25 JULY 2023

Mapping and Sampling Commences at the Cooletha Lithium Project

Highlights

- Fieldwork commences at the Cooletha Lithium Project in the Pilbara region.
- Mapping and sampling program will target an initial 10km of the previously delineated 30km strike of outcropping pegmatite swarms
- Detailed mapping of pegmatites will generate high-priority targets for future drilling programs
- Channel samples will be cut at surface using a diamond saw to provide high quality samples
- Mapping and sampling program is ACM's first exploration activity following this month's successful listing on the ASX

Australian Critical Minerals (ASX:ACM, "Australian Critical Minerals" or "the Company") is pleased to announce the commencement of a mapping and sampling program at the Cooletha Lithium Project in the Pilbara, Western Australia. The objective of this program is to evaluate the high priority target area over an initial 10km of the 30km strike of outcropping pegmatite swarms. The results, expected later this quarter, will define high priority targets for future drilling programs.

Managing Director, Dean de Largie said,

"Following our successful IPO this month, focus has turned immediately to undertaking systematic exploration across our portfolio of projects. We are excited that our initial efforts as a listed company will be at the Cooletha Lithium Project in the Pilbara, a region that hosts a number of significant lithium mines and recent exploration successes.

At Cooletha, we have already identified numerous targets across 10km of the 30km strike with the focus on the prospective spodumene-bearing pegmatites. With preparations completed for the three-week mapping and sampling program, we expect to significantly improve our data set and understanding of the underlying geological characteristics across our tenements. With results due later this quarter, this will enable us to plan our first drilling campaign at Cooletha later this year.

Shortly after this program, we will commence drilling at the Rankin Dome Rare Earth Project at Southern Cross.

We are committed to advancing our exploration efforts and unlocking the potential of our Projects and look forward to providing shareholders with updates as these activities progress."

Cooletha Lithium Project, Pilbara

The Cooletha Lithium Project, ACM's flagship lithium project, has over 100km² of lithium prospectivity with outcropping pegmatite swarms in the Pilbara lithium district. The Project is located south of significant discoveries at Pilbara Minerals' (**ASX:PLS**) Pilgangoora Lithium Project (223Mt @ 1.25% Li₂O), MinRes' (**ASX:MIN**) Wodgina Lithium Project (259Mt @ 1.17% Li₂O), and Global Lithium Resources' (**ASX:GL1**) Archer Lithium Deposit at Marble Bar (18Mt @ 1% Li₂O) (Figure 1).



The Cooletha project also sits 30km south of the Tambourah Lithium Project owned by Trek Metals (**ASX:TKM**), which has commenced its maiden 3,800m drill campaign following up on rock chip results up to 3.02% Li₂O.

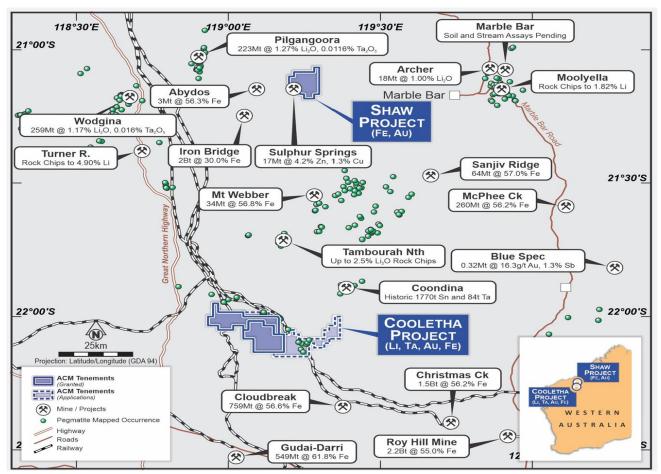


Figure 1 – The location of the Cooletha Lithium Project in the Pilbara region, Western Australia.

Australian Critical Minerals has mapped pegmatite dyke swarms over a 30km strike at Cooletha, an area with minimal exploration using modern techniques. The mapping and sampling program will initially target a 10km wide area where numerous pegmatite swarms, spodumene in rock chips and lithium micas have been identified (Figure 2).

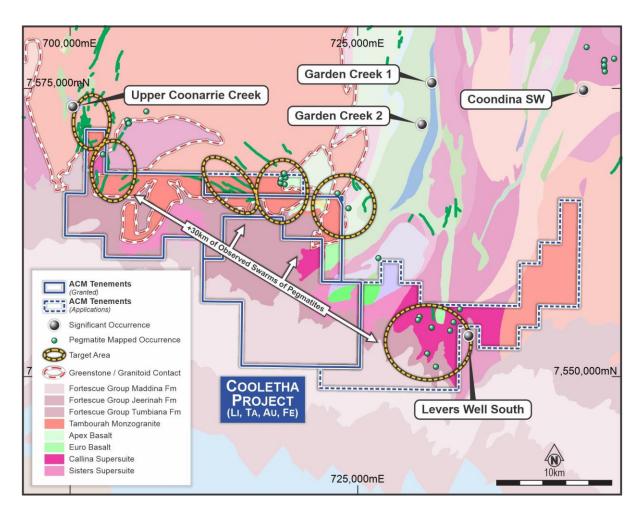


Figure 2 – The Cooletha Lithium Project represents +100km² of lithium prospectivity.

The pegmatite swarms vary in width from several metres to a hundred metres and express a linear continuity of up to several hundred metres with associated spodumene evident in rock chips (Figure 3).





Figure 3 - The Cooletha Lithium Project hosts pegmatite dyke swarms over a 30km strike.

ACM's field team will collect samples from high-priority targets. A diamond saw will be used to cut channel samples at the surface, enabling quality samples to JORC standard.

The mapping and sampling program will be undertaken on a 2 weeks on / 1 week off rotation with initial results due six weeks following completion of the first rotation of the program.

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 Cooletha (Pilbara) Lithium Project and 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.

Reference to Previous Announcements

Investors can refer to the Company's Prospectus for further disclosure on information in this Announcement and all of the Company's Projects.

Competent Persons Statement

The information in this report that relates 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 have verified the data disclosed in this release and consent to the inclusion in this release of the matters based on the information in the form and context in which it appears.

Forward Statement

This news release contains "forward-looking information" within the meaning of applicable securities laws. Generally, any statements that are not historical facts may contain forward-looking information, and forward looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget" "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or indicates that certain actions, events or results "may", "could", "would", "might" or "will be" taken, "occur" or "be achieved." Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, commodity prices, the estimation of initial and sustaining capital requirements, the estimation of labour costs, the estimation of mineral reserves and resources, assumptions with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the project, permitting and such other assumptions and factors as set out herein.

Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: risks related to changes in commodity prices; sources and cost of power and water for the Project; the estimation of initial capital requirements; the lack of historical operations; the estimation of labour costs; general global markets and economic conditions; risks associated with exploration of mineral deposits; the estimation of initial targeted mineral resource tonnage and grade for the project; risks associated with uninsurable risks arising during the course of exploration; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support exploration activities; risks associated with changes in the



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mining regulatory regime governing the Company and the Project; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; financing, capitalisation and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issuance of additional common shares of the Company; the risk of litigation.

Although the Company has attempted to identify important factors that cause results not to be as anticipated, estimated or intended, there can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. Accordingly, readers should not place undue reliance on forward-looking information. Forward looking information is made as of the date of this announcement and the Company does not undertake to update or revise any forward-looking information this is included herein, except in accordance with applicable securities laws.

