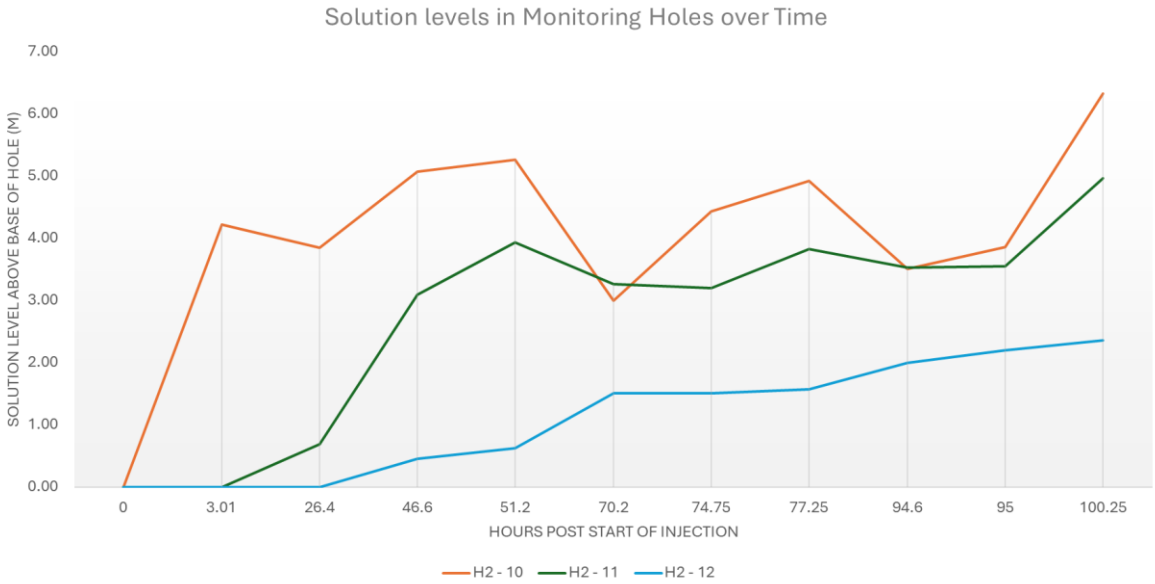

Figure 3. Solution levels measured daily and time taken for initial solution to reach monitoring holes.

pH Target

Chemical changes in the solution clearly showed that the magnesium sulphate had migrated from the injection holes to the extraction holes in the field trial locations. The in-situ pH levels were reduced significantly within the extraction solution with the addition of low concentration $MgSO_4$ (0.5M) and were recorded at or below pH 4.0 (Figure 4.), the level required to leach rare earths into solution via in-situ recovery (ISR).

Solutions potentially containing rare earths were extracted from the monitoring holes and sent to the laboratory for analysis.

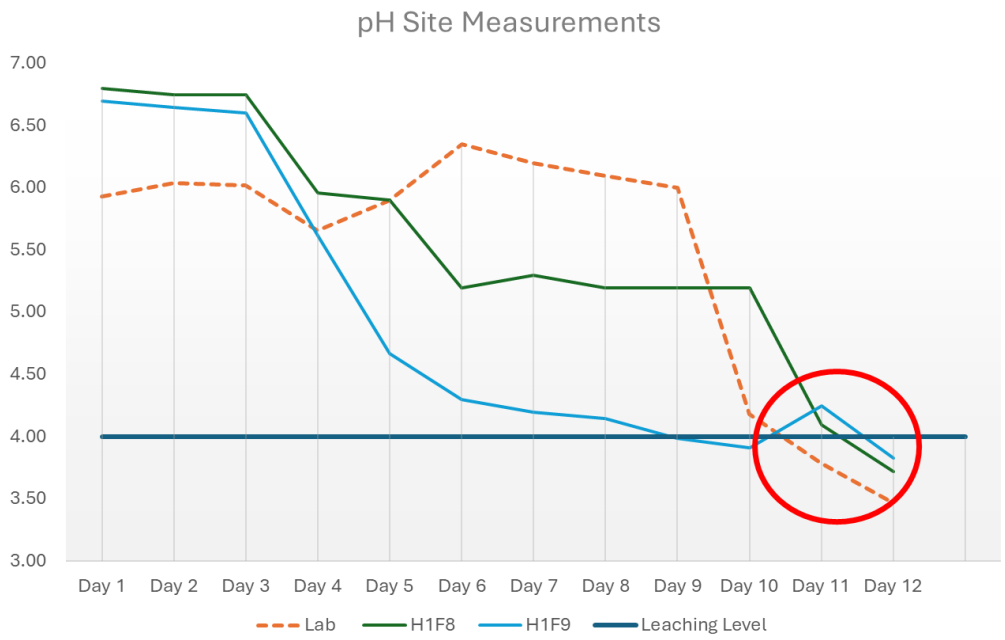

Figure 4. pH measurements from 2 ISR field monitoring holes at location 1 (H1-8 and H1-9) versus pH measurements taken from column laboratory testing over the same time period. Red circle indicates levels at which rare earths become soluble.

Strong Bedrock Integrity Supports ISR Success

Monitoring hole data from the field trial (Figure 2) not only shows the initial time taken for solution to reach these wells post injection but also records the daily solution levels above the bottom of the hole (recorded as depth 0). The consistent upward trend in solution levels observed across the first 100 hours of injection indicated full in-situ saturation of the clays, retention of solution within the mineralised zone and minimal solution loss—attributed to the impermeable nature of the underlying fresh bedrock.

Importantly, these trends have been observed consistently across the entire trial area to date (Figure 3), confirming a key condition for the successful deployment of in-situ recovery. This represents a significant technical validation and a major de-risking milestone for the project.

Placement

BCM received binding commitments to raise A$4.0 million (before costs) via a strongly supported and oversubscribed two-tranche share placement to professional and institutional investors (“Placement”).

Proceeds from the Placement will allow BCM to significantly accelerate workstreams at its flagship Ema Rare Earths Project in Brazil. Funds will be used to commence a Bankable Feasibility Study (BFS), complete pilot field trials for in-situ recovery (ISR), progress environmental permitting, and strengthen the Company’s working capital position to support pre-development activities. The funding comes at a pivotal time for the Company, as BCM transitions from successful early-stage technical validation to formal project de-risking and commercial readiness. This capital raise places BCM in a strong position to unlock further value from one of the world’s largest ionic clay rare earths deposits

The Company has accepted firm commitments to raise A$4.0 million through the issuance of 500,000,000 new fully paid ordinary shares at A$0.008 per share. The Placement will be completed in two tranches: Tranche 1 comprises 247,574,647 shares (A$1.98 million) to be issued under the Company's existing placement capacity pursuant to ASX Listing Rules 7.1 and 7.1A. Tranche 2 comprises 252,425,353 shares (A$2.02 million) and will be subject to shareholder approval at a General Meeting expected to be held in late July 2025.

In addition to the shares, investors will receive one (1) free-attaching unlisted option for every three (3) new shares subscribed for, exercisable at A$0.011 with a two-year expiry, subject to shareholder approval. Cornerstone investors included high-conviction strategic funds and resource-focused institutions, with strong representation from new and existing shareholders.

Corporate

For the purpose of Section 6 of the Appendix 5B, all payments made to related parties have been paid in relation to director fees.

References

[1]Brazilian Critical Minerals (ASX:BCM) – ISR testwork from ANSTO achieves high recoveries 12th March 2025

[2]Brazilian Critical Minerals (ASX:BCM) – Ema Field Trial receives magnesium Sulphate Approval 28th March 2025

[3]Brazilian Critical Minerals (ASX:BCM) – Ema Field Trial Commences 14th May 2025

[4]Brazilian Critical Minerals (ASX:BCM) – Ema ISR field trial achieves first major permeability hurdle 27th May 2025

[5]Brazilian Critical Minerals (ASX:BCM) – Placement raises $4.0 Million to advance Ema project 5th June 2025

[6]Brazilian Critical Minerals (ASX:BCM) – Magnesium Sulphate recorded in multiple field trial areas 13th June 2025

[7]Brazilian Critical Minerals (ASX:BCM) – Ema Rare Earths Scoping Study confirms low CAPEX and OPEX 26th February 2025

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

For more information:

Andrew Reid
Managing Director
Brazilian Critical Minerals Ltd
E: andrew.reid@braziliancriticalminerals.com
M: +61 432 740 975

Competent Person Statement

The information in this announcement that relates to exploration results is based on information compiled by Mr. Antonio de Castro, BSc (Hons), who is a member of Australasian Institute of Mining and Metallurgy (AusIMM), 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.
The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements 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.

Additional Information required under Listing Rule 5.3.3

Tenements held at the end of the quarter	Area (Ha)	Percentage ownership
ANM Permit Number 880.107/08 Location Brazil (Ema)	9,839.91	100% Exploration Licence
ANM Permit 880.184/16 Location Brazil (Ema East)	9,034.00	100% Exploration Licence
ANM Permit Number 880.090.08 Location Brazil (Três Estados)	8,172.25	100% Exploration Licence
ANM Permit Number 880.025/2023 Location Brazil (Apuí iREE)	2,417.00	100% Exploration Licence
ANM Permit Number 880.026/2023 Location Brazil (Apuí iREE)	6,591.90	100% Exploration Licence
ANM Permit Number 880.027/2023 Location Brazil (Apuí iREE)	5,856.00	100% Exploration Licence
ANM Permit Number 880.259/2020 Location Brazil (Apuí iREE)	9,092.01	100% Exploration Licence
ANM Permit Number 880.149/2017 Location Brazil (Apuí iREE)	9,815.15	100% Exploration License
ANM Permit Number 880.076/2023 Location Brazil (Apuí ENE iREE)	8,475.30	100% Exploration application
ANM Permit Number 880.077/2023 Location Brazil (Apuí ENE iREE)	8,856.84	100% Exploration application