

Iron Ore Exploration Commences in the Pilbara

Highlights

- An initial mapping and sampling campaign focused on Iron Ore prospectivity has commenced on the Cooletha and Shaw Projects in the Pilbara, Western Australia
- Objective of the program is to develop drill targets for a follow up field campaign
- ACM's Pilbara portfolio covers 494km² and is highly prospective for Iron Ore
- Over 20km of prospective Channel Iron Deposits (CID), with historical sampling returning an average grade of 56% Fe across various CID ridges at the Cooletha Project
- Over 10km of Banded Iron Formations (BIF) and CID targets will be followed up at the Shaw Project
- Excellent infrastructure including rail and port that currently service established iron ore mines
- Located amongst Iron Ore Giants
 - The Shaw Project sits directly south of Atlas Iron's Miralga Creek Iron Ore Mine and directly east of the Abydos Iron Ore Complex. The Abydos host stratigraphy potentially extends into the Shaw tenement
 - The Cooletha Project is located north of FMG's Cloudbreak Mine and northwest of Hancock Prospecting's Roy Hill Mine

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 announce the commencement of iron ore exploration on its Pilbara portfolio.

Cooletha Fe Project

The Cooletha Project, covering over 400 km² of ground in the Pilbara, is highly prospective for Iron Ore. The Project is located north of Fortescue Metals Group's (**ASX:FMG**) Cloudbreak Mine and north west of Hancock Prospecting's Roy Hill Iron Ore Mine (Figure 1).

As sampling work progresses and drill targets are defined at Cooletha and Shaw it is anticipated that the currently known CID areas will be extended and further CIDs may be identified (Figure 2).

An advanced, high-resolution satellite-borne sensor mapping study has been completed and this will guide the current sampling program.

The Cooletha Project has excellent infrastructure with both FMG and Hancock Prospecting's rail infrastructure transecting the tenements. Once ACM's CIDs are defined, the Company expects they may be of significant interest to major mining companies given the ease of which existing road, rail and port infrastructure can be accessed from Cooletha and Shaw.

Pastoral stations in the Cooletha and Shaw areas provide an excellent base from which ACM will be able to support exploration teams to conduct exploration and drill programs.

Shaw Fe Project

The Shaw Project of almost 100km² of ground is prospective for Iron Ore in Banded Iron Formation (BIF) and as CID's (Fig 3). Historic sampling of the BIF at Shaw returned +50% Fe (previously reported in the Company Prospectus 29 June 2023). This BIF unit will be followed up with further sampling in the current program to further identify its size and grade potential. The CIDs in Shaw have not had historic work and provide targets that represent potential substantial upside.

The Shaw Project sits directly south of Atlas Iron's Miralga Creek Iron Ore Mine and directly east of the Abydos Iron Ore Complex. The Abydos host stratigraphy potentially extends into the Shaw tenements. The proximity of the Shaw project to Miralga Creek offers the scope to discover a Direct Shipping Ore (DSO) resource which may be attractive to Miralga Creek where Atlas have mine plans to develop five open pits to extract 8 million tonnes of Iron Ore over four to five years.¹

The Shaw Project is close to existing infrastructure including rail and is only 100km SSE of Port Hedland. The Miralga Creek to Abydos road passes within 100m of the Shaw tenement boundary. The Miralga Creek mine site is only 6km from the tenement boundary. Miralga Creek is one of three nearby Atlas Iron locations which together reported 100Mt of iron ore production in 2022-2023.

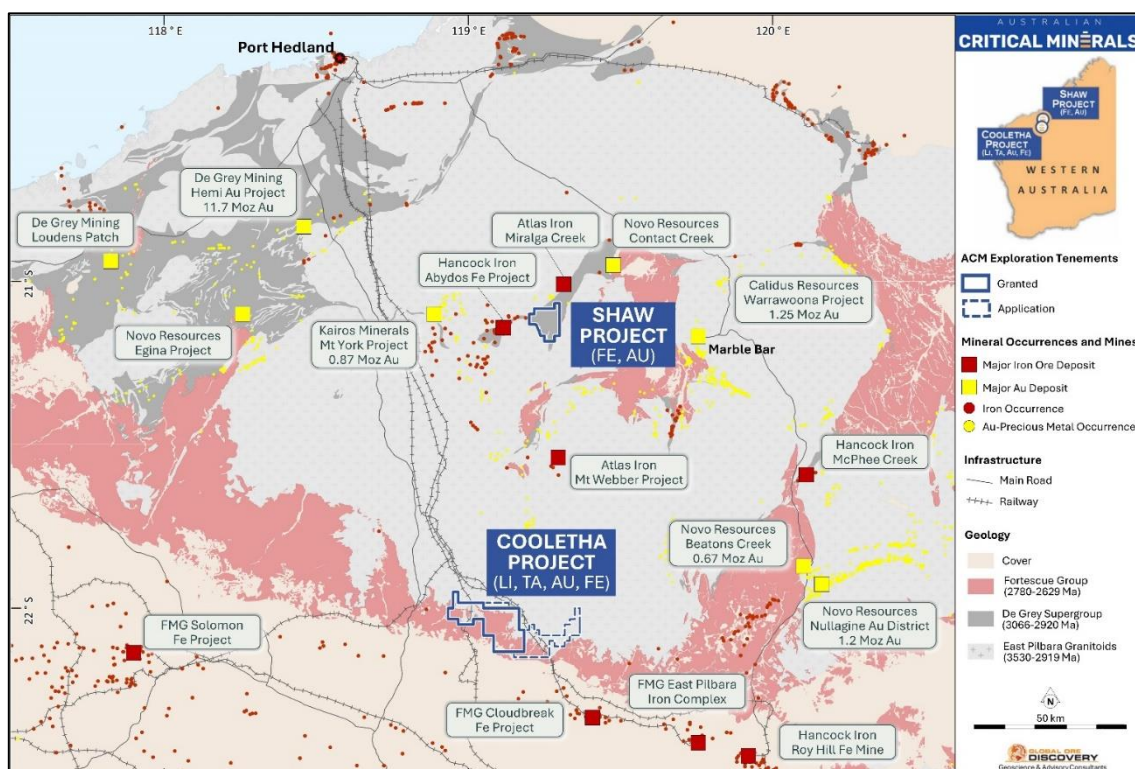


Figure 1 – The location of the Cooletha and Shaw Projects in the Pilbara region, Western Australia.

¹ Reference 1: www.atlasiron.com.au/atlas-iron-readies-miralga-creek-project-start/

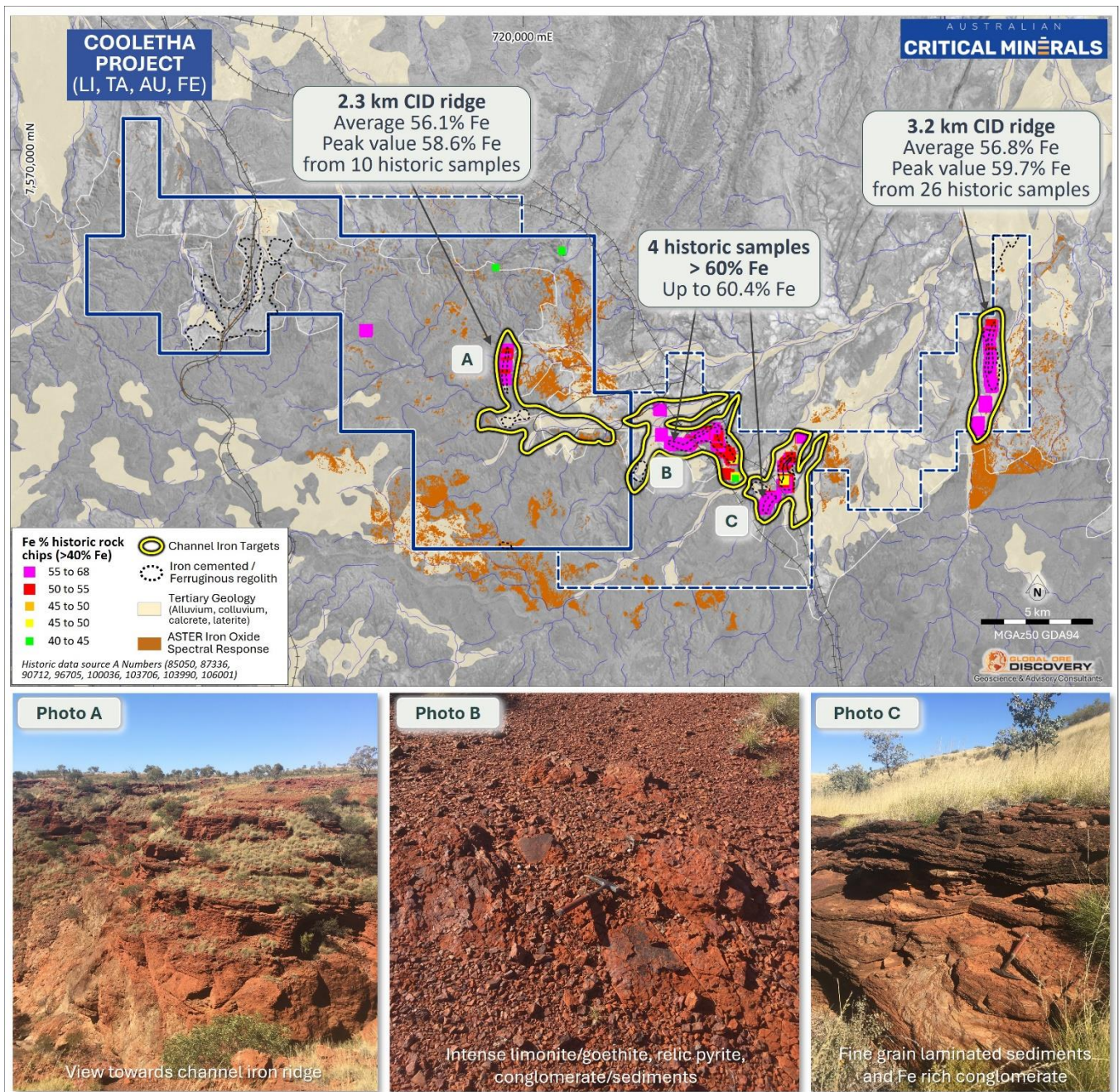


Figure 2 – The Coolletha Project, Channel Iron Ridge locations

(Source Company Prospectus, Released 29 June 2023)

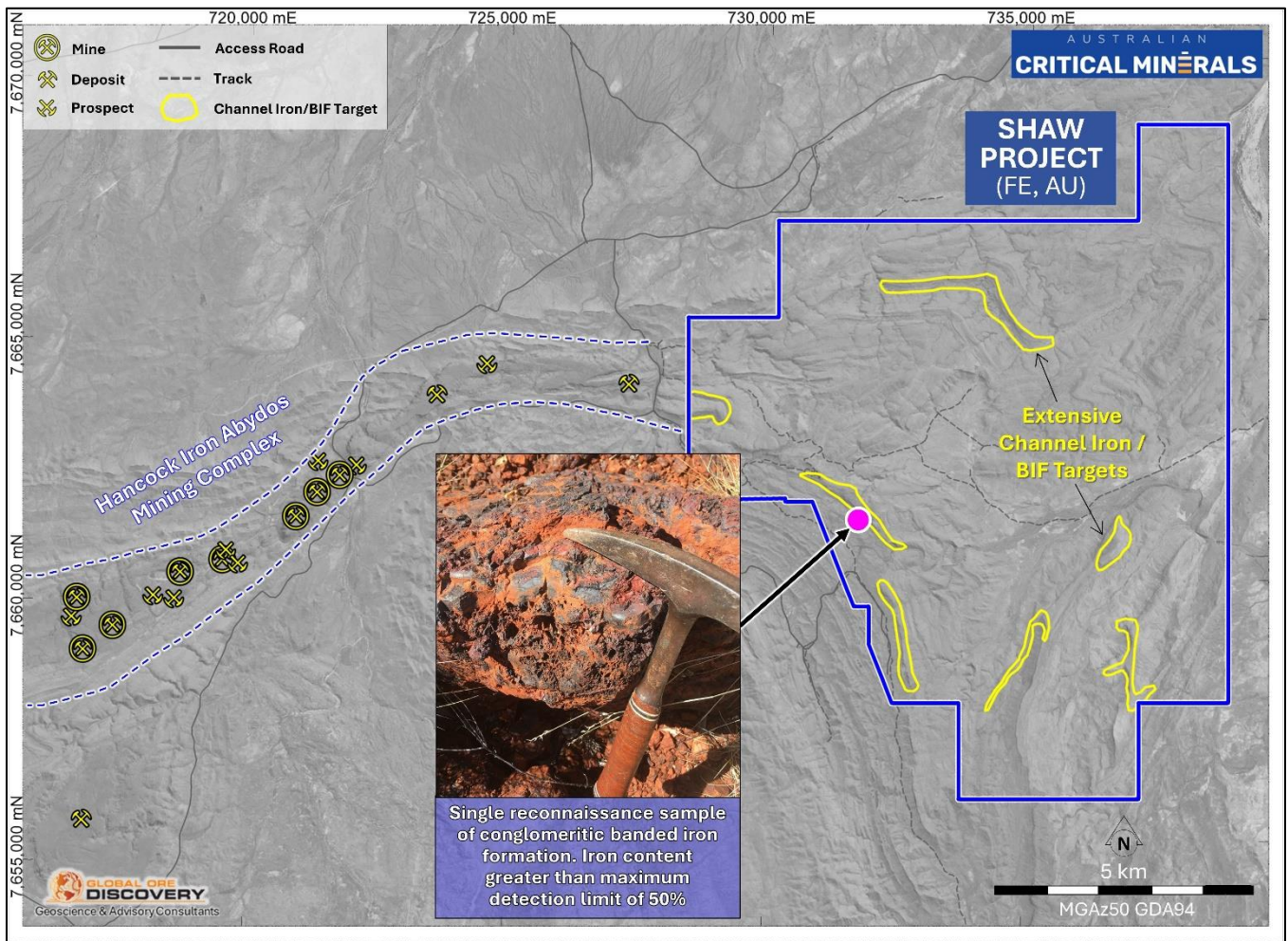


Figure 3 – The Shaw Project with over 10km of BIF and CID reconnaissance targets

(Source Company Prospectus, Released 29 June 2023)

Next Steps

The mapping and sampling program is expected to take 1-2 weeks, with results due around 6 weeks later. The objective is to develop targets for a follow-up field campaign.

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

E info@auscriticalminerals.com.au

T +61 (8) 6165 8858

Ben Creagh / Andrew Willis

Investor and Media Relations

NWR Communications

E benc@nwrcommunications.com.au

E awillis@nwrcommunications.com.au

Reference to Previous Announcements

With respect to Iron Results contained in this announcement, these were disclosed in the Company's prospectus released to ASX on 29 June 2023. Investors can refer to the Company's Prospectus and previous News releases for further disclosure on information in this Announcement and all of the Company's Projects.

Competent Persons Statement

The information in this report related to Exploration Targets and Exploration Results is based on information compiled by Mr. Dean de Largie. Mr. de Largie is the Managing Director of Australian Critical Minerals Limited and is a Fellow of the Australian Institute of Geoscientists and has sufficient experience relevant to the styles of mineralisation under consideration and to the activity being reported to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. de Largie has verified the data disclosed in this release and consented to including the matters based on the information in the form and context in which it appears.

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.