

# QUARTERLY ACTIVITIES REPORT

## Quarter Ended 31 December 2023

### Highlights

#### Cooletha Lithium Project

- First pass rock chip assay results confirm the lithium prospectivity of the Cooletha Project
- 10 high priority targets totalling over 24km in length have been identified
- Lithium and lithium-caesium-tantalum (“LCT”) pegmatite indicator minerals confirmed
- Follow-up program in Q1 2024, focusing on testing the target areas identified from the current work program which only covered 25% of the granted tenure

#### Rankin Dome Project

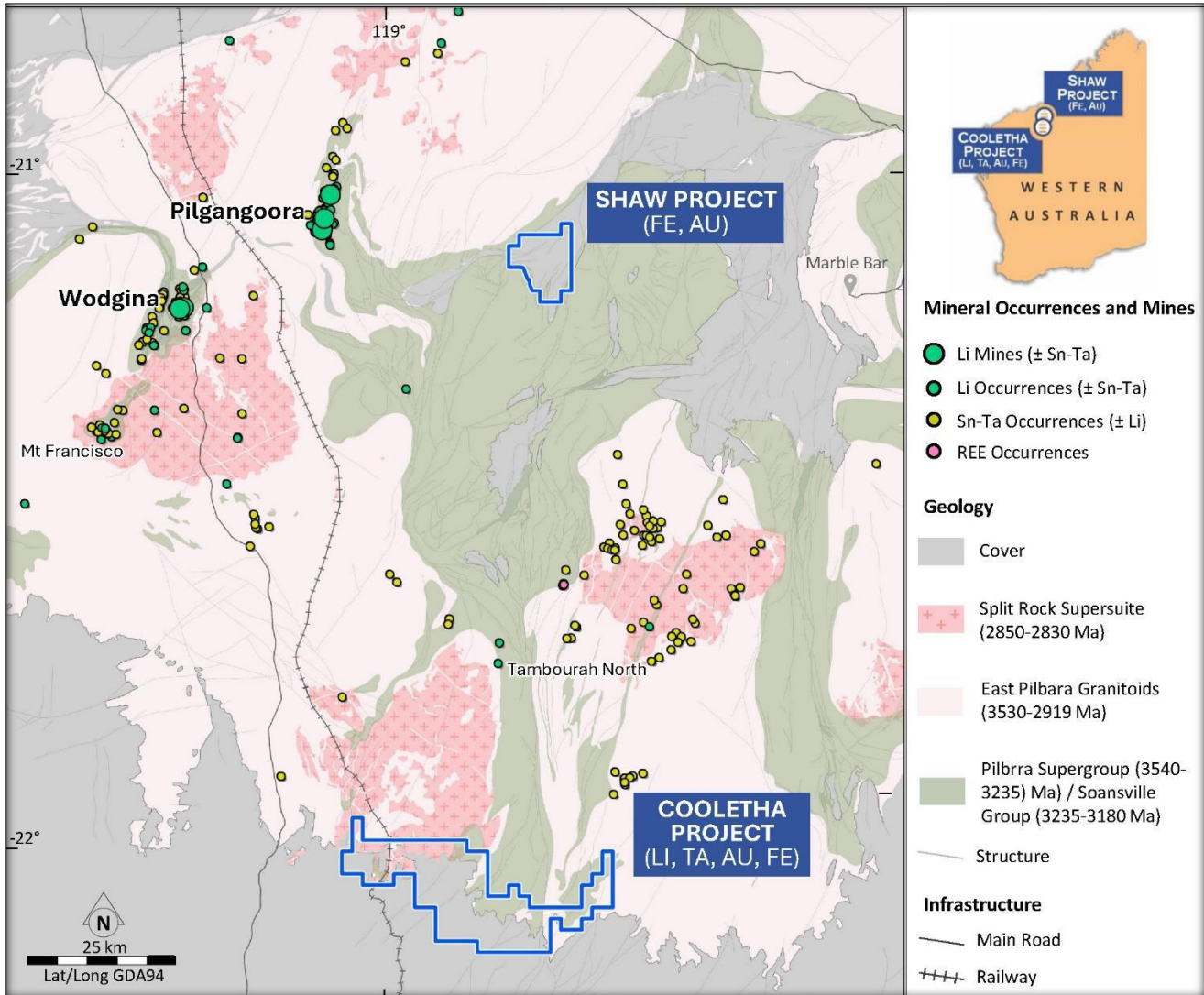
- Six reverse circulation drillholes at Rankin Dome returned thick continuous TREO (total rare earth oxides) with several ending in mineralisation
- All RC drillholes have intervals greater than 1000ppm TREO with highlights including:
  - Grades up to 2534 ppm TREO;
  - Longest intercept of 111m at 913ppm TREO from 3m; and
  - Highest multiple-metre intercept of 3m at 2026 ppm TREO from 12m in RDRC001
- Magnetic rare earths (Pr, Nd, Tb, Dy) comprise 20% to 26% of significant result intervals
- Maiden RC drilling program clearly defines new drill targets with the anomaly open to the north and south
- Results from the 249-hole auger sampling program at Rankin Dome
  - 132 of 258 samples returned significant assay results up to 1365ppm TREO

**Australian Critical Minerals (ASX: ACM, “Australian Critical Minerals” or “the Company”)** a mineral exploration company focused on the exploration and development of critical mineral projects in Western Australia, is pleased to provide the following report on its activities for the quarter ended 31 December 2023.

### SUMMARY OF ACTIVITIES

#### Cooletha Lithium Project

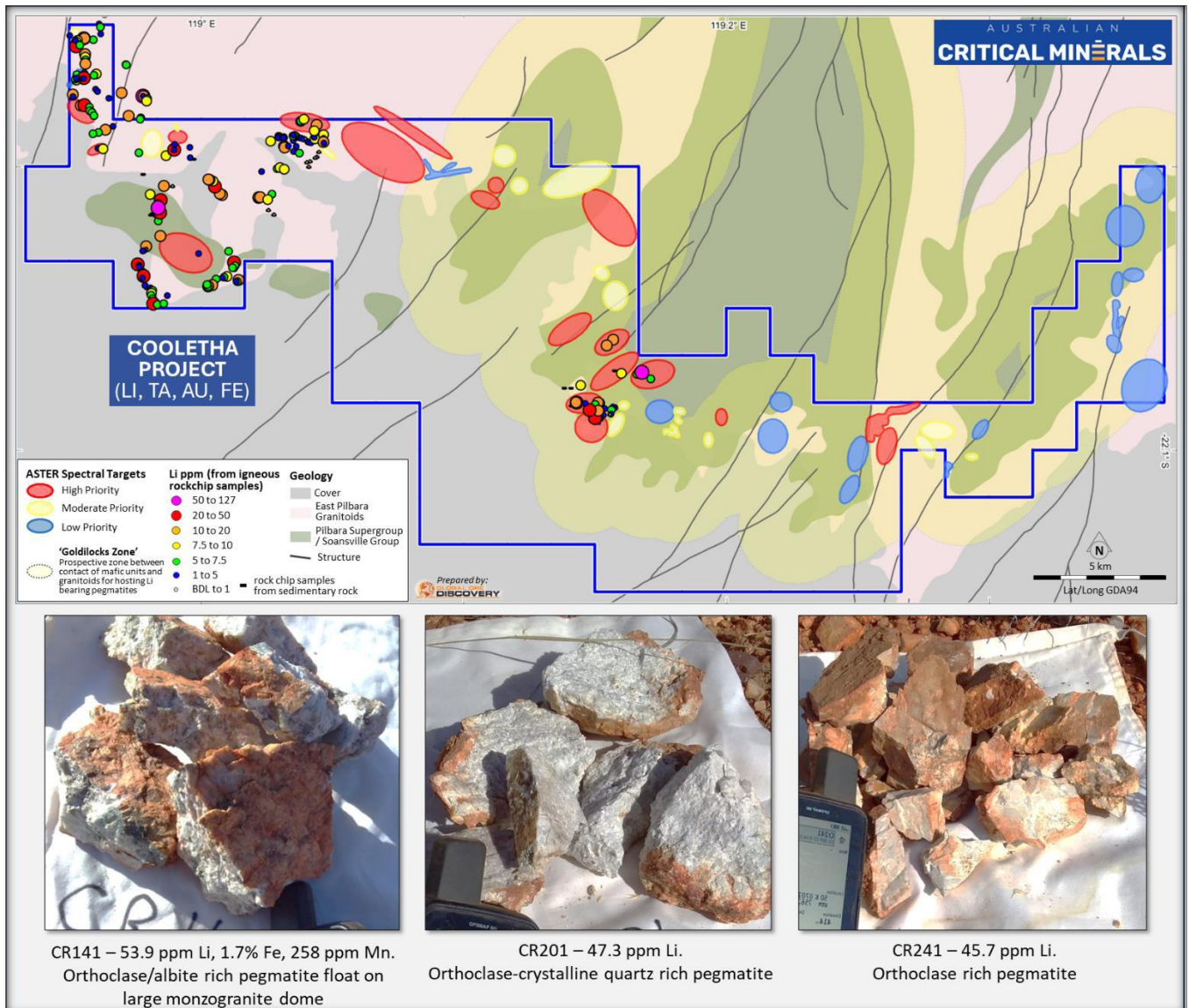
The Cooletha Project is the Company’s flagship lithium project, with over 100km<sup>2</sup> of prospective ground in the Pilbara. The Project is located south of significant discoveries at Pilbara Minerals’ (**ASX:PLS**) Pilgangoora Lithium Project (223Mt @ 1.25% Li<sub>2</sub>O), MinRes’ (**ASX:MIN**) Wodgina Lithium Project (259Mt @ 1.17% Li<sub>2</sub>O), and Global Lithium Resources’ (**ASX:GL1**) Archer Lithium Deposit at Marble Bar (18Mt @ 1% Li<sub>2</sub>O) (Figure 1). The central and eastern side of the Cooletha Project covers the southern extension of the Soansville Group which hosts both Pilbara Minerals Pilgangoora and Mineral Resources Wodgina Lithium Projects.



**Figure 1 – The location of the Cooletha Lithium Project in the Pilbara region, Western Australia.**

During the quarter, results were received from the Company's first-pass rock chip sampling at Cooletha. The results were encouraging for lithium and LCT pegmatite indicators. Geochemical analysis was combined with hyperspectral data analysis to derive a robust interpretation and geological model at Cooletha. The hyperspectral data analysis was performed over the 251 km<sup>2</sup> of granted tenure and the 160 km<sup>2</sup> of pending tenure at Cooletha in anticipation of the future grant. Preliminary geochemical analysis and interpretation of rock chip samples from Cooletha involved developing a LCT pegmatite correlation matrix specific to the geology of Cooletha. Elemental ratios were used to identify LCT pegmatites or the fertile intrusive rocks from which vectors to lithium mineralisation have been calculated. The hyperspectral imagery analysis identified several target areas across the project which warrant field testing (Figure 2).

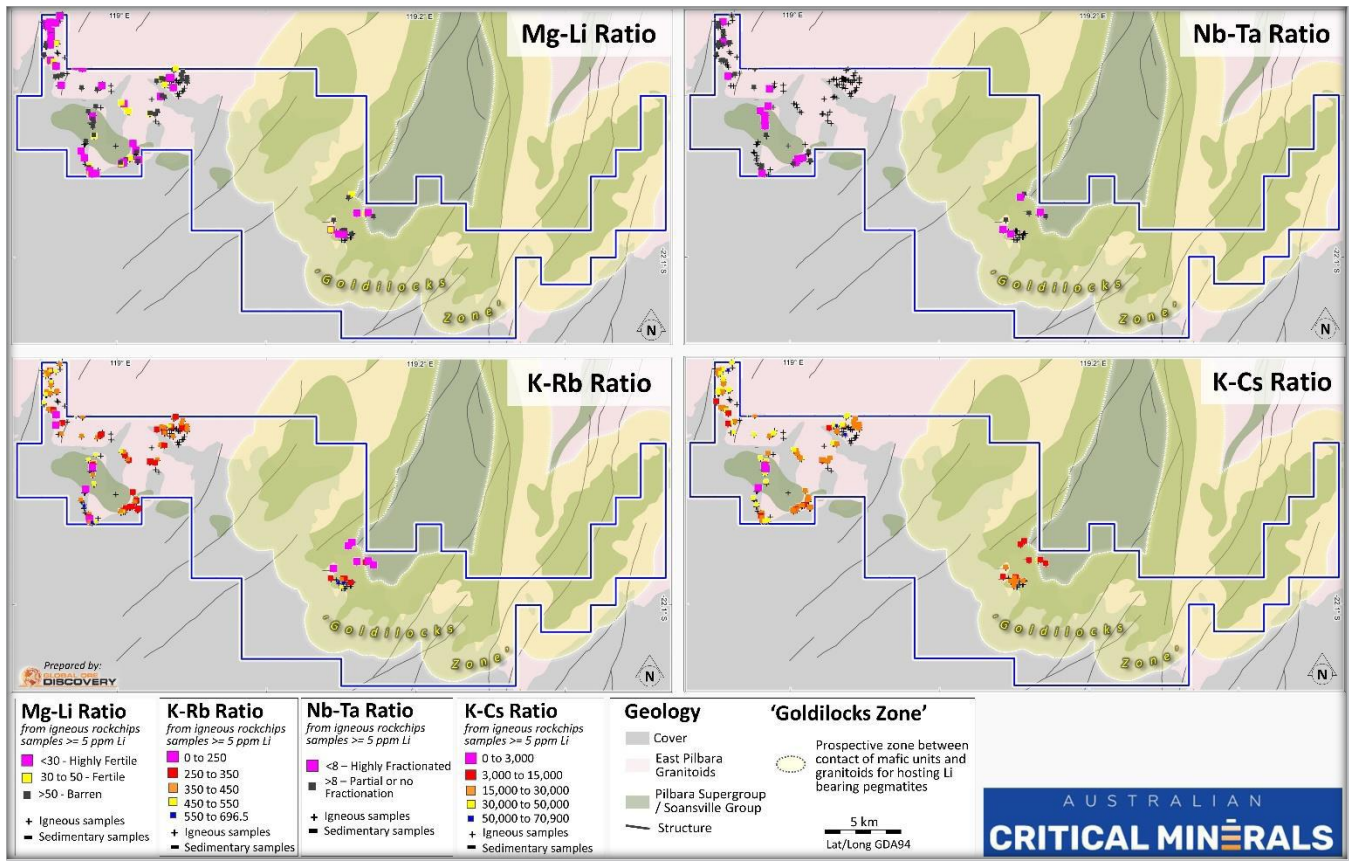




**Figure 2 – Lithium rock chip results, prioritised spectral targets and Cooletha geological setting**

The extension of the Pilbara scale Goldilocks Zone (Figure 3) has been interpreted from analysis of various elemental ratios and provides the targeting required to explore this large tenure efficiently. The samples derived from the geological units proximal to the Goldilocks Zone are lithium bearing and provide confirmation of the fertility of these locations. The scope of the current program was to gain an understanding of the broader geology and prospectivity upon which further exploration can be based. The hyperspectral imagery interpretation has identified approximately 25 linear kilometres of target areas which warrant investigation.

Results of rock chip sampling at the Cooletha Project discussed in this report have been presented previously in ASX release titled “Lithium Prospectivity Confirmed at Cooletha Project” on November 23, 2023. The Company confirms that it is not in possession of any additional data or material information relating to the project.



**Figure 3 – Lithium rock chip LCT pegmatite indicator element ratios**

The combination of geochemical and spectral analysis of the intrusive rocks at Coolletha has provided a powerful tool for ACM to refine exploration targeting. The exploration target at Coolletha remains very large and the contact zone of the Soansville Group presents the opportunity of many kilometres of targeted exploration within the interpreted Goldilocks Zone.

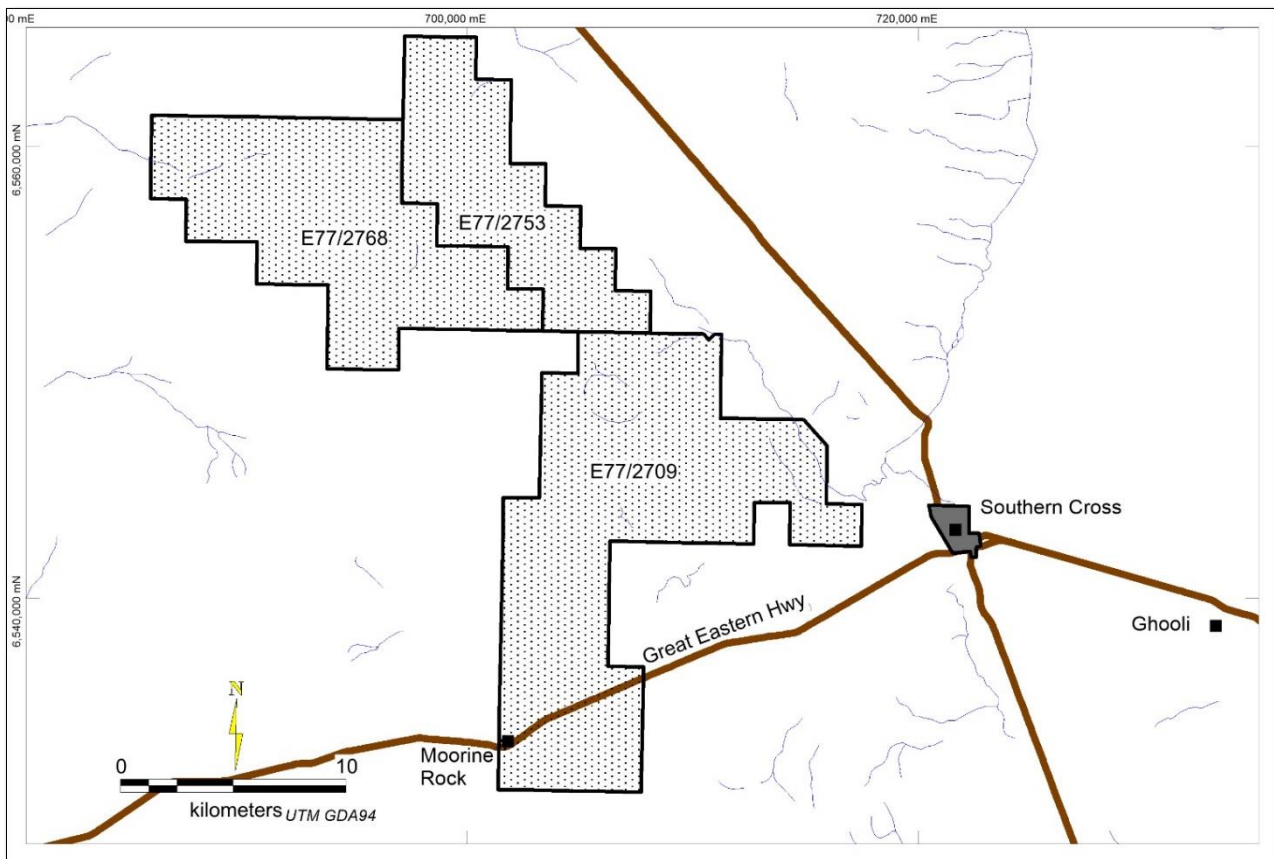
### Future Works

The Company is preparing to continue the Coolletha sampling program with a focus on the target areas represented in Figure 2 and Figure 3. Post-quarter, the Company undertook further sampling at the Coolletha Project and assays are awaited

### Rankin Dome Rare Earth Project

The Rankin Dome Project consists of three exploration licences in the Youanmi Terrane near Southern Cross (Figure 4). The Company has a farm-in agreement with Kula Gold Limited (ASX: KGD) to earn a 51% joint venture interest.





**Figure 4 – Rankin Dome Project tenement map**

During the quarter, the Company conducted its maiden RC drilling program and the high-definition shallow auger sampling program at the Rankin Dome Project. These activities were conducted on E77/2768. Results of drilling and auger sampling at the Rankin Dome Project discussed in this report have been presented previously in ASX release titled “Outstanding Shallow High-Grade REE Results at Rankin Dome” on December 4, 2023. The Company confirms that it is not in possession of any additional data or material information relating to the project.

Preliminary reconnaissance and sampling of tenement E77/2709 comprised the collection of 61 rock samples over an area of approximately 20km<sup>2</sup> in the northern half of the tenement. Identified local geology was dominantly porphyritic granitic intrusive rocks, graphic granite with subordinate monzogabbro and banded iron formation.

### Auger Sampling

Auger sampling at Rankin Dome consisted of a 254-hole high-definition auger sampling program over approximately 2.5km<sup>2</sup> which delineated a substantial rare earth anomaly (Figure 5). The auger anomaly is based on values above 500ppm TREO (Total Rare Earth Oxides). The zone of anomalous rare earth element geochemistry returned a peak of 1297 TREO. Of the 258 samples from a depth of 2m, 132 returned values greater than 300ppm TREO. The spatial definition of the anomaly is sufficient for ACM to progress to planning RC drilling in co-ordination with the local landowner.

The auger sampling provided clearer geochemical definition over the area previously sampled by Kula Gold Limited and provided further information on the depth of saprolite profile. Several auger holes were drilled to auger refusal which occurred between 5 m and 9 m. Saprolite remained present at auger refusal in many drillholes and thus it is expected that the saprolitic horizon continues deeper than auger refusal at these locations.

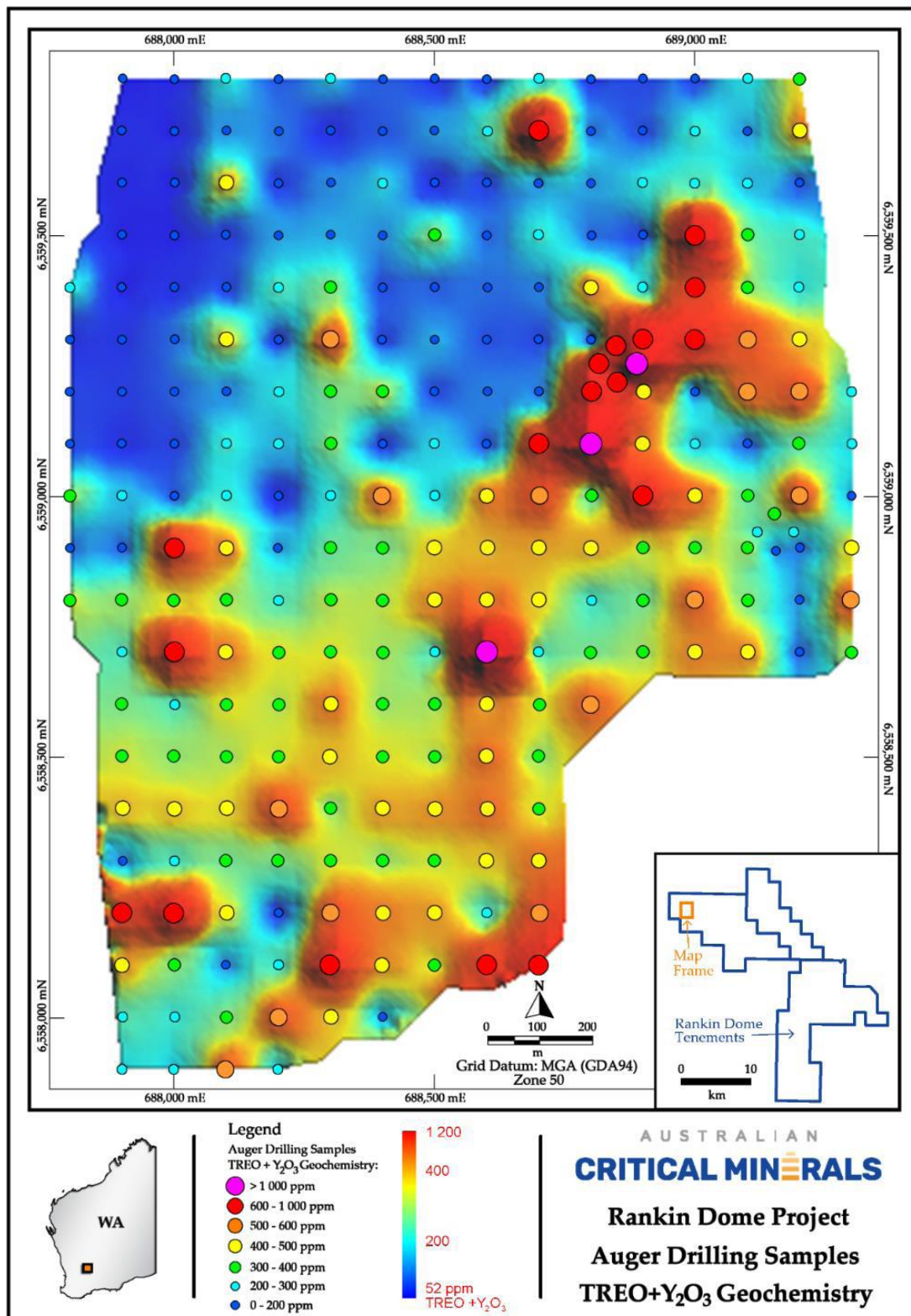


Figure 5 – Rankin Dome tREO raster of 2m auger geochemistry with overlying thematic of assay results, Yilgarn, Western Australia.

## Reverse Circulation Drilling

A 6-hole reverse circulation drilling program was completed for 864m (Figure 6). The area drilled is located between 1km and 2km SE of the auger sampling program. Five drillholes were drilled to 150m and the remaining drillhole was stopped at 114m. The drillholes were planned over areas identified by Kula Gold Limited as having anomalous rare earth geochemistry in shallow auger samples that appeared to be coincident with aeromagnetic anomalies. All drillholes returned thick intersections of significant results in total rare earth oxides. The significant TREO intercepts comprised between 20% and 26% magnetic rare earth oxides.

**Table 1: Significant Rare Earth Results**

### **RDRC001**

- **20m @ 1003ppm TREO** from 9m; Magnet Rare Earths =21%; Pr+Nd=19% including:
  - **5m @ 1637ppm TREO** from 11m; Magnet Rare Earths =22%; Pr+Nd=20%
- **46m @ 1003ppm TREO** from 104m; Magnet Rare Earth =18%; Pr+Nd=17%

### **RDRC002**

- **35m @ 1009ppm TREO** from 6m; Magnet Rare Earths =22%; Pr+Nd=18%
- **26m @ 985ppm TREO** from 64m; Magnet Rare Earths =17%; Pr+Nd=18%,
- **4m @ 925ppm TREO** from 131m; Magnet Rare Earths =21%; Pr+Nd=20%

### **RDRC003**

- **3m @ 1110ppm TREO** from 18m; Magnet Rare Earths =21%; Pr+Nd=19%
- **13m @ 866ppm TREO** from 66m; Magnet Rare Earths =23%; Pr+Nd=21%
- **12m @ 884ppm TREO** from 132m; Magnet Rare Earths =23%; Pr+Nd=20%

### **RDRC004**

- **15m @ 965ppm TREO** from 5m; Magnet Rare Earths =24% ;Pr+Nd=20%
- **4m @ 870ppm TREO** from 59m; Magnet Rare Earths =23% ; Pr+Nd=21%
- **8m @ 999ppm TREO** from 75m; Magnet Rare Earths =22% ; Pr+Nd=20%

### **RDRC005**

- **35m @ 1119ppm TREO** from 7m; Magnet Rare Earths =22%; Pr+Nd=18% of TREO
- **3m @ 998ppm TREO** from 81m; Magnet Rare Earths =20% ; Pr+Nd=20%

### **RDRC006**

- **111m @ 979ppm TREO** from 3m; Magnet Rare Earths =23% ; Pr+Nd=21% of TREO



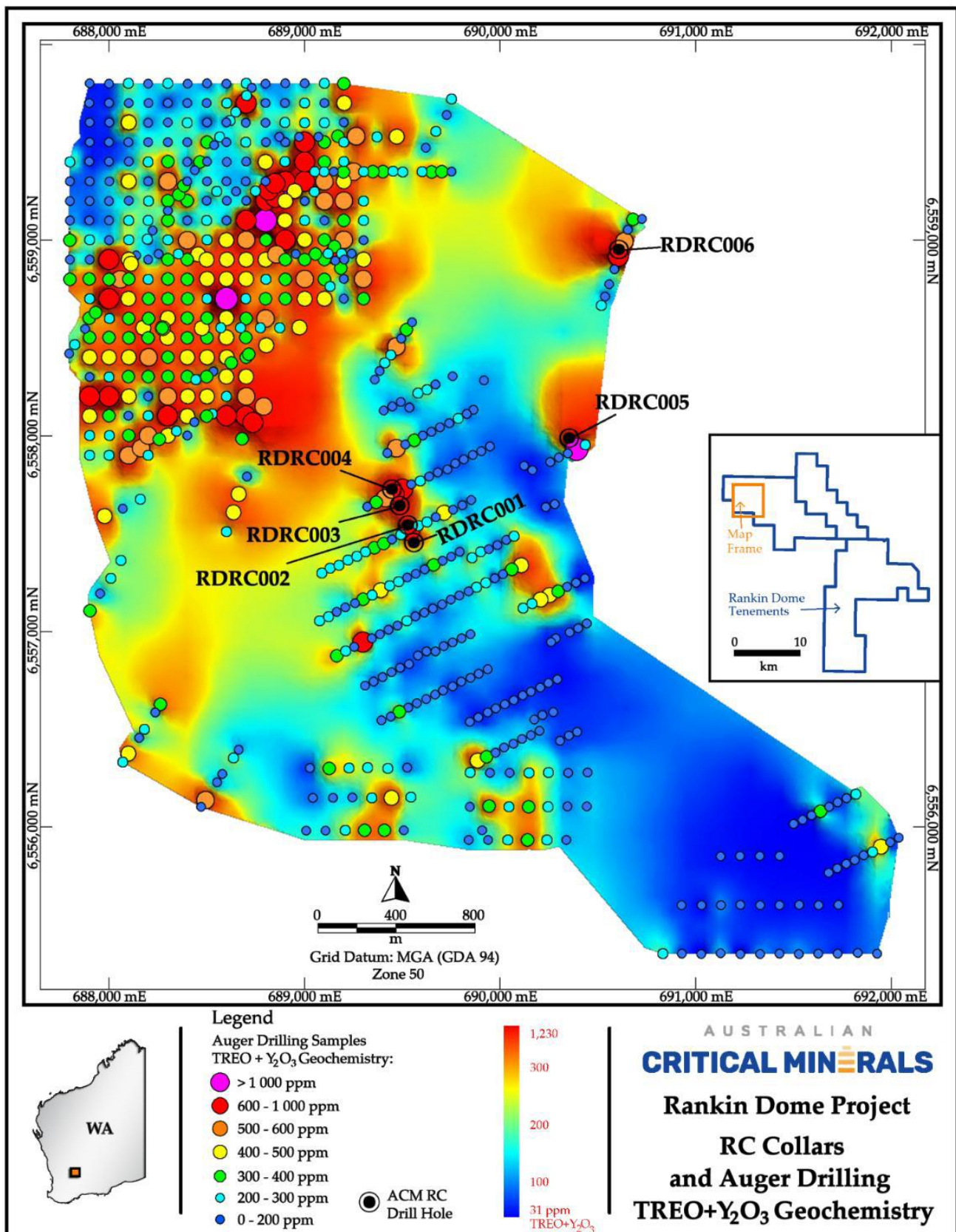
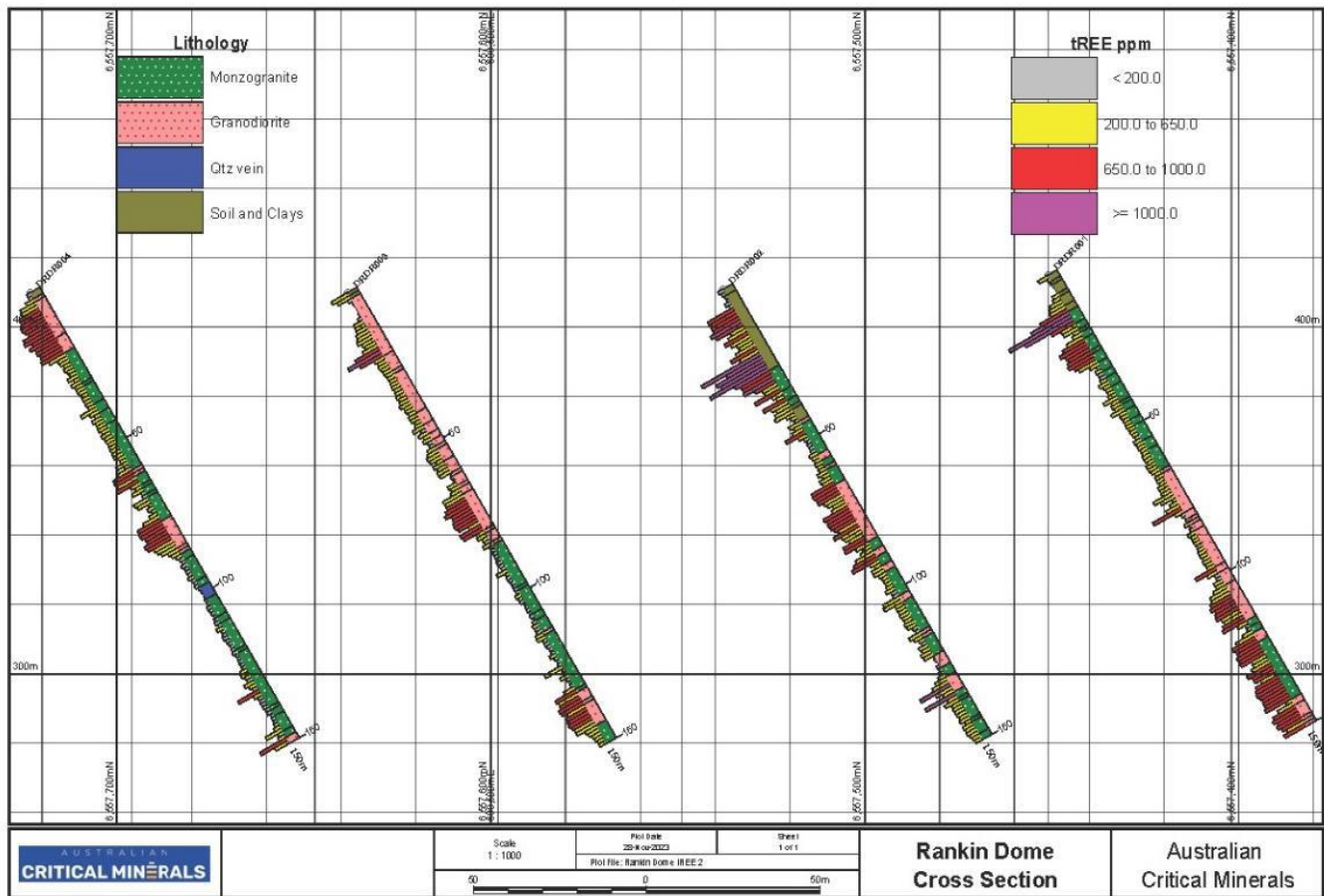


Figure 6 – Auger and RC Drillhole Locations



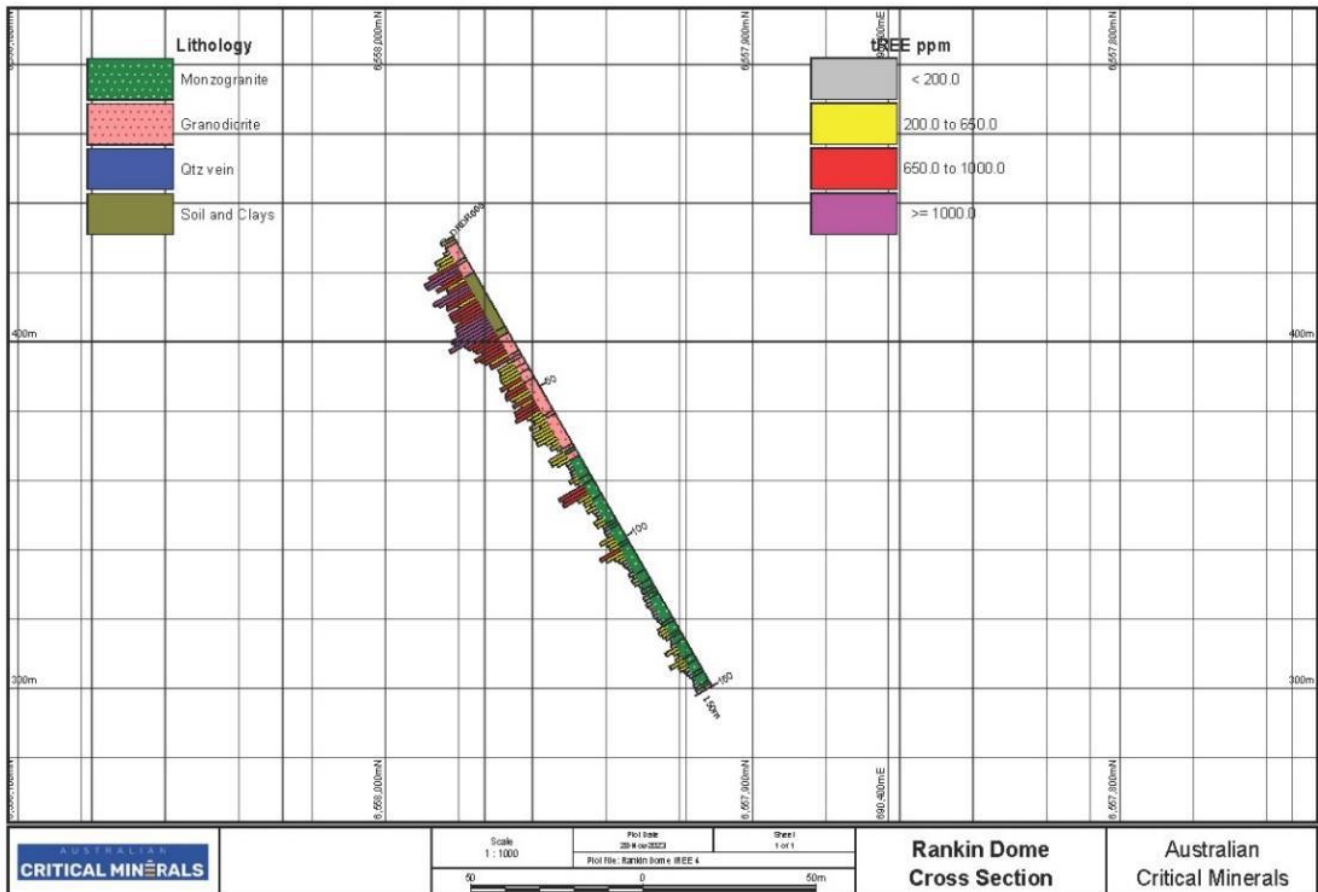


**Figure 7 – Drill Section Holes RDR001-004**

The drill section of Figure 7 shows enhanced rare earth results were generally associated with a rock of granodioritic composition. RDR001 encountered significant mineralisation in monzogranite in the lower 50m of the drillhole. The section also shows that mineralisation was enhanced in the saprolitic clays and oxidised intrusive rock in the upper 30m. This alludes to supergene enrichment processes which have remobilised the rare earths from deeper levels through water table movement to the upper near surface environment. This pattern of near surface enrichment above a depleted zone which itself sits above mineralised rock is common in Archaean gold deposits. It opens up possibilities of greater depth extents than early exploration and development indicated. Most drillholes ended in mineralisation.

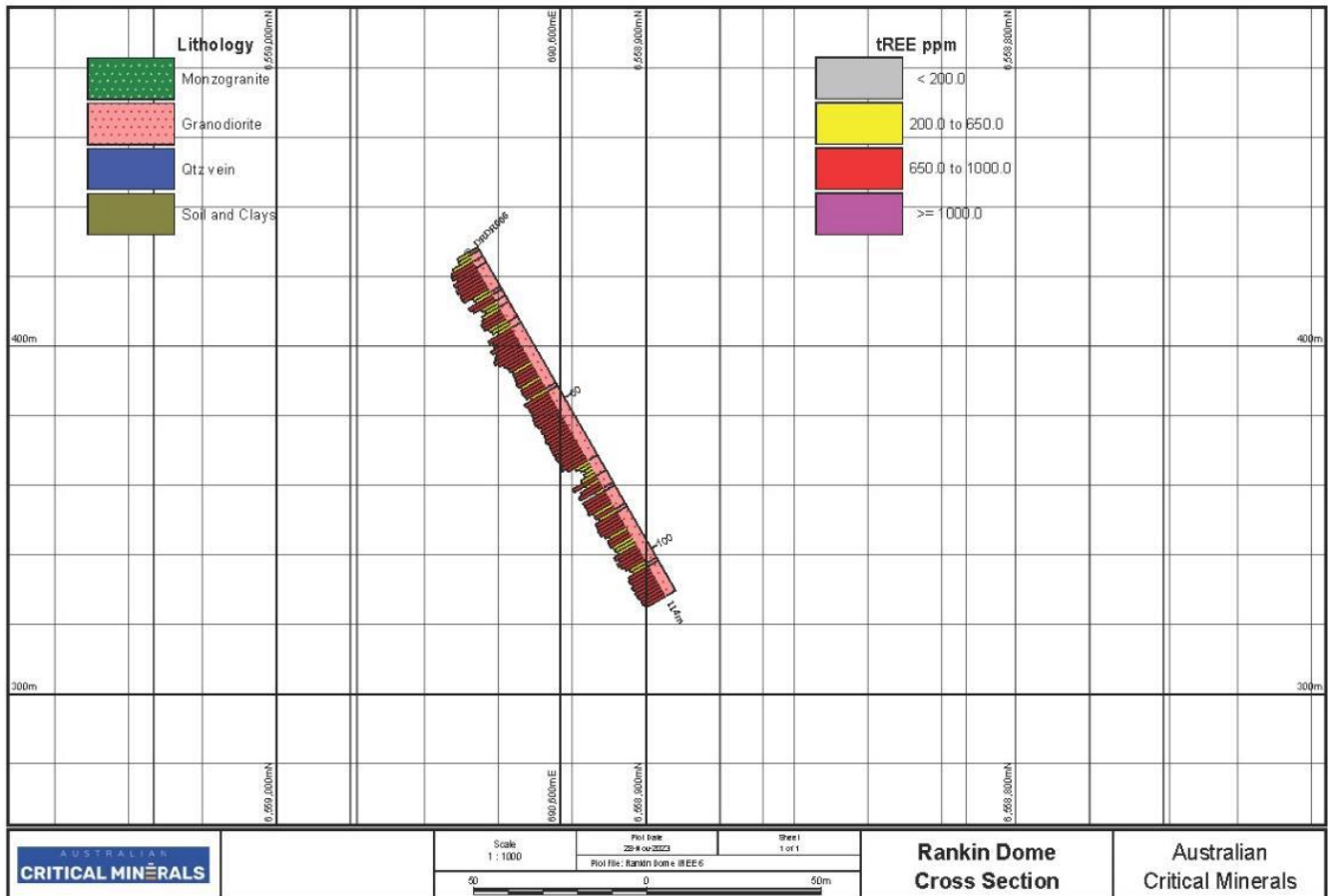
All of the RC drill holes returned intercepts of +1000ppm TREO. The best individual result was **1m at 2534 ppm TREO** within a near-surface interval of **5m at 1641ppm TREO** in Hole RDR001. The best multiple-metre intercept was **3m at 2012ppm TREO** in hole RDR002. The longest significant intercept was **111m at 927ppm TREO** in drillhole RDR006 from 3m to end of hole at 114m. Both drillholes RDR001 and RDR006 terminate in strongly anomalous rare earth geochemistry. The drill section of Figure 7 displays multiple thick mineralised intervals separated by less mineralised intervals in drillhole RDR001 to RDR004. One kilometre to the east, drillhole RDR005 is mineralised in the upper 60m. It is located one kilometre south of drillhole RDR006. (Figures 6, 8 and 9).

The ratio of LREO: to HREO varies between 4 and 13 (Table 1). There are significant values associated with the near surface clays and the oxidised intrusive rocks and also further down each drillhole associated with granodiorite and to a lesser degree the monzogranitic rocks. This manifestation is likely indicative of supergene enrichment and further indicates the source of the rare earths in the near surface clays is the intrusive rocks beneath. Intercepts reported are down-hole intercepts and true widths are unknown. There are two intrusive rock types present, monzogranite and granodiorite. Both are mineralised however mineralisation in the granodiorite tends to be of a higher tenor.



**Figure 8 – Drill Section Hole RDRC005**





**Figure 9 – Drill Section Hole RDRC006**

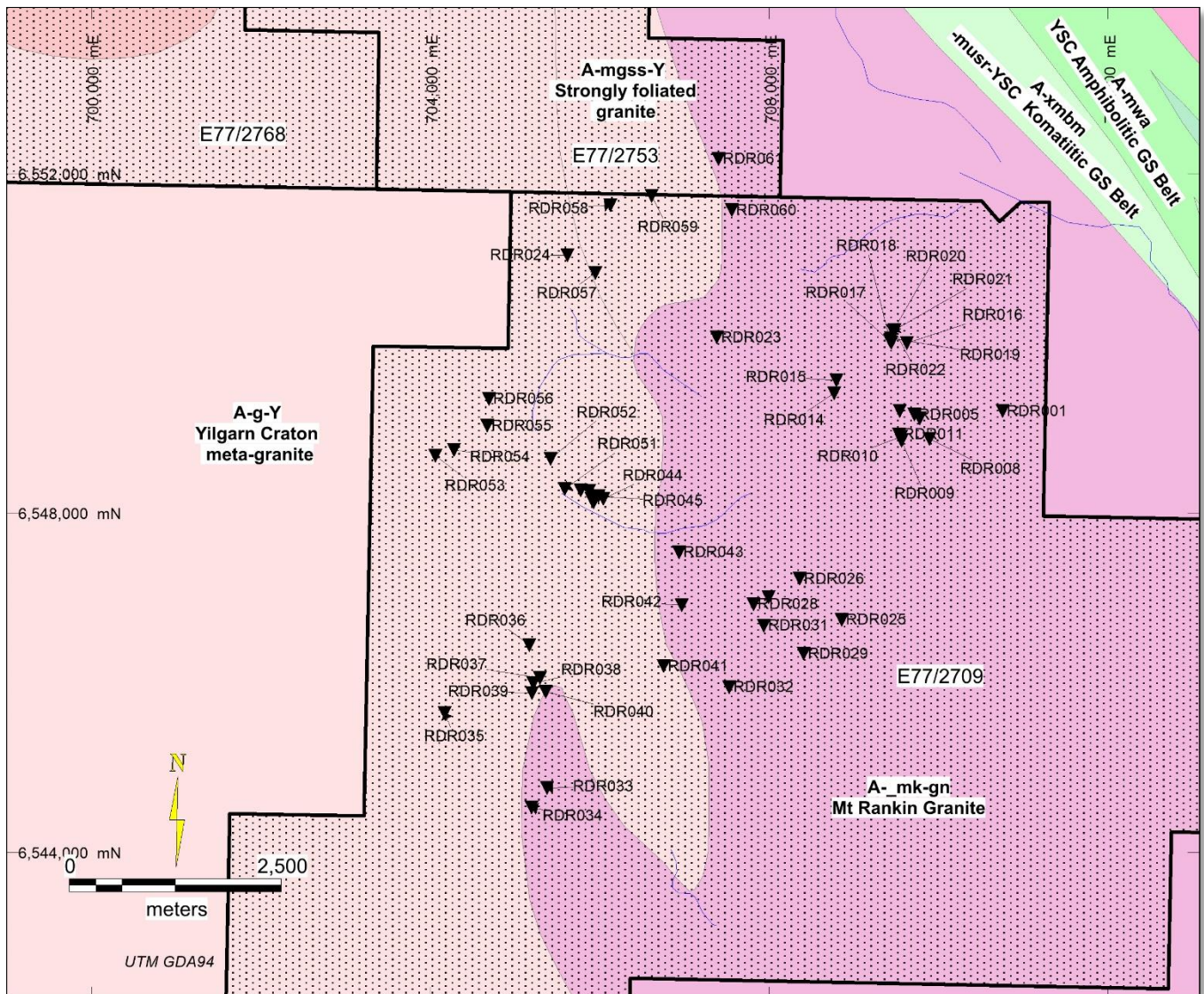
## Regional Rock Sampling and Reconnaissance

Preliminary reconnaissance and sampling of tenement E77/2709 was undertaken at the end of the period comprising the collection of 61 rock samples over an area of approximately 20km<sup>2</sup> in the northern half of the tenement (Figure 10). Assays are expected in the next quarter. Identified local geology was dominantly porphyritic granitic intrusive rocks, graphic granite with subordinate monzogabbro and banded iron formation.

## Future Work Planning

The results of the RC drilling indicate that the rare earth anomaly is open to the west and north. Drillholes RDRC005 and RDRC006 warrant follow up drilling north and south of each of these two drillholes. RC drilling will be planned to extend the current RC drill coverage to the north and south and to drill-test the TREO area delineated by the auger sampling program.

Regional rock sampling will continue on E77/2709 and be extended northward into E77/2753 during the next Quarter.



**Figure 10 – Rankin Dome regional rock sample locations**

## CORPORATE

### *Loyalty Options*

The offer of a non-renounceable pro-rata issue of Loyalty Options was announced on 6 October 2023 and closed on 26 October 2023, seeking to raise up to approximately \$87,063.

The Company received applications for entitlements from eligible shareholders for 12,910,677 options (amounting to \$64,553.49).

The Shortfall was strongly supported and the Company received demand well over the New Options available under the Shortfall following the Loyalty Offer. The Shortfall was completed with the issue 4,501,827 New Options.



## Additional ASX Information

### *Summary of Exploration Expenditure (ASX Listing Rule 5.3.1)*

In accordance with Listing Rule 5.3.1, the Company advises the cash outflows on its mining exploration activities reported in 1.2(1) of its Appendix 5B for the December 2023 quarter and detailed above were, Cooletha \$117,276, Kula \$225,699 and other \$15,281.

### *Mining Production and Development (ASX Listing Rule 5.3.2)*

There were no substantive mining production and development activities during the quarter.

### *Payment to Related Parties (ASX Listing Rule 5.3.5)*

The Company advises the payments in section 6.1 of Appendix 5B for the quarter related to director, company secretarial and accounting fees.

### *Finance and Use of Funds (ASX Listing Rule 5.34)*

Pursuant to ASX Listing Rule 5.34, the Company provides a comparison of its actual expenditure to the estimated expenditure as set out in section 4.6 of the Company's Prospectus.

Activity Description	Funds allocated	Actual to date (6 months)
Exploration (2 yrs)	\$3,500,100	\$597,258
Administration (2 yrs)	\$974,791	\$460,434
Repayment of Borrowings	\$147,005	\$147,005
Expenses of the Offer	\$546,757	\$551,112

### *The mining tenement interests acquired or relinquished during the quarter and their location*

Not applicable.

This release has been approved by the Board of Australian Critical Minerals Limited.

### **For further information, please contact:**

#### **Dean de Largie**

*Managing Director*

Australian Critical Minerals Limited

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This release has been approved by the Board of Australian Critical Minerals Limited.

## About Australian Critical Minerals

Australian Critical Minerals is an exploration company focused on developing a quality portfolio of critical minerals projects in Western Australia. The key projects are the Cooletha (Pilbara) Lithium Project and the Rankin Dome (Southern Cross) Rare Earth Project. Battery metals, including rare earths and lithium are fundamental in the clean energy transition to net zero transmissions. ACM intends to play a pivotal role in delivering the processed minerals needed for a clean energy future. ACM has established a highly experienced management team with a proven track record of exploration and corporate success in the mining industry.



## Appendix 5B

### Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

**Australian Critical Minerals Limited**

ABN

**15 658 906 159**

Quarter ended ("current quarter")

**31 December 2023**

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(358)	(598)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(75)	(144)
	(e) administration and corporate costs	(150)	(383)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	6	6
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (GST Refund)	46	62
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(531)</b>	<b>(1,057)</b>
<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	-	(41)
	(e) investments	-	-
	(f) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (6 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (cash balance of subsidiaries on acquisition)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>(41)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	87	87
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(32)	(587)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	(147)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other – Repayment of lease liability	-	-
3.9	Other – Cash items from financing activities	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>55</b>	<b>(647)</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	3,734	5,003
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(531)	(1,057)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	(41)



## Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	55	(647)
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	<b>Cash and cash equivalents at end of period</b>	<b>3,258</b>	<b>3,258</b>

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	3,258	3,734
5.2	Call deposits	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>3,258</b>	<b>3,734</b>

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	96
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

*Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.*

<b>7.</b>	<b>Financing facilities</b> <i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i> <i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	<b>Total financing facilities</b>	-	-
7.5	<b>Unused financing facilities available at quarter end</b>		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

<b>8.</b>	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (item 1.9)	(531)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(531)
8.4	Cash and cash equivalents at quarter end (item 4.6)	3,258
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	3,258
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b> <i>Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.</i>	6.13
8.8	If item 8.7 is less than 2 quarters, please provide answers to the following questions:	
8.8.1	Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not? <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">n/a</div>	
8.8.2	Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful? <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">n/a</div>	
8.8.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis? <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">n/a</div>	
<i>Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.</i>		



## Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 31 January 2024

Authorised by: By the Board  
(Name of body or officer authorising release – see note 4)

## Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.