



MetalsGrove
MINING LIMITED

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MINERALOGY TESTS CONFIRM STRONG RARE EARTH (REE) POTENTIAL AT BRUCE-ARUNTA

Highlights:

- *Shallow high grade LREE and HREE mineralisation is now confirmed at Bruce Prospect in Northern Territory.*
- *Initial mineralogy tests reported strong liberation of high-grade primary LREE and HREE minerals within the Bruce samples.*
- *Lanthanum was used as a guide element for LREE and yttrium as a reference for HREE.*
- *Drilling reported in August intersected high-grade carbonatite REE grades of up to 7,000ppm (0.70%) TREO, 35% MREO/TREO, 28% NdPr/TREO and 36% Y₂O₃/TREO with multiple zones of mineralisation.*
- *Exploration to date has demonstrated exceptionally high-grade carbonatite of 38% MREO/TREO, 58% HREO/TREO 28% NdPr/TREO and 36% Y₂O₃/TREO.*
- *Carbonatite outcrops extend strike east-west by 9km and remain open.*
- *Follow up drilling is planned and recent soil sampling assay results are pending.*

Critical metals exploration and development company **MetalsGrove Mining Limited** (ASX: **MGA**), ("**MetalsGrove**" "**MGA**" or the "Company"), is pleased to announce that mineralogy analysis of Reverse Circulation ("**RC**") chip samples has confirmed strong Light Rare Earth Element ("**LREE**") potential within the recently reported carbonatite REE discovery at the Bruce Prospect.

The Bruce Prospect is located within the Company's Arunta Project, north of Alice Springs in the Northern Territory.

Recent RC assay results now demonstrate that Bruce has a large and high-grade rare earth footprint, with the Company now finalising plans to systematically explore and extend this mineralised zone.

Commenting on the mineralogy test work from the Bruce Prospect, Managing Director, Sean Sivasamy said: "We are very encouraged by the outcomes from this initial round of mineralogy test work at the Bruce Prospect. Results confirm the recent high-grade carbonatite REE discovery at Bruce and highlight the strong potential for favourable LREE and HREE mineralisation.

Initial mineralogy results have confirmed LREE and HREE elements with strong liberation characteristics within the examined RC samples.

This is considered an encouraging step forward as MGA develops the next work programs to better refine the large mineralisation footprint identified to date."

Bruce Carbonatite REE Discovery Background

MGA recently completed (see ASX announcement dated 14 August 2023) a total of 16 RC holes for 2,343m designed to test several high priority targets including identified **multiple high priority carbonatite and REE bearing drill targets** reported from soil sampling (see ASX release dated 7 June 2023).

Assays from this program returned high-grade carbonatite REE grades of up to **7,000ppm (0.70%) TREO, 35% MREO/TREO, 28% NdPr/TREO and 36% Y₂O₃/TREO with multiple zones of mineralisation.**

Further, drilling has also highlighted exceptionally high-grade carbonatite of **38% MREO/TREO, 58% HREO/TREO 28% NdPr/TREO and 36% Y₂O₃/TREO.**

Importantly, carbonatite outcrops extend strike east-west by 9km and remain open.

Mineralogy Analytical Method

The chip trays were analysed with the new Ecore instrument at the Automated Mineralogy Incubator. The Ecore is a rapid scanning technique using LIBS technology and provides a point scale microanalysis and is able to detect even trace amounts of elements down to a 50 micron spot size. It provides the spatial distribution of elements and minerals.

This information is then used to target areas of mineralisation for further identification text work. The element maps show the distribution of elements in the RC chips in addition to the occurrence of trace amounts of Cerium, Lanthanum and Yttrium which are indicator elements for rare earth minerals (the <100um size grains are circled). The sample shows high concentration of alkaline elements as can be seen by the element distribution maps.

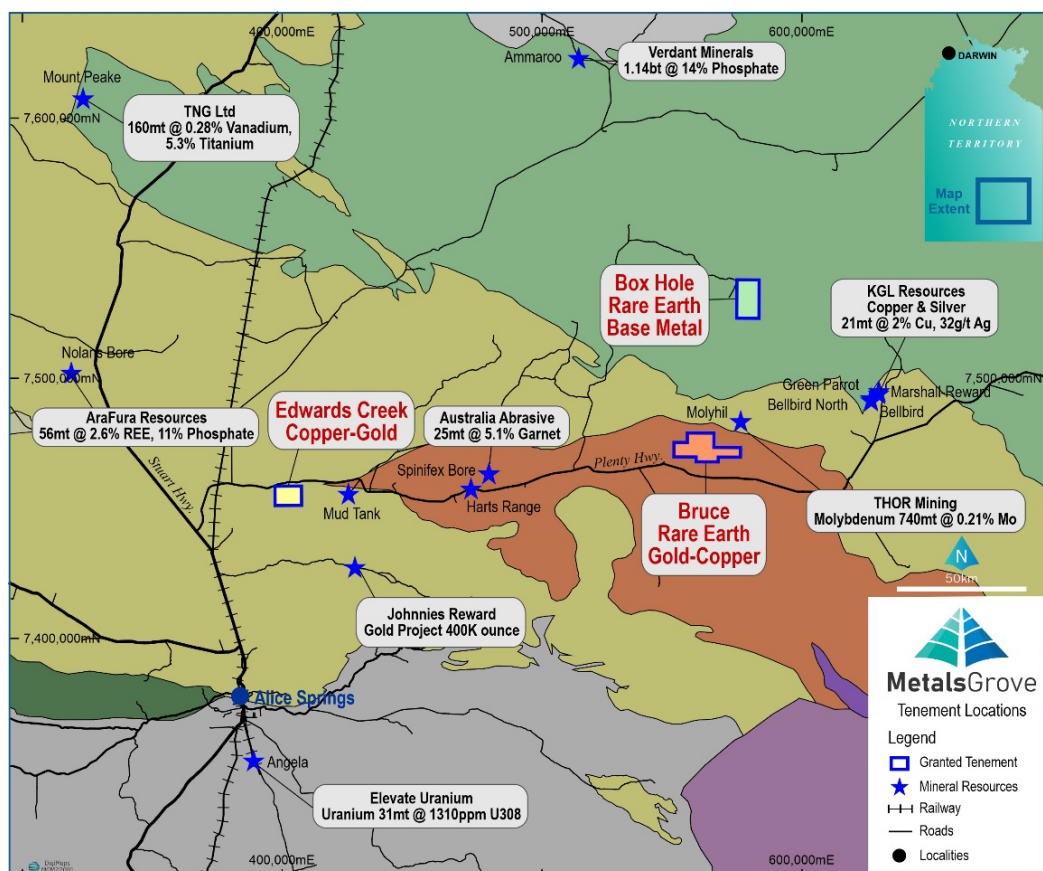


Figure 1: Arunta Project Location Map.

Results (Element Maps)

automated mineralogy incubator

MetalsGrove BRR23009 (0-20m)

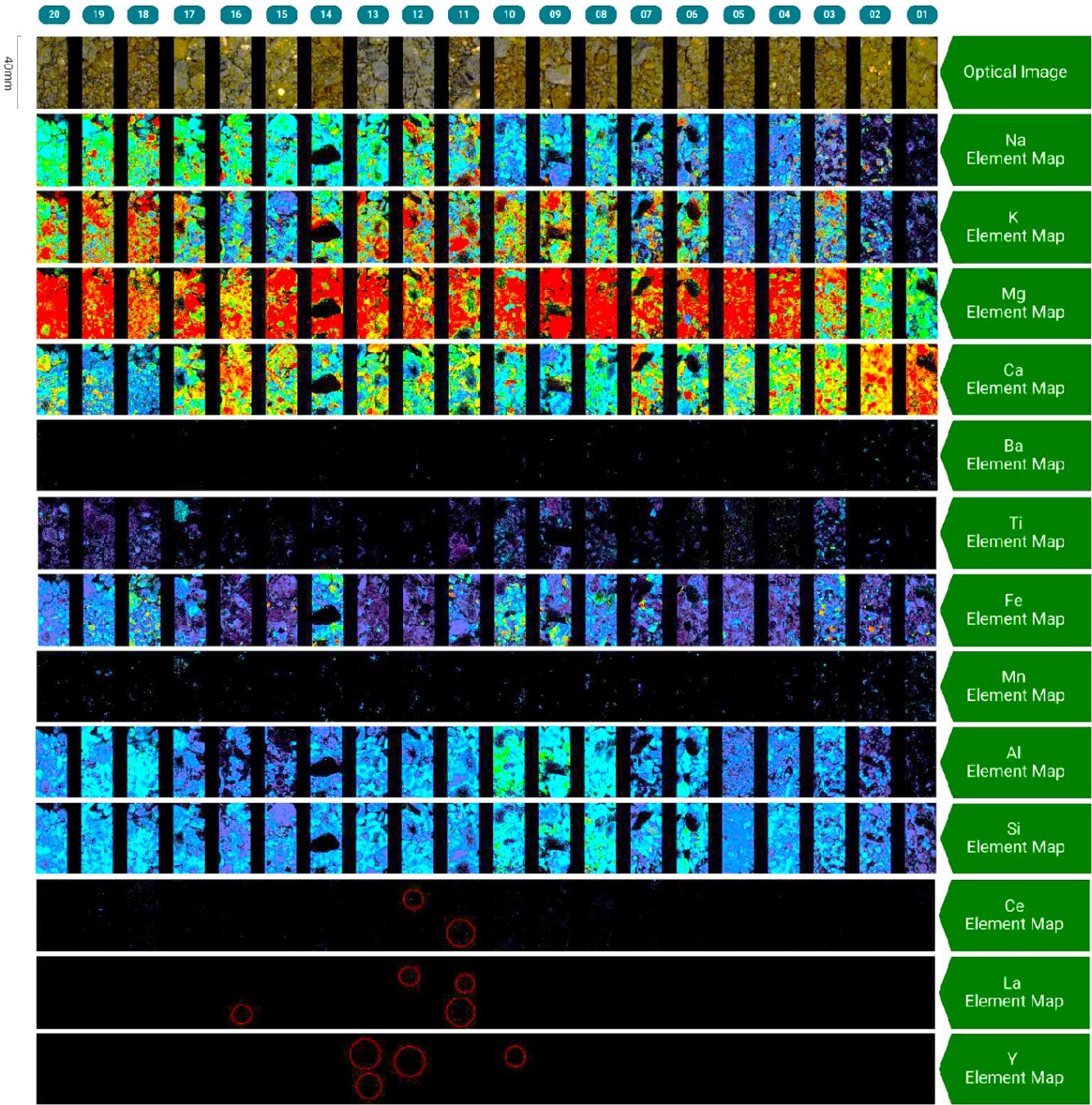


Figure 2: High resolution optical image and LIBS element maps for Tray BRR23009 (0-20m).



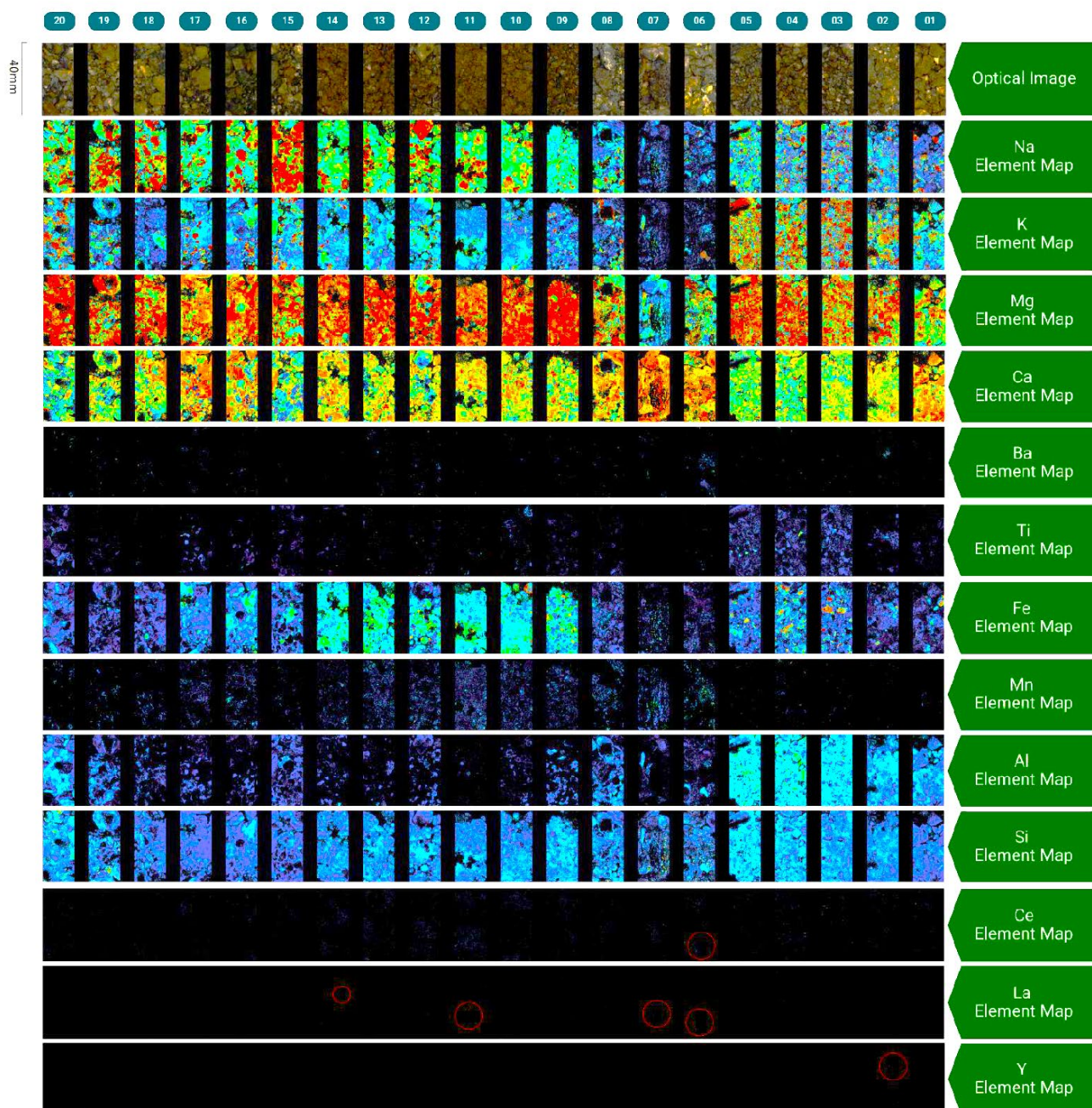


Figure 3: High resolution optical image and LIBS element maps for Tray BRR23016 (0-20m).

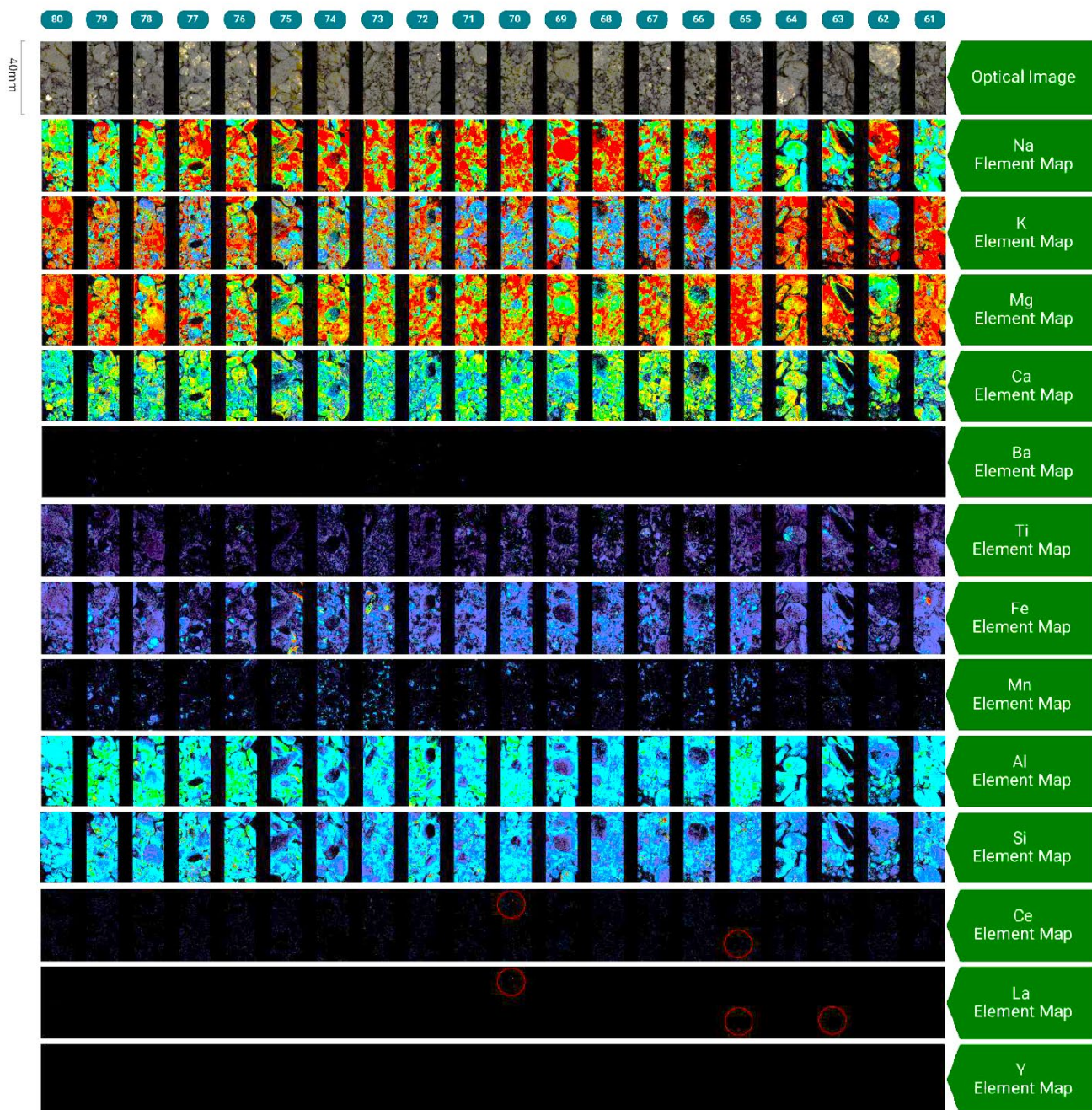


Figure 4: High resolution optical image and LIBS element maps for Tray BRR23016 (60-80m).

Bruce Prospect Background

The Bruce rare earth prospect is located within the Central Desert Region of the Northern Territory and covers an area of approximately 17,722 ha. MGA recently reported (see ASX announcement dated 7th June 2023) that it had identified outcropping carbonatite and high grade REE mineralisation that now extends more than 9km in length with multiple parallel mineralised areas and with a high percentage of valuable magnetic and heavy rare earth elements up to 1,800 ppm TREO, 38% HREO/TREO, 31% MREO/TREO, 23% NdPr/TREO, 23% Y₂O₃/TREO.

MGA reported (see ASX announcement dated 20th July 2022) that it had identified a broad conductor along strike from the Plenty River mine which is adjacent to magnetic features interpreted to be components of the pegmatite intrusion.

MGA recent REE discovery at Bruce (see ASX announcement dated 14 August 2023) RC drilling assays returned high-grade carbonatite REE grades of up to 7,000ppm (0.70%) TREO 35% MREO/TREO, 28% NdPr/TREO and 36% Y₂O₃/TREO with multiple zones of mineralisation.

About MetalsGrove

MetalsGrove Mining Limited (ASX: MGA) is an Australian-based exploration and development company, focused on the exploration and development of its portfolio of high-quality lithium, rare earth, copper-gold, manganese and base metal projects in Western Australia and the Northern Territory.

MGA is committed to green metal exploration and development to meet the growing demand from the battery storage and renewable energy markets in the transition to a de-carbonised world.

Competent Person Statement – Exploration Strategy

The information in this announcement that relates to exploration strategy has been developed by Sean Sivasamy. All assay results have been compiled by Mr Sivasamy who is a member of Australasian Institute of Mining and Metallurgy. Mr Sivasamy is Managing Director and CEO of MetalsGrove Mining Limited.

Mr Sivasamy has sufficient experience which is relevant to the style of mineralisation and exploration processes as reported herein 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 Sivasamy consents to the inclusion in this announcement of the information contained herein, in the form and context in which it appears.

The imaging information performed on the ECore was performed at the Automated Mineralogy Incubator who has approved the publication of the data.

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Forward looking statements

This announcement may contain certain “forward looking statements” which may not have been based solely on historical facts, but rather may be based on the Company's current expectations about future events and results. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and believed to have a reasonable basis.

However, forward looking statements are subject to risks, uncertainties, assumptions, and other factors which could cause actual results to differ materially from future results expressed, projected or implied by such forward looking statements. Such risks include, but are not limited to exploration risk, mineral resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes.

For more detailed discussion of such risks and other factors, see the Company's Prospectus, as well as the Company's other filings. Readers should not place undue reliance on forward looking information. The Company does not undertake any obligation to release publicly any revisions to any “forward looking statement” to reflect events or circumstances after the date of this announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws.

Authorised for release by the MetalsGrove Mining Limited Board of Directors,

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