

# QUARTERLY ACTIVITIES REPORT

## Quarter Ended 30 September 2024

### Highlights

#### Shaw Project

- Results of first program returned up to 61.3% Fe averaging 55.5% Fe from 7 rock-chip Banded Iron Formation (BIF) samples
- Second program identified two distinct BIF zones identified from recent fieldwork - Shaw Western BIF Zone and Shaw Eastern BIF Zone
  - Shaw Western BIF Zone combined strike length of over 7km with mapped and interpreted BIF unit widths over 100m
  - Shaw Eastern BIF Zone combined strike length of over 9km
  - 32 samples were collected in September, results are expected in November 2024

#### Cooletha Project

- First program results from 39 rock-chip Channel Iron Deposits (CID) sampling returned up to 62.6% Fe averaging 54.9% Fe
- Second program collected 189 rock chip samples of CID mineralisation
- 20m x 80m grid sampling completed over a 2km strike length of CID deposits covering a total area approximately 300,000m<sup>2</sup>
- Systematic sampling and mapping of CIDs will be used in a paleo-drainage interpretation and reconstruction to develop new targets

**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 30 September 2024. The Company is focused on the iron and energy prospectivity of its large tenement package in the Pilbara.

### SUMMARY OF ACTIVITIES

#### **Pilbara – Cooletha and Shaw Projects**

The Pilbara portfolio covers 453km<sup>2</sup> and includes the Shaw and Cooletha Iron Ore Projects (Figure 1).

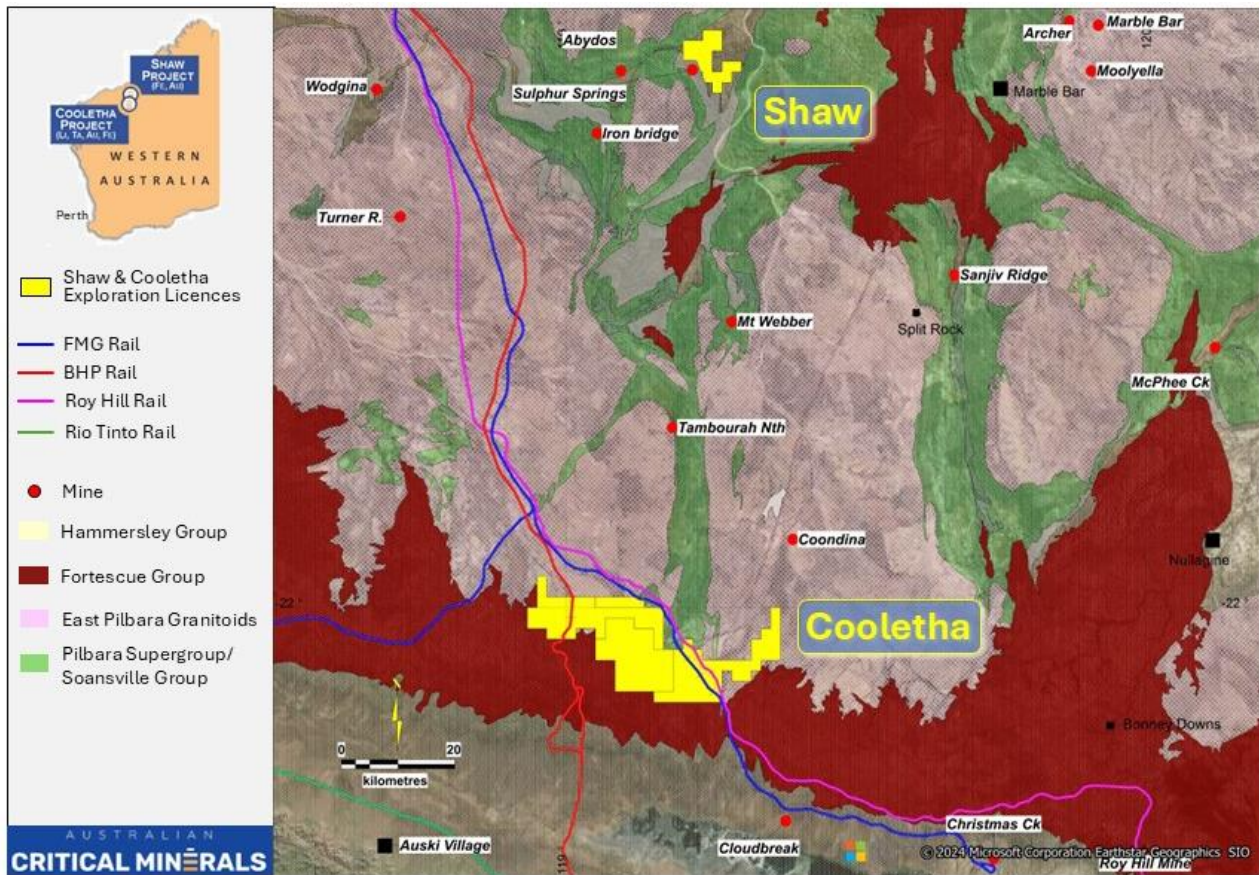


Figure 1 – Map of Pilbara projects

## Shaw Project

The Shaw Project is prospective for Iron Ore hosted in Banded Iron Formation (BIF). The Shaw Project is located adjacent to Hancock Prospecting's Abydos Iron Ore Mine and south of Atlas Iron's Miralga Creek Iron Ore Mine. The Abydos host stratigraphy potentially extends into the Shaw tenements. The project benefits from its proximity to the existing infrastructure at Abydos and Miralga Creek and its proximity to Port Hedland 100km to the north.

## BIF Discovery Process

ACM has significantly advanced its understanding of the BIF occurrences at the Shaw Project. Several corridors of BIF targets were identified through the integration of recent sampling data, mapping and multispectral remote sensing interpretations.

During the quarter, ACM geologists conducted a first-round reconnaissance rock chip sampling program, which successfully validated the presence of extensive, underexplored BIF occurrences.

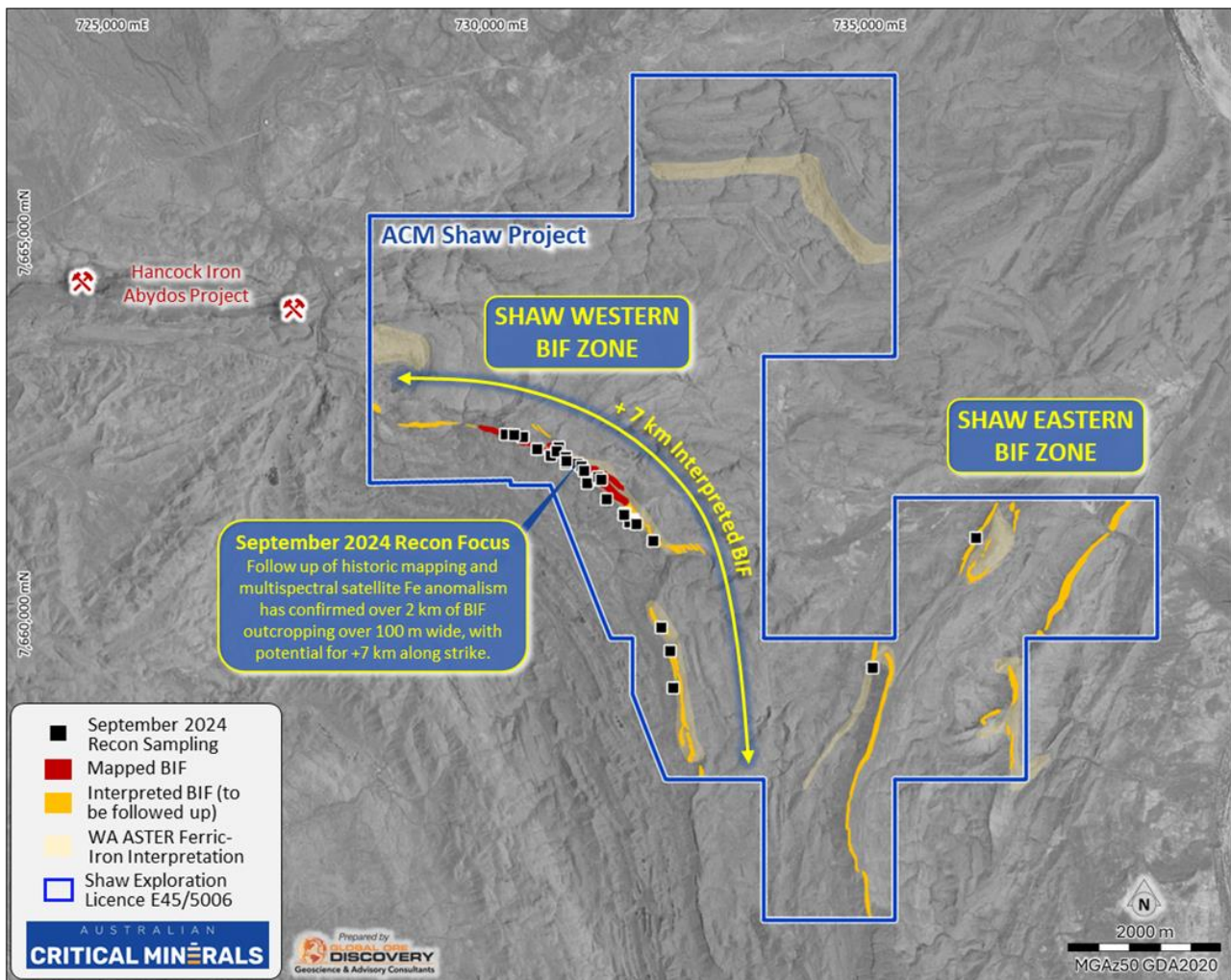
In September, ACM completed its Phase 2 rock chip sampling program, collecting 32 samples with mapped BIF occurrences with approximate widths of up to 100m (Figure 2). The delineation of these BIF units has been significantly enhanced, and they will form the focus of a follow-up sampling program planned for late November 2024.

Geological observations indicate that the BIF lithologies at Shaw occur as linear, sub-parallel, folded and brecciated units within the structurally complex western side of the tenement. The Western BIF Zone consists of up to three



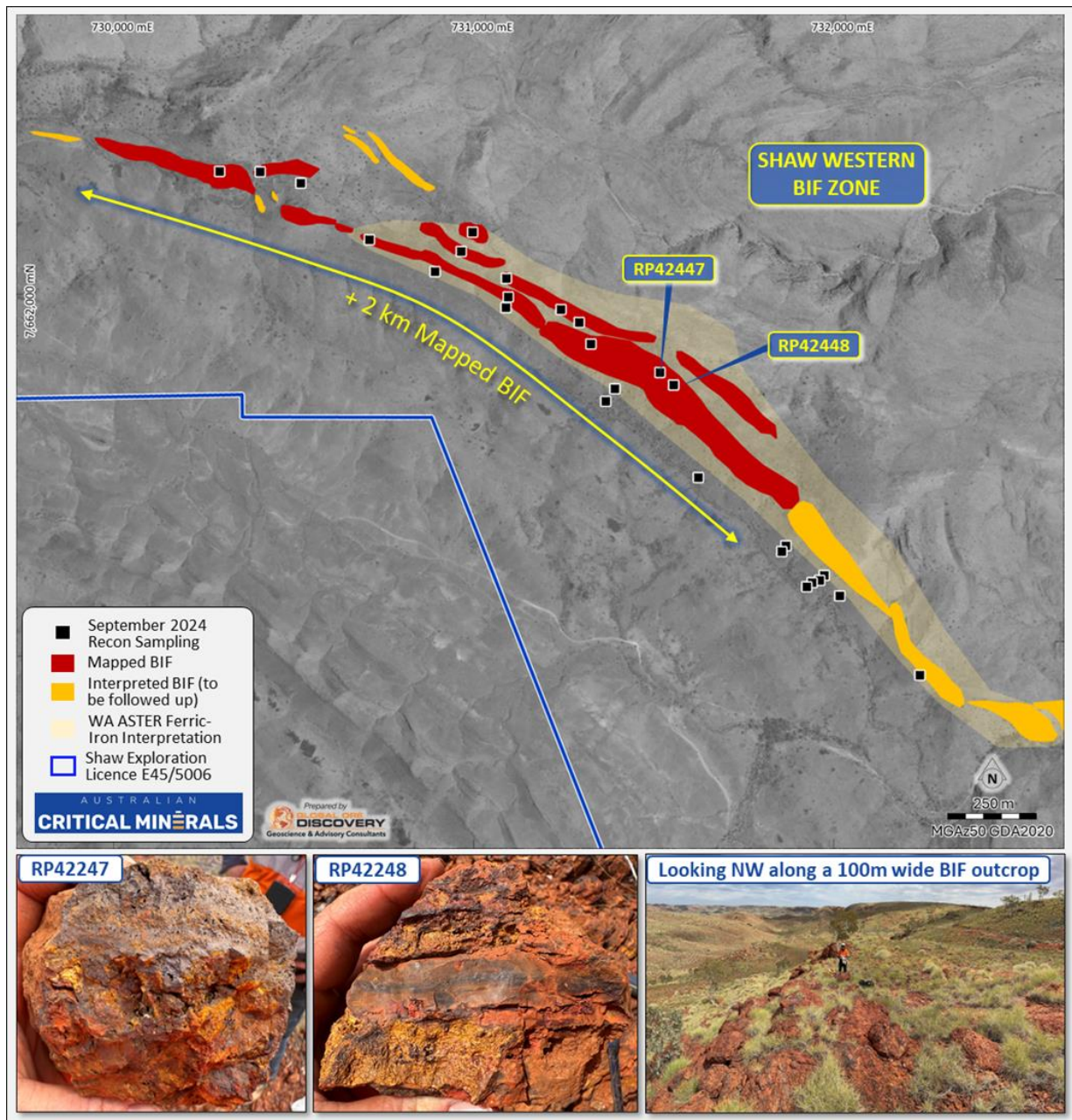
sub-parallel horizons, with a combined strike length exceeding 7km. Similarly, the Eastern BIF Zone has a strike length of approximately 6km, featuring sub-parallel BIF horizons (Figure 3).

Field observations continue to suggest that the BIF-bearing formations at Shaw are likely strike extensions of the Cleaverville Formation, which hosts notable direct shipping ore (DSO) iron ore deposits, including those at the Abydos and Miralga Creek Mines.



**Figure 2 – Location of ACM Shaw Project's BIF Zones and September 2024 reconnaissance sampling**





**Figure 3** – Shaw Project Western BIF Zone comprises up to 3 sub-parallel BIF horizons over a combined strike length of +7km. RP42247/48 – laminated BIF with >80% hematitic layers

During the quarter, ACM partially reduced the tenement size at Shaw, as is the requirement of the tenement licence. Those regions considered the most prospective for iron or energy metals were retained (Figure 4).

### Analogue – Miralga Creek Project – WA

At Miralga Creek, the Banded Iron Deposits (BID) are up to 100m thick, consisting of units of BIF chert, shale and sandstone segregated by thick layers of quartzites and meta-felsic sandstones. The operator views Miralga Creek as an extension of the Abydos Mining Complex. This stratigraphic sequence passes through the northern part of the Shaw tenement, where BIF units were identified during reconnaissance.

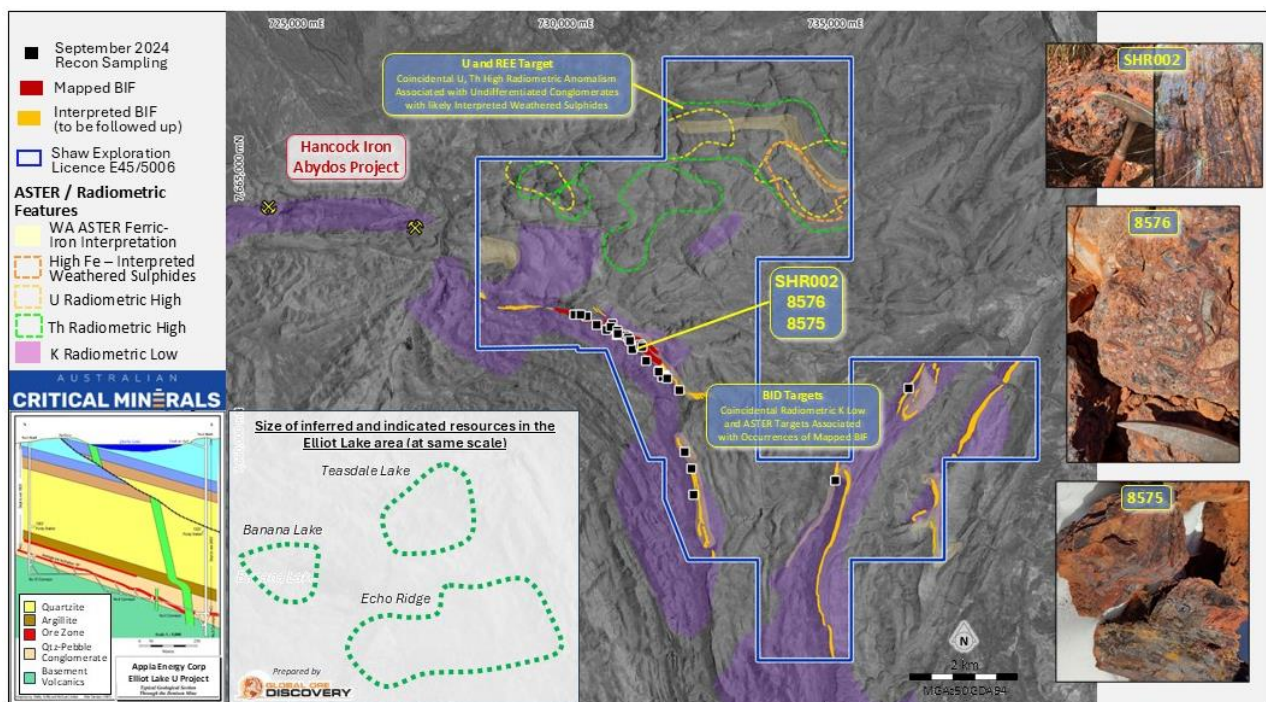


In the structurally complex western side of the Shaw tenement, BIF units occur as linear, folded and brecciated formations. The western side hosts approximately 7km of BIF stratigraphy, while the eastern side contains over 3km (Figure 2). Field reconnaissance and preliminary spectral analysis have identified that the Shaw tenement may contain at least nine satellite BIFs. Field observations at the Shaw Fe targets are analogous to the descriptions of Miralga Creek stratigraphy.

### Shaw U Targets

ACM has identified a Uranium-Thorium radiometric anomaly within northern Shaw's pebble and boulder conglomerates. This anomaly is strongly analogous to the quartz-pebble conglomerate hosting the Canadian Elliot Lake Uranium deposits. The pebble-to-boulder conglomerate is 30m to 100m wide and extends for approximately 9km strike length in an east-west orientation in northern Shaw.

Visual identification of the conglomerate unit coincides with a high uranium and thorium radiometric anomaly. The size of this anomaly is significant, and a comparison with the Elliot Lake resource is shown in Figure 4. Australia currently supplies 8% of global uranium production from three mines and holds about one-third of global uranium resources. Public sentiment in Australia is increasingly recognising the potential role of nuclear energy in the country's future energy generation.



**Figure 4 – Shaw Project U-Th Radiometric Targets and BIF areas**

### Cooletha Project

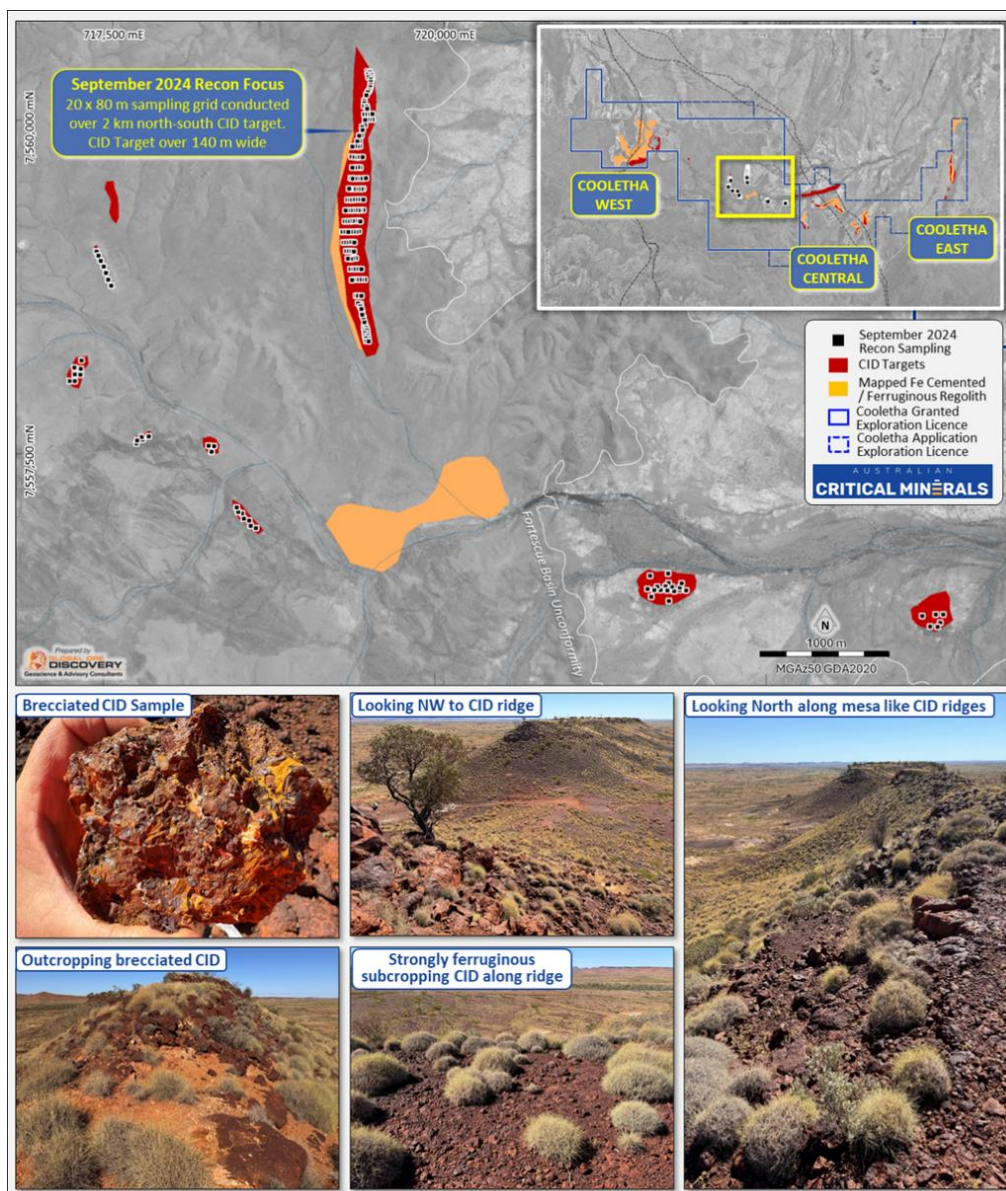
At Cooletha, ACM holds 252km<sup>2</sup> of granted tenure and 151km<sup>2</sup> of tenement applications with approximately half of this area containing the stratigraphy of the Fortescue Group, which is prospective for CIDs. The Cooletha Project is located north of Fortescue Metals Group's (ASX: FMG) East Pilbara Complex and north-west of Hancock Prospecting's Roy Hill Mine. The Cooletha Project has excellent infrastructure with both FMG and Hancock Prospecting's rail infrastructure transecting the tenements.



## CID Discovery Process

An integrated multispectral remote sensing interpretation successfully generated CID and ferruginous regolith targets for field investigation. Initial reconnaissance sampling and field observations undertaken during the quarter confirmed the presence of strongly cemented, goethitic pisolitic CIDs at Coolletha.

As part of the ongoing exploration during Phase 2, ACM's team collected an additional **189 rock chip samples** targeting CID mineralisation. The potential for concealed CIDs beneath Tertiary or Quaternary sediments will be a key focus of further investigation, pending the results from the current round of rock chip sampling.



**Figure 5 – Coolletha CID targets sampled during the Quarter**

### **Analogue - Bonnie Creek - WA**

Bonnie Creek is a CID with a reported 2008 Mineral Resource Estimate of 47.2 Mt @ 53.6% Fe (BC Iron Annual Report, 2008). The Bonnie Creek CIDs are also hosted in the Fortescue Group stratigraphy and have a total CID strike length of approximately 10km (BC Iron Press Release, 2 April 2009).

### **Analogue – Solomon and Serenity – WA**

In 2005, FMG discovered a buried CID paleochannel system through target generation and early-stage reconnaissance sampling (Kepert et al., 2010). This discovery by FMG, of approximately 30km strike length of CIDs concealed beneath cover units of the Mt Bruce Supergroup, was developed into a world-class deposit containing 2.9Gt of detrital and bedded iron ore mineralisation (Kepert et al., 2010).

ACM is investigating the parallels between the exploration rationale at Solomon and Serenity and its application to the forward work program at Cooletha; in particular, FMG's discovery success highlights the potential for CIDs to be concealed beneath overlying units of the Fortescue Group and how important it is to understand the paleo drainage system and its implications for the exploration targeting process.

### **Rankin Dome Project**

After regional exploration and observations ACM has informed Kula Gold Limited that the Company wishes to remove the two southern most tenements from the option agreement with Kula Gold.

### **Kaolin Projects**

ACM has conducted a strategic review of its kaolin assets within its tenement portfolio, including the Kojonup, Kondinin and Beverly projects. Since ACM's listing in July 2023, most ASX-listed peers have experienced substantial declines, particularly in kaolin assets. Many have shifted their focus to commodities with higher current and projected demand, such as rare earths, uranium and lithium, and have relinquished or disposed of their kaolin assets.

Due to weakened investor sentiment for kaolin, ACM recognised the diminishing support for the exploration and development of its kaolin assets. Consequently, ACM has relinquished its tenements and increased its emphasis on energy sectors, battery minerals, and higher-value projects, including iron ore.

### **Upcoming Exploration Activities**

ACM is set to advance exploration at both the Cooletha and Shaw Projects with a series of focused programs designed to build on recent discoveries:

- A targeted follow-up sampling program at Shaw is scheduled for November 2024, focusing on newly delineated BIF zones, particularly within the Western and Eastern BIF zones. This will include further geological mapping and analysis to define the extent and grade of mineralisation.
- Additional field mapping and reconnaissance rock chip sampling at Cooletha is planned to extend the known footprint of CID. Systematic grid sampling will continue across approximately 45km of CID-prospective stratigraphy, with ongoing paleo-drainage analysis aimed at uncovering potential concealed deposits.
- ACM is awaiting the results of 221 samples collected during September 2024 from both the Cooletha and Shaw projects. These results will guide further exploration and target refinement. Specifically, the ACM team is returning to Shaw to continue sampling and defining the extensions of the BIF horizons in mid-November.

These activities will continue to build ACM's understanding of the geological potential of the tenements and refine

exploration strategies as the company progresses toward its development goals.

## CORPORATE

The Company's cash position at 30 September 2024 was \$2.22 Million.

### 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 September 2024 quarter and detailed above were, Coolletha \$57,128, Rankin Dome \$12,715, Shaw \$66,655 and other \$46,957.

#### *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 (15 months)
Exploration (2 yrs)	\$3,500,100	\$1,011,622
Administration (2 yrs)*	\$974,791	\$775,918
Repayment of Borrowings	\$147,005	\$147,005
Expenses of the Offer	\$546,757	\$546,757

\* Includes some staff costs which were not allocated to Exploration at the time of preparation

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

Tenement Number	Project	Status Update
E 70/5772	Kojonup	Relinquished
E 70/5773	Kojonup	Relinquished
E 70/5774	Kojonup	Relinquished
E 70/5775	Kojonup	Relinquished
E 70/5608	Kondinin	Relinquished
E 70/5609	Kondinin	Relinquished
E 70/5610	Kondinin	Relinquished
E 70/5574	Beverley	Relinquished
E 70/6148	Beverley	Relinquished
E 77/2709	Rankin Dome	Removed from Option



E 77/2753	Rankin Dome	Removed from Option
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**Table 1 – Tenement portfolio changes**

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

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## 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 Shaw and Cooletha (Pilbara) Lithium/Iron Projects 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 be pivotal in delivering the processed minerals needed for a clean energy future.

ACM has established a highly experienced management team with a proven record of exploration and corporate success in the mining industry.

### TENEMENT INFORMATION (ASX Listing Rule 5.3.3)

The table below shows the interest in tenements held by Australian Critical Minerals and its wholly owned subsidiaries and is provided in accordance with ASX Listing Rule 5.3.3.

COOLETHA PROJECT					
Tenement ID	HOLDER	INTEREST	STATUS	GRANT DATE	AREA BLOCKS
E 45/4990	PROTEROZOIC GOLD PTY LTD	100%	GRANTED	24/10/2019	39
E 45/5228	PROTEROZOIC GOLD PTY LTD	100%	GRANTED	29/07/2019	40
E 45/5052	PROTEROZOIC GOLD PTY LTD	100%	PENDING	-	5
E 45/6375	PROTEROZOIC GOLD PTY LTD	100%	PENDING	-	42

RANKIN DOME PROJECT					
Tenement ID	HOLDER	INTEREST	STATUS	GRANT DATE	AREA BLOCKS
E 77/2768	KULA GOLD LIMITED	EARNING 51%	GRANTED	26/03/2021	36

SHAW PROJECT					
Tenement ID	HOLDER	INTEREST	STATUS	GRANT DATE	AREA BLOCKS
E 45/5006	PROTEROZOIC GOLD PTY LTD	100%	GRANTED	4/07/18	29



## 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")

**30 SEPTEMBER 2024**

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 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	(183)	(183)
	(b) development	-	-
	(c) production	-	-
	(d) staff costs	(79)	(79)
	(e) administration and corporate costs	(126)	(126)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	3	3
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)	10	10
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(375)</b>	<b>(375)</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	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 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>-</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	-
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	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
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>-</b>	<b>-</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	2,598	2,598
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(375)	(375)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-



## 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 (3 months) \$A'000
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	<b>Cash and cash equivalents at end of period</b>	<b>2,223</b>	<b>2,223</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	2,223	2,598
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>2,223</b>	<b>2,598</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	73
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.*

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

<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)	(375)
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)	(375)
8.4	Cash and cash equivalents at quarter end (item 4.6)	2,223
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	2,223
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	5.94
<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>		
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?	
	n/a	
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?	
	n/a	
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?	
	n/a	
<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 October 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.