



MetalsGrove
MINING LIMITED

Date

27.01.2023

ASX Code

MGA

Shares on Issue

52,710,000

Company Directors

Mr Sean Sivasamy
Managing Director and CEO

Mr Richard Beazley
Non-Executive Chairperson

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Non-Executive Director

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Mr Jack Rosagro

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QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 31 DECEMBER 2022

HIGHLIGHTS:

UPPER COONDINA – LITHIUM, TIN AND TANTALUM

- **4,200m Phase 1 drilling programme finished at the Chola, Happy Go Lucky and Shaw River Lithium Prospects – drilling completed on time and on budget**
- **High priority Chola Prospect is a pegmatite corridor measuring approx. 4.0 km x 2.0 km**
- **Previously completed first pass soil sampling assay results at Chola Prospect confirm strong lithium and tantalum potential**
- **Deep Ground Penetrating Radar (DGPR) survey has identified 31 new potential pegmatite structures conjugate with existing known mineralised pegmatites within Chola Prospect**
- **First drilling assays to be reported this quarter**

ARUNTA PROJECT – RARE EARTH, COPPER-GOLD, BASE METALS

- **Surface field mapping and rock chip sampling highlights multiple zones of mineralised pegmatites confirmed within the Bruce Prospect area**
- **Pegmatites in the southern part of the prospect, which have been mined for mica up until the early 1950's – ranging from one meter to four metres and have a strike length up to over 200 metres**
- **Quartz veins which form an east-west trending complex are associated with Au and Cu mineralisation**
- **Most recent program was designed to test three specific target areas within the Bruce Prospect – Whistleduck, Plenty River and Whitehorse**
- **Maiden drill program scheduled to commence this quarter to test the bedrock conductor and historical pegmatite mines**

Commenting on exploration progress made during the December quarter, Managing Director Sean Sivasamy said: "We are very encouraged by the level of progress made by our team during the December quarter, headlined by the successful completion of our Phase 1 drilling program at the highly prospective Upper Coondina Lithium-Tantalum Project in WA. Initial observations from our technical team indicate that our drilling successfully intersected the priority lithium targets discovered at the Chola Prospect in the south-east of the main Upper Coondina Project area.

We have entered early 2023 with significant momentum, supported by a busy pipeline of exploration activity planned across our assets in WA and NT. We look forward to providing further updates as first assays from Upper Coondina are received and new work programmes get underway this quarter."

Critical metals exploration and development company **MetalsGrove Mining Limited** (**ASX: MGA**), ("**MetalsGrove**" "**MGA**" or the "**Company**"), is pleased to provide its Quarterly Activities Report for the period ended 31 December 2022 ("**Quarter**").

MetalsGrove is focused on exploration for 'green metals' to supply rapidly growing battery and renewable energy markets globally.

The Company has assembled a strategic portfolio of advanced exploration and near-term development assets, with a total of five projects, two located in Western Australia (WA) and three in the Northern Territory (NT).

A summary of the Company's 100% owned critical metals project portfolio is outlined below:

- The Upper Coondina lithium-tin-tantalum project comprises a single granted Exploration Licence (E 45/5952), located approximately 70 km southwest of Marble Bar in the eastern Pilbara region, WA. The tenement covers an area of approximately 6,359 ha.
- The Woodie Woodie North manganese project comprises a single granted Exploration Licence (E 45/5945), located approximately 100 km east of Marble Bar in the eastern Pilbara region, WA. The tenement covers an area of approximately 14,370 ha.
- The Edwards Creek polymetallic (copper-lead-zinc-gold) project comprises a single granted mineral exploration licence (EL32420), located approximately 80 km north-northeast of Alice Springs, NT. The tenement covers an area of approximately 7,568 ha.
- The Bruce gold-copper, rare earth element (REE) project comprises a single granted mineral exploration licence (EL31225), located approximately 300 km northeast of Alice Springs, NT. The tenement covers an area of approximately 17,680 ha.
- The Box Hole zinc-lead, REE project comprises a single granted mineral exploration licence (EL32419), located approximated 340 km northeast of Alice Springs, NT. The tenement covers an area of approximately 12,765 ha.



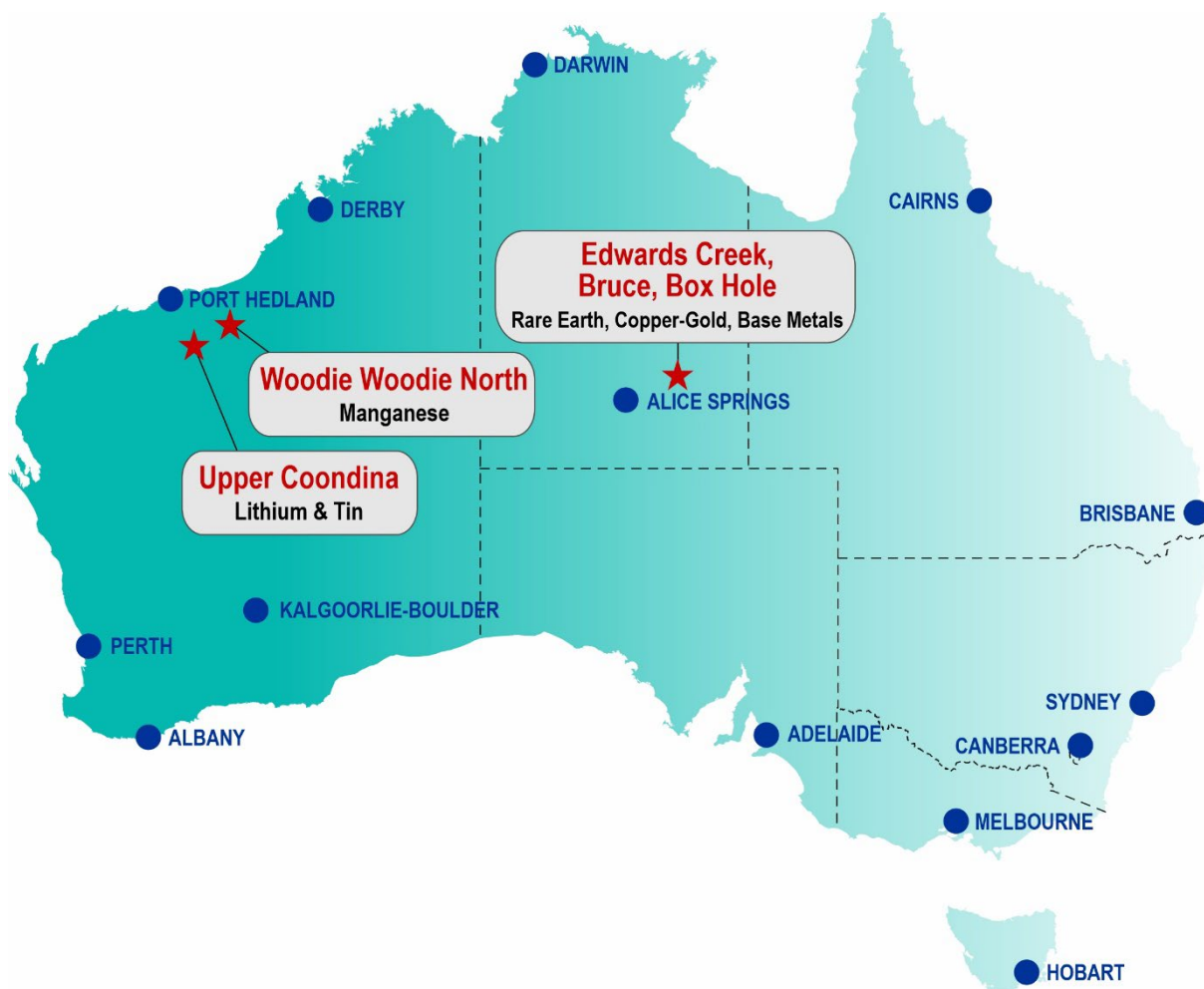


Figure 1: Location of MetalsGrove Mining Ltd Projects in three emerging battery metals belts

UPPER COONDINA LITHIUM, TIN AND TANTALUM-WA

High Grade Lithium Tantalum Soil Samples Returned

During the quarter the Company reported that a pre-drilling exploration programme had confirmed multiple pegmatite corridor and identified potential drilling targets at the Company's Upper Coondina Lithium Project.

The targeted programme comprised soil sampling, airborne survey and surface field mapping, which revealed a corridor containing multiple pegmatites which are coincident with the source area and with surface geochemistry.

Encouraging soil sampling assays including Li_2O 670 ppm and Ta 103 ppm have been returned. Multiple outcropping pegmatite dykes occurring in swarms, with pegmatite dykes strike approximately 8.0 km x 4.0 km.

Multiple outcropping pegmatite dykes occurring in swarms. Pegmatite dykes strike approximately 8.0 km x 4.0 km.

Initial observations suggest Upper Coondina has two generations of pegmatite - G1 and G2 - which host the lithium mineralisation found within the Pilbara lithium field.

MetalsGrove also believes Upper Coondina may be part of the same system that hosts the major lithium discovery announced by Global Lithium (ASX: GL1) and similar geological setting as Pilbara Minerals (ASX: PLS) north of MGA's ground.



Geochemistry confirms drill targets at Upper Coondina

Over 2,500 soil samples were taken from the southern part of Upper Coondina Chola Prospect. The geochemical responses and surface field mapping identified strong Lithium-Caesium-Tantalum ("LCT") - pegmatite anomaly, which is 8 km x 4 km multiple pegmatite corridor.

First pass soil sampling assay results confirm lithium mineralisation and defining the drilling target within the Chola Prospect pegmatite corridor measuring approx. 4.0 km x 2.0 km.

Chola Prospect - Expanding horizon of lithium-bearing pegmatites

Figure 2 below shows the location of the **Chola Prospect** pegmatite outcrop and pegmatite structural corridor at the Upper Coondina Lithium Prospect that were confirmed by soil sampling assays hosting lithium mineralisation and expanding up north and west.

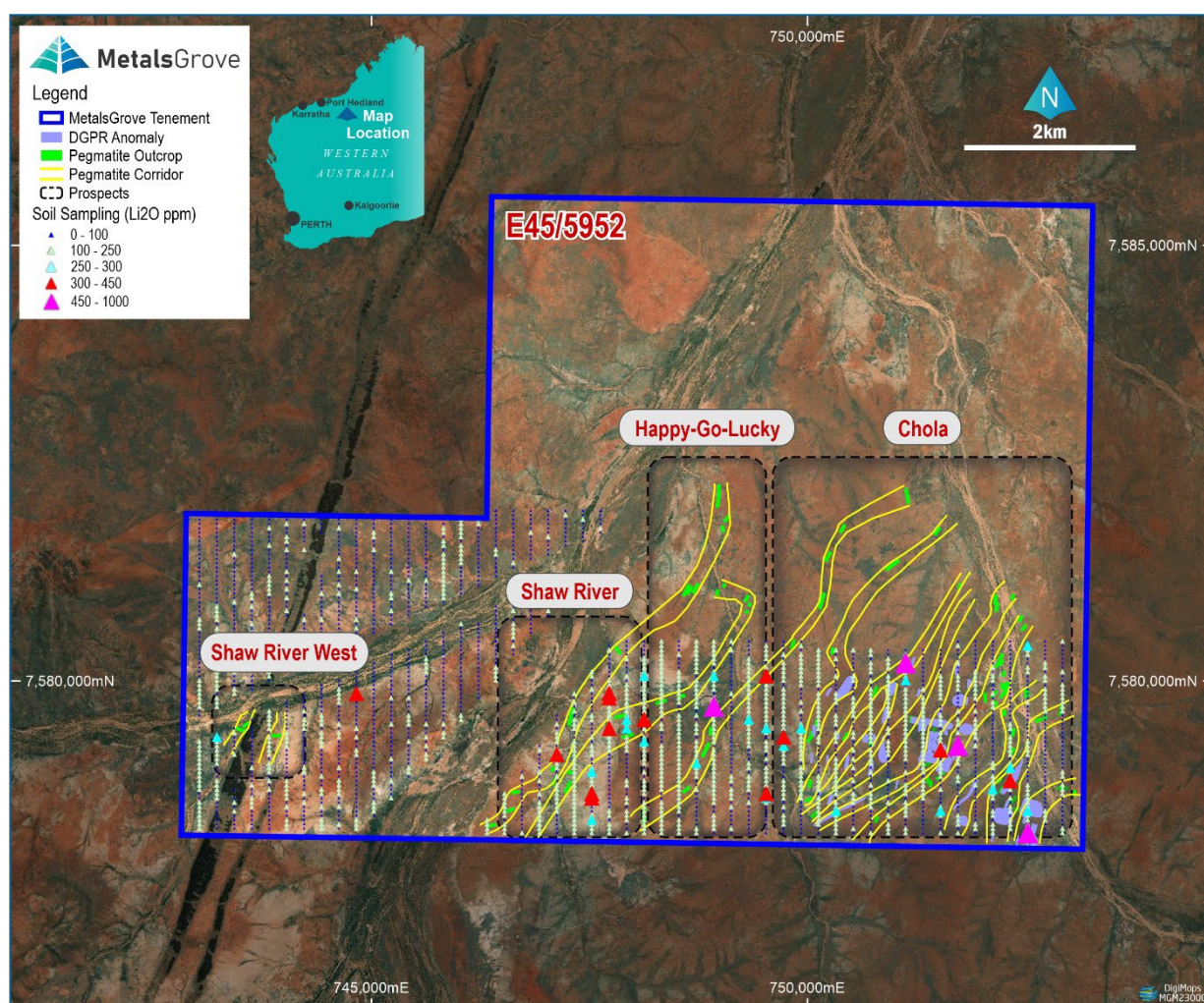


Figure 2: Upper Coondina Lithium projects showing pegmatites with lithium assays results against pegmatite outcrop and pegmatite structural corridor

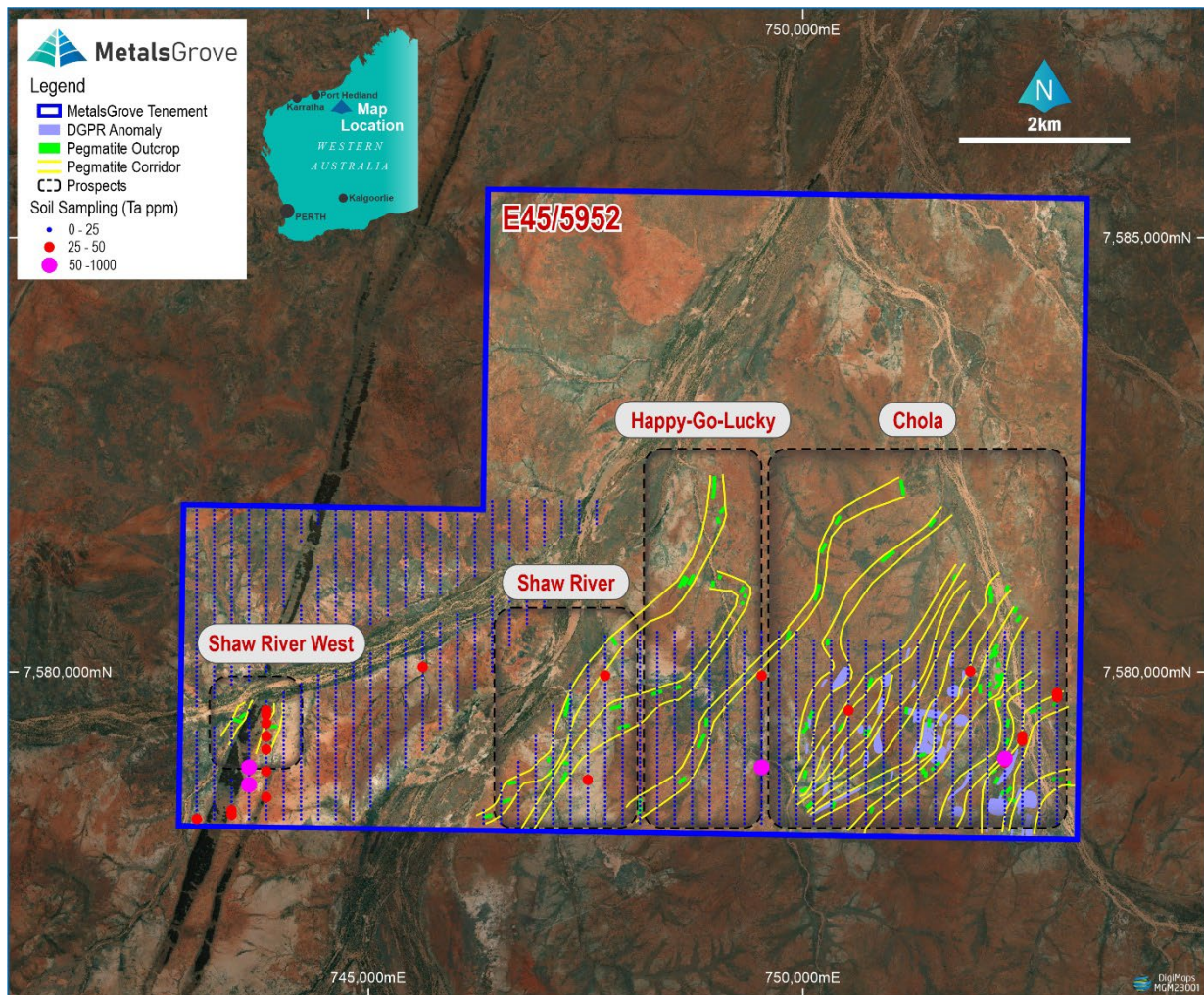


Figure 3: Upper Coondina Lithium projects showing pegmatites with tantalum assays results against pegmatite outcrop and pegmatite structural corridor

Further details on the soil sampling programme completed at Upper Coondina can be viewed in the ASX release dated 7th November 2022.

Phase 1 Drilling Programme Successfully Completed

A key milestone for MetalsGrove was achieved during the December quarter with the successful completion of the 4,200m Reverse Circulation ("RC") drilling programme at the Upper Coondina Lithium Project, located 80 km south of Marble Bar.

This maiden drilling programme was designed to test the priority lithium targets at the recently discovered Chola Prospect in the south-east of the main Upper Coondina Project area. The Company can report that drilling has successfully intersected the main target zone at Chola with first assays expected to be reported in Q1 2023.

MGA is also pleased to confirm the completion of a Deep Ground Penetrating Radar ("DGPR") survey at Upper Coondina. DGPR is a proven technique for identifying additional pegmatites and establishing a more detailed understanding of subsurface mineralisation.



Figure 4: Inaugural drilling at Upper Coondina

Deep Ground Penetrating Radar (DGPR) survey

Ultramag Geophysics was engaged by the Company to undertake a DGPR survey to identify pegmatites and investigate subsurface potential for the known, mapped and sampled at Upper Coondina Chola Prospect south-east section.

Excellent signal quality from depths of 30m to 100m was recorded and a total of 28.5 km of line-data at 50m to 150m spacing was completed.

The DGPR survey has identified 31 new potential pegmatite structures conjugate with existing known mineralised pegmatites within the Chola Prospect.

During the first phase drilling programme, MGA tested approx. 50% of the DGPR anomaly, and the untested anomaly will be drilled during the next phase of drilling programme. DGPR is a geophysical technique similar to seismic that emits very short pulses of electromagnetic (EM) radiation into the ground via a transmitter, measuring the reflected energy in a receiver to produce profiles of subsurface resistivity.

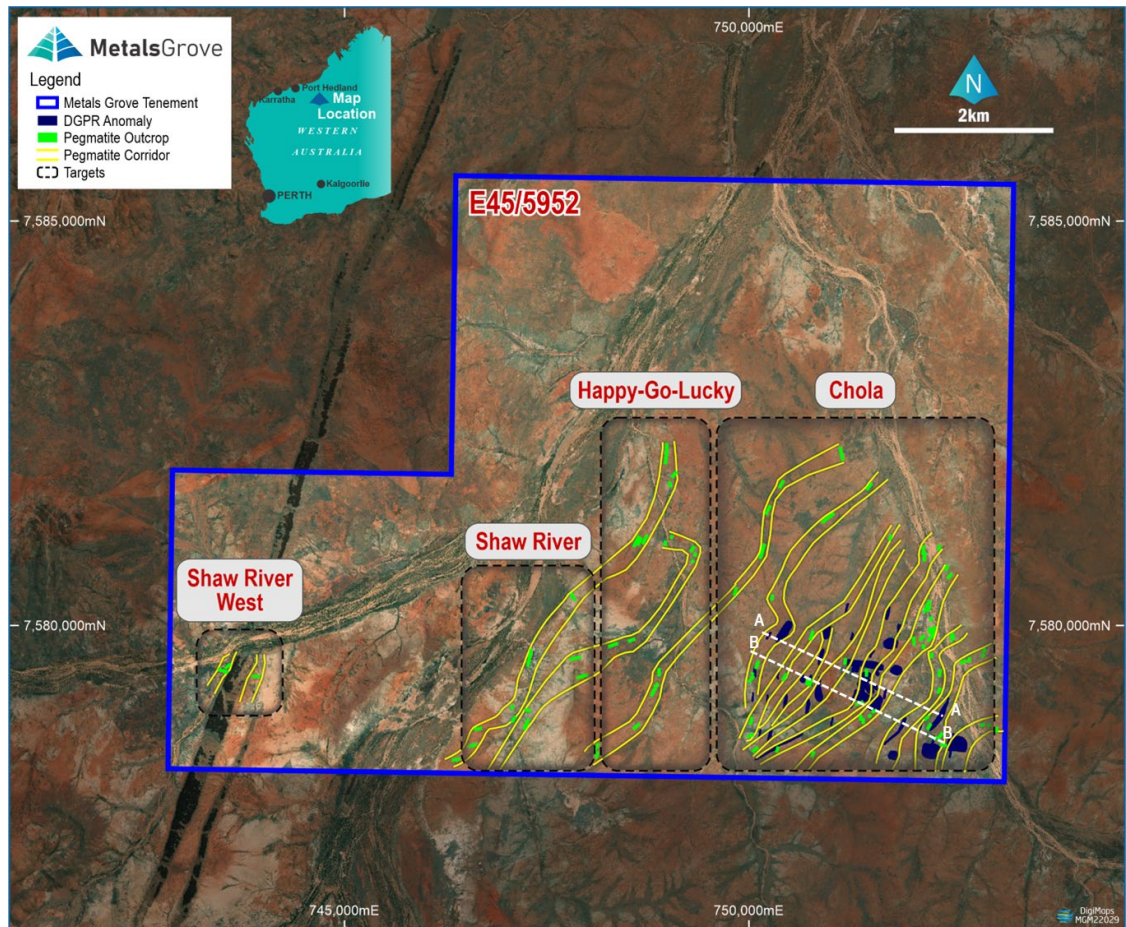


Figure 5: Showing mapped pegmatites with DGPR interpreted pegmatites at Chola Prospect

The DGPR survey was planned to test extension at depth of existing surface-mapped, known lithium-rich pegmatites; and potential to identify additional blind pegmatites.

The new interpreted pegmatites, shown in green in Figure 4, appear to be much wider than the mapped and sampled pegmatites at Chola, and are also interpreted to start below surface and extend slightly deeper. The orientation correlates with the known surface outcrop pegmatite. Further details on the drilling programme completed at Upper Coondina can be viewed in the ASX release dated 19th December 2022.

Next steps

- RC Drill samples have been sent to the laboratory for analysis, with first results expected this quarter.
- Continue detailed field mapping in the areas north of Chola and Happy Go Lucky Prospects to further enhance the geological modelling.
- Continue DGPR survey in the areas north of Chola and Happy Go Lucky and Shaw River Prospects to identify potential extensions of the undercover pegmatites.
- Planning for follow-up programmes once assay results have been received and interpreted.
- Commence planning for heritage surveys prior to drill programmes.
- Planning underway for reconnaissance surface field mapping and sampling.

ARUNTA PROJECT-BRUCE, EDWARDS CREEK, BOX HOLE PROSPECTS-NT

BRUCE RARE EARTH, COPPER-GOLD

Pre-Drilling Surface Mapping Confirms Rare Earth and LCT Pegmatite Potential

During the quarter, MGA reported that a pre-drilling detailed surface mapping program had been completed at the Company's Bruce Rare Earth Prospect. (See ASX release dated 7th November 2022).

Importantly, this work has highlighted two types of mineralised zones within EL31225 which are:

- **Pegmatites in the southern part of the EL which have been mined for mica up until the early 1950's; and**
- **Quartz veins at the Bruce prospect which form an east-west trending complex which is associated with Au and Cu mineralisation**

The program covered three specific target areas within EL31225, Whistleduck, Plenty River and Whitehorse. Forty four (44) rock chip samples were taken from Plenty River, Whistleduck, Whitehorse and Bruce North prospects. The geochemical responses for the recent rock chip sampling assay results confirm the potential of REE mineralisation. The assay results include TREO 433 ppm, LREO 145.5 ppm, HREO 363 ppm, CREO 322 ppm, MREO 135 ppm. Sampling was across multiple outcropping pegmatite dykes occurring in swarms, over an approximate area of 5.0 km x 3.0 km.

The rock chip samples were collected from each of the prospective areas or old mine clusters. There are many small mica mines on the tenement. The mines are all located on pegmatites intruding into a Palaeo-to-Meso-Proterozoic basement complex of granite/gneiss and high-grade metamorphic units. The pegmatites range in size up to ten metres wide and have a strike length up to over 200 metres. All the old mines are located where the pegmatites have a high mica content. Other pegmatites have a moderate or low mica content.

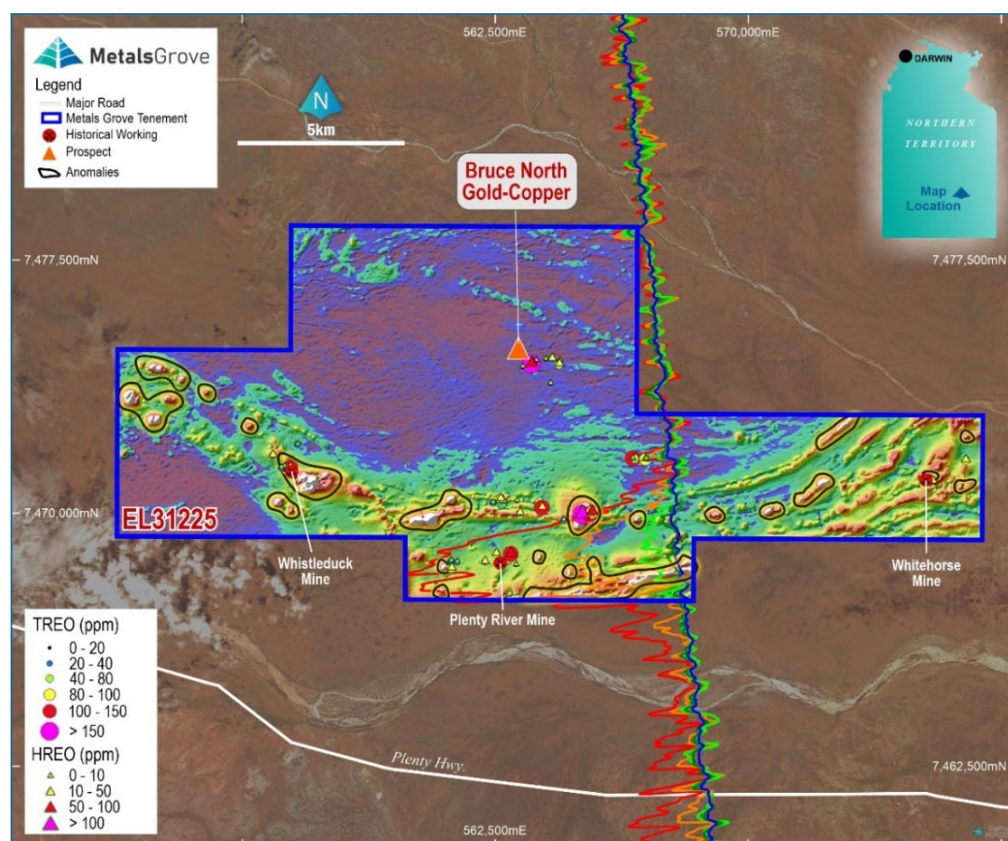


Figure 6: Bruce tenement location plan with recent rare earth assay results

As previously reported (see ASX release dated 20th July 2022), MetalsGrove has 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. The broad conductor has not been tested to date. Surface field mapping and sampling was completed to identify and refine additional drill targets for testing during the planned drilling program designed to test the bedrock conductor and historical pegmatite mines.

Bruce North prospect has a series of east-west trending quartz veins dipping at shallow angles. The quartz veins are sub-parallel up to 2 metres wide trending east-west. An estimate of eleven (11) different trends were identified with a total cumulative strike length of a little over 2 km.

The veins appear to have intruded into a thrust fault complex. The fault has splayed at the surface - it trends about east-west and has the north-block-over. Recent rock chip assay results returned 5.00 g/t gold, 2.70% copper, 16.00 g/t silver and 31.25% titanium.

Previous rock chip sampling of an exposed 300m section of the quartz vein returned values up to 7.24 g/t Au, however, the sample results show a large range suggesting that the gold has an uneven distribution in the vein ('nuggety gold'). A selected sample of ferruginous quartz from a possible extension of the vein 1.4 km to the east assayed 15.26 g/t Au. Previous Northern Territory Geological Survey (NTGS) rock chip sampling returned a highest grade of 53 g/t Au (ASX: SHH 15th November 2021).

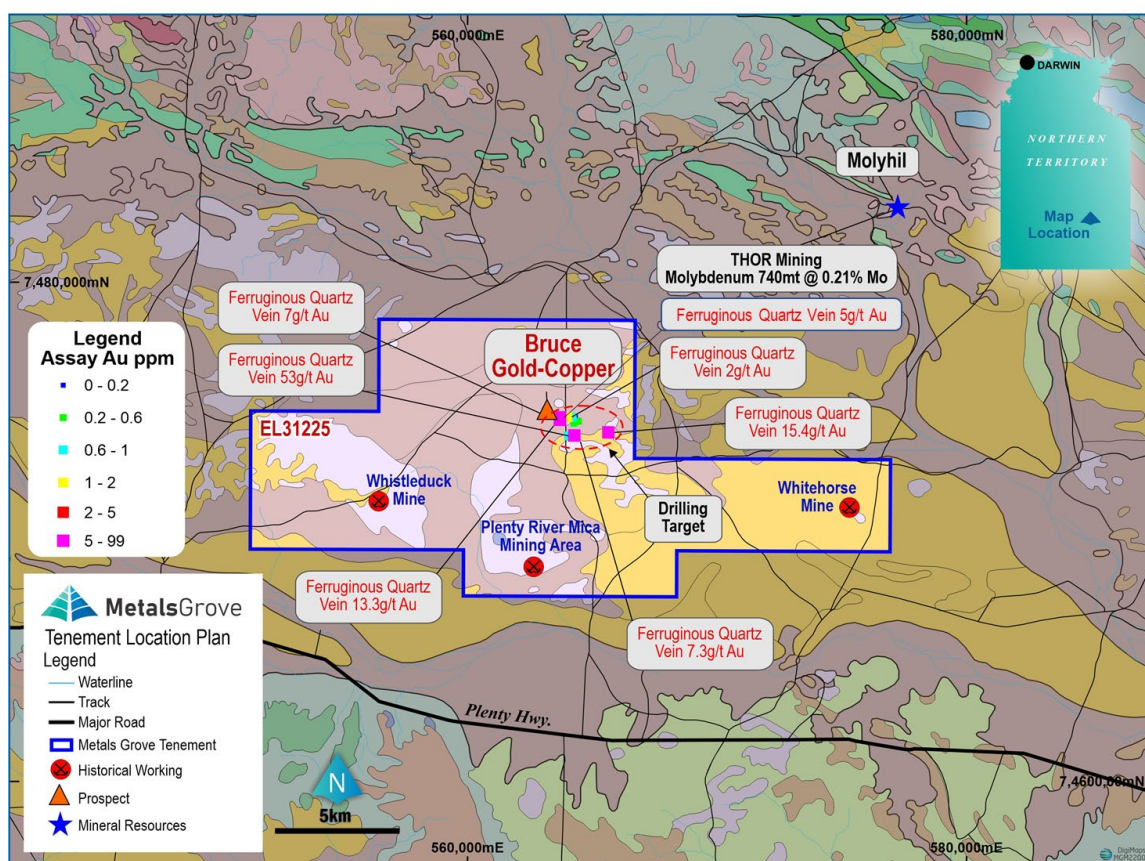


Figure 7: Bruce location plan with rock chip sample Au assay results

Next Steps

A program of approximately 10,000 meters of air core drilling is proposed to test the bedrock conductor at Whistleduck, Plenty River and Whitehorse historical pegmatite mines in three different stages. The field mapping identified multiple pegmatites up to 10 metres wide and strike length up to over 200 metres within the southern part of the tenement.

Further details on the Bruce sampling and mapping program can be viewed in the ASX release dated 27th October 2022.

BOX HOLE PROSPECT (EL32419)

The Box Hole zinc-lead, REE prospect comprises a single granted mineral exploration licence (EL32419), located approximated 340 km northeast of Alice Springs, NT. The tenement covers an area of approximately 12,765 ha.

No additional work was completed at Box Hole during the December quarter.

EDWARDS CREEK PROSPECT (EL 32420)

The Edwards Creek polymetallic (copper-lead-zinc-gold) prospect comprises a single granted mineral exploration licence (EL32420), located approximately 85 km north-northeast of Alice Springs, NT. The tenement covers an area of approximately 7,568 ha.

No additional work was completed at Edwards Creek during the quarter.

WOODIE WOODIE NORTH MANGANESE-WESTERN AUSTRALIA

The Woodie Woodie North Project is a highly mineralised region which has clearly demonstrated the potential to host significant manganese mineralisation.

No further work was completed at Woodie Woodie North during the December quarter.

BUSINESS DEVELOPMENT

In addition to aggressively advancing exploration, the Company is continuing to assess opportunities of resource assets that have a strategic fit, with the intention of providing maximum value to Shareholders.

CORPORATE

Cash Position

At quarter-end the Company held \$4,593,000 in cash.

ASX ADDITIONAL INFORMATION

The Company provides the following information pursuant to ASX Listing Rule requirements:

- ASX Listing Rule 5.3.1:
Exploration and Evaluation Expenditure spend during the quarter was \$734,000.
- ASX Listing Rule 5.3.2:
The Company confirms that there was no mine production and development activities for the quarter.
- ASX Listing Rule 5.3.4:
The below table provides the comparison of the Company's actual expenditure since its admission to the Official List of the ASX to its Use of Funds included in its Prospectus dated 13th May 2022.



Use of Fund	Estimate of the first 2 years after ASX admission	Actual use in December 2022 Quarter	Balance Remaining
Upper Coondina	\$1,685,865	637,920	1,047,945
Bruce	\$1,453,000	85,219	1,367,781
Box Hole	\$423,000	61,574	361,426
Edwards Creek	\$427,000	46,430	380,570
Woodie Woodie North	\$450,000	163,857	286,143
Cash Settlement-SHH and TLPL	\$60,000	60,000	-
Estimated costs of the offer	\$696,264	696,264	-
Working capital	\$1,141,736	1,141,736	1,141,736
Administration costs	\$524,000	516,601	516,601
Total	\$6,860,865	2,267,865	4,593,000

- ASX Listing Rule 5.3.5:

The Company advises that the Directors were paid or were payable \$62,000 during the quarter.

TENEMENTS

In accordance with Listing Rule 5.3.3, MetalsGrove provides the following Information concerning its mining tenements.

No applications were made during the quarter by the Company to acquire or surrender its existing licenses.

Project	Tenement	Holder	Lease Status
Upper Coondina	E45/5952	MetalsGrove Mining Ltd	Granted
Woodie Woodie North	E45/5945	MetalsGrove Mining Ltd	Granted
Edwards Creek	EL32420	Territory Lithium Pty Ltd	Granted
Bruce	EL31225	Territory Lithium Pty Ltd	Granted
Box Hole	EL32419	Territory Lithium Pty Ltd	Granted

Note: Territory Lithium Pty Ltd is wholly owned subsidiary of MetalsGrove Mining Limited

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 and results is based on information provided to and compiled by Sean Sivasamy who is a Member of The Australian 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'.

The information in this announcement that relates to Geophysical interpretations was provided by Mr Russell Mortimer of Southern Geoscience Consultants who is a Member of The Australian Institute of Geoscientists.

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

This announcement includes information that relates to Exploration Results prepared and first disclosed under the JORC Code (2012) and extracted from the Company's initial public offering prospectus which was released on the ASX on 13th May 2022. A copy of this prospectus is available from the ASX Announcements page of the Company's website: <https://metalsgrove.com.au/>

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,

SHAREHOLDER ENQUIRIES

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