



ASX ANNOUNCEMENT



Date

27 October 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

Mr Haidong Chi
Non-Executive Director

Chief Financial Officer
Ms Rebecca Broughton

Company Secretary
Ms Rebecca Broughton

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QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 30 SEPTEMBER 2023

ARUNTA PROJECT HIGHLIGHTS:

Bruce REE Prospect

- **2,343m RC drilling programme completed on time and budget to test multiple high priority carbonatite and REE bearing drill targets.**
- **High-grade carbonatite REE grades of up to 7,000ppm (0.70%) TREO 35% MREO/REO, 28% NdPr/TREO and 36% Y₂O₃/TREO with multiple zones of mineralisation.**
- **Exceptionally high-grade carbonatite of 38% MREO/TREO, 58% HREO/TREO 28% NdPr/TREO and 36% Y₂O₃/TREO.**
- **Carbonatite dyke outcrops extend strike east-west by 9km and remain open.**

Best drill highlights include:

Plenty River:

- **BRR23016: 2m @ 4,000ppm (0.40%) TREO and 35% MREO/TREO, 27% NdPr/TREO from 21m Incl: 7,000ppm (0.7%) TREO, 35% MREO/TREO, 27% NdPr/TREO from 21m.**

Bruce:

- **BRR23013: 1m @ 7,785ppm Cu (0.8% Cu) from 103m, 3m @ 1,000ppm PbO₂ from 63m, 2m @ 1,170ppm PbO₂ from 84m and 3m @ 1,245ppm ZnO from 63m, 2m @ 1,710ppm ZnO from 83m.**
- **Follow-up soil sampling programme completed at the Bruce Prospect.**

CORPORATE SUMMARY:

- **Cash position as at 30 September \$2,058,000**
- **Management attendance and presentation at 121 Mining and Energy Investment Conference in Singapore.**

MANAGEMENT COMMENTARY

Commenting on the September quarter, Managing Director Sean Sivasamy said:

"MGA continued to make considerable exploration progress during the September quarter, highlighted by the confirmation of a high-grade Rare Earth Element carbonatite discovery within our Bruce Prospect. This was a significant advancement in our exploration strategy as it clearly demonstrates the abundant mineralised potential within our Arunta tenement package. Importantly, the carbonatite dyke outcrops extend the mineralised strike within the Bruce Prospect by 9km (east-west) and remain open, providing excellent upside potential for future exploration."

MetalsGrove has a busy pipeline of exploration activity planned for the remainder of the 2023 calendar year, and management is also continuing to assess new potential project acquisition opportunities that complement our current strategy. I look forward to reporting regular updates on progress over the coming weeks."

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 30 September 2023 ("**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).

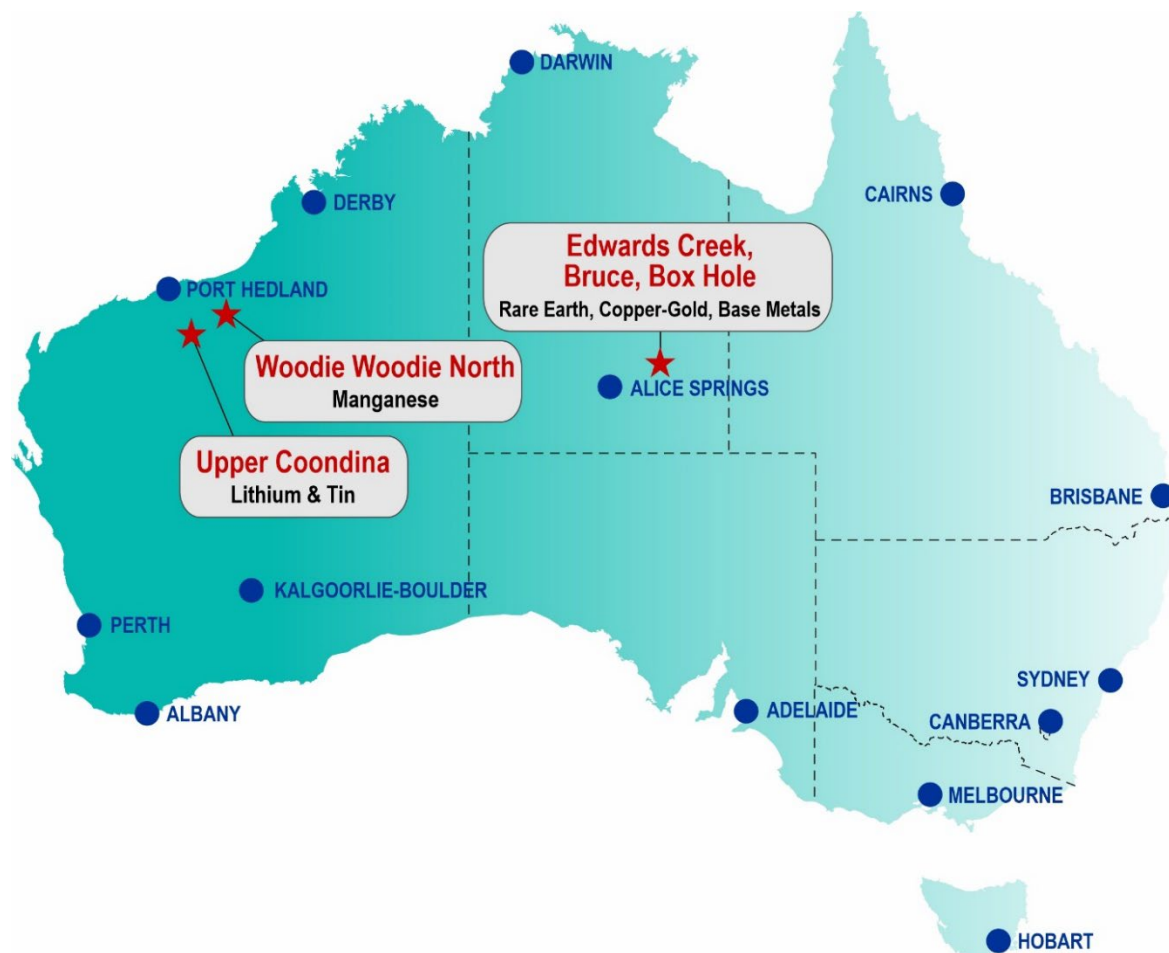


Figure 1: MetalsGrove Mining Ltd Projects location map.

ARUNTA PROJECT – NORTHERN TERRITORY (BRUCE, EDWARDS CREEK, BOX HOLE PROSPECTS)

BRUCE RARE EARTH, COPPER-GOLD

Maiden Drilling Campaign Completed

In July, MGA completed its maiden Reverse Circulation ("RC") drilling programme at the Bruce Prospect.

A total of 16 RC holes for 2,343m were drilled to test several high priority targets including identified **multiple high priority carbonatite¹ and REE bearing drill targets** reported from soil sampling (see ASX release dated 7th June 2023).

Assays from this programme 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.**

Carbonatite outcrops extend strike east-west by 9km and remain open.

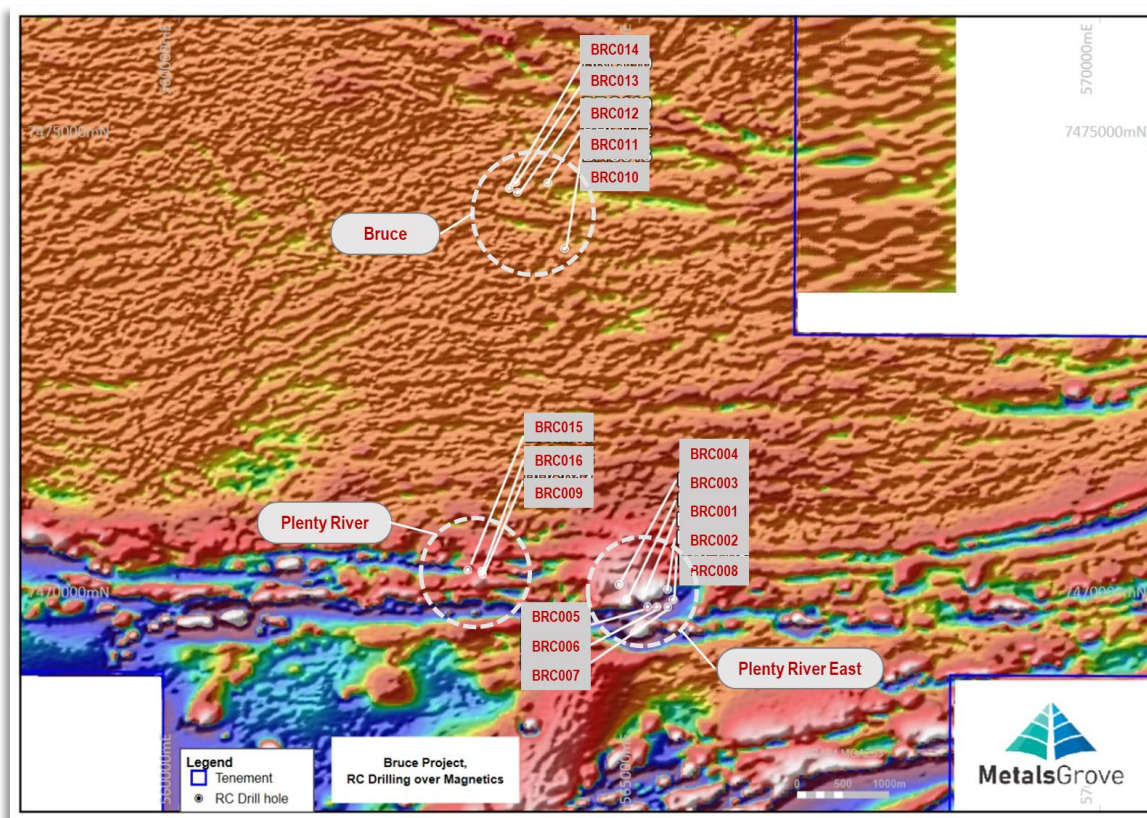


Figure 2– Maiden Drilling at Bruce Drill Hole Location Plan.

All the intersections are shallow at depth with the geology of the holes in altered biotite schist and gneiss. The most significant intersections occur near surface and in the weathered zone. Weathering processes typically concentrate rare earth element (REE). The primary rock is leached and the rare earth oxides (REO) are concentrated in the weathered zone.

The grades returned in the Bruce drilling compare very favourably and indicate potential for the development of the project if sufficient tonnes can be found. The HREO/TREO, MREO/TREO and NdPr/TREO ratios are all reasonable and comparable to other projects (see below Table 1.).

Company	Project Name	Cut-off TREO %	TREO %	LREO ppm	HREO ppm	MREO ppm	NdPr ppm	HREO /TREO	MREO /TREO	NdPr /TREO	Y ₂ O ₃ /TREO
Pensana	Longonjo	0.1% NdPr (~0.5% REO)	1.60	14,720	1,250	4,200	2,710	8%	26%	17%	2.6%
Peak Resources	Ngualla	3.0	4.75	46,140	1,380	11,220	10,110	3%	24%	21%	0.2%
Lynas	Mount Weld	4.0	8.60				19,500			23%	
Arafura	Nolan's Bore	1.0	2.60	24,544	2,506	8,861	6,864	10%	34%	26%	1.4%
Hastings	Yangibana	0.2% NdPr	1.17	10,263	920	5,167	3,900	8%	44%	33%	1.4%
Northern Minerals	Browns Range	0.15	0.76		6,688			88%			57%
Ionic Rare Earths	Makuutu	200ppm*	640	480	171	179	140	26%	30%	22%	14%
ABX	Deep Leads	250ppm*	0.08	476	326	260	161	41%	32%	20%	23
Dreadnought	Yin	0.2	1.03							28%	
MetalsGrove	BRR23016	0.0	0.70	6,095	934	2,394	1,875	14%	35%	28%	5%

Table 1: Rare earth grades and ratios for select rare earth projects and the grades and ratios in the MGA RC drilling comparison.

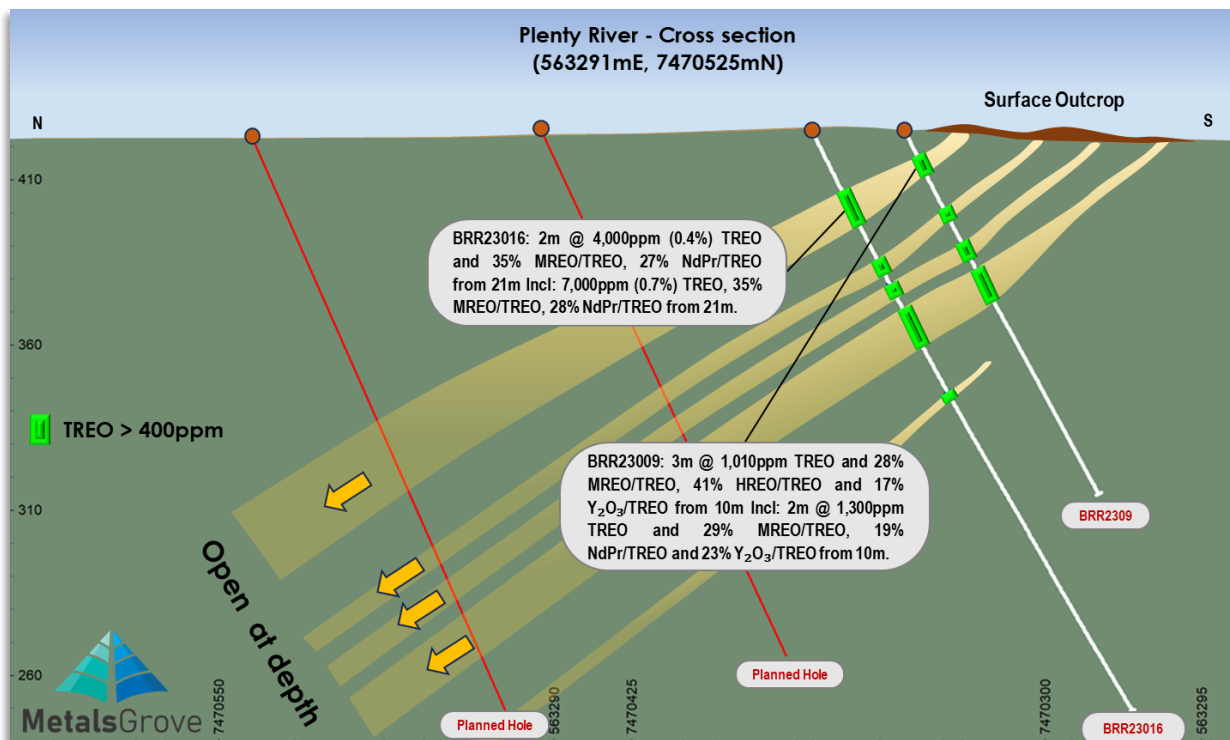


Figure 3 – Plenty River Carbonatite Rare Earth Mineralisation Long Section.

Further details on the outcomes from the maiden drilling programme at Bruce can be reviewed in the ASX announcement dated 14 August 2023.

Bruce Phase 2 (P2) Soil Sampling Programme

In August, MGA reported that a follow-up grid spaced soil sampling programme was underway at the Bruce Prospect. The aim of this programme was to follow-up RC drilling and soil of carbonatite outcrops at Bruce which have confirmed high-grade REE mineralisation.

The pegmatite and carbonatite outcrops at Bruce are generally highly weathered. The P1 soil sampling was completed on the high priority geophysical anomaly and carbonatite outcrops. The P2 grid spaced soil sampling will be carried out on the remaining carbonatite outcrops and geophysical anomalies along the 9km carbonatite corridor. This soil sampling programme will take 10 days to complete.

This detailed grid spaced soil sampling campaign at Bruce is to define targets for the upcoming phase two (P2) drilling programme. Targets for drill testing will be finalised once results of the detailed soil sampling campaign have been assessed.

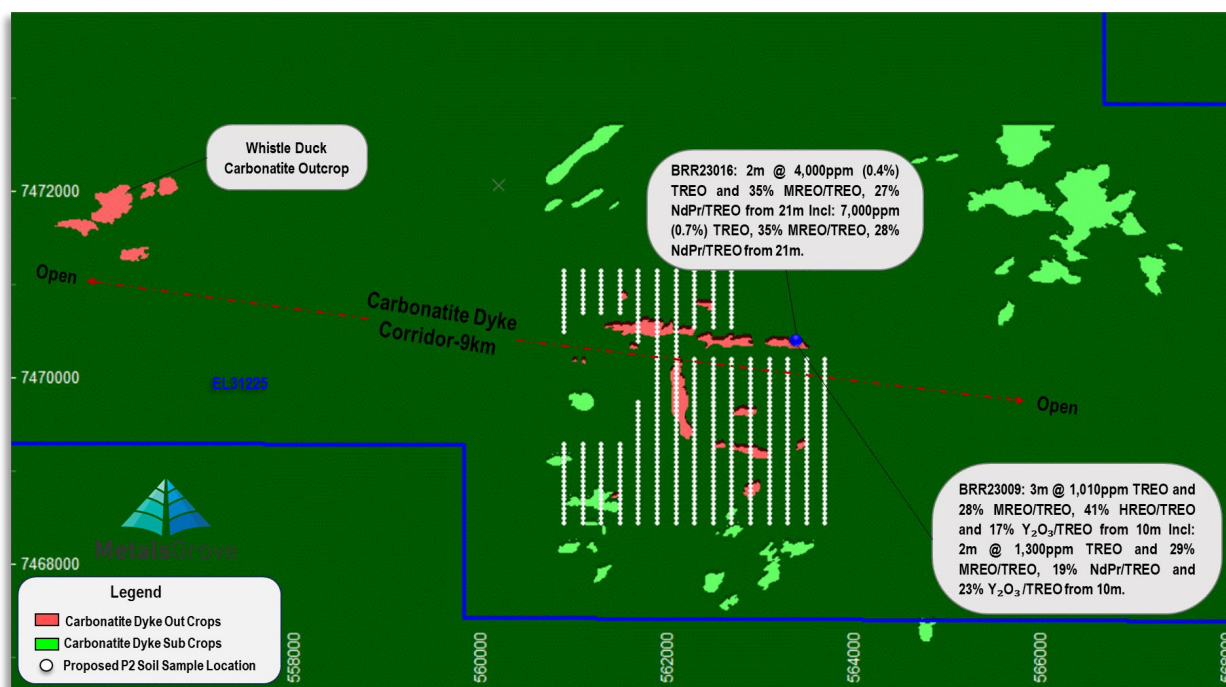


Figure 4: Systematic grid spaced soil sampling (P2) priority drilling targets at Bruce location plan.

Further details on the confirmation of the follow-up soil sampling programme at Bruce can be reviewed in the ASX announcement dated 4 September 2023.

EDWARDS CREEK COPPER-GOLD

Maiden RC Drilling Programme Completed at Edwards Creek

Post quarter end (October 3, 2023), MGA reported an update on the maiden drilling programme completed at the Edwards Creek Copper-Zinc Prospect in the Northern Territory.

The initial programme included two RC holes for a total of 431m and was designed to test several targets identified through both historic and recent geophysical, electromagnetic and radiometric data sets. Initial results from this round of drilling indicate drilling intersected only a small portion of the total system, however this has provided invaluable data on the mineralogy, geology, and geometry of mineralisation. The REE and gossan mineralisation remains open in all directions.

Maiden drilling was encouraging and showed mineralisation zones up to 17 metres (drill width) of weak to intense sericite and silicification with disseminated sulphides in gneissic granitoid structures.

The observations from the Company's maiden drilling programme align with the pre-drill geological model that indicated Edwards Creek could potentially host large REE and copper-zinc mineralisation system at depth.

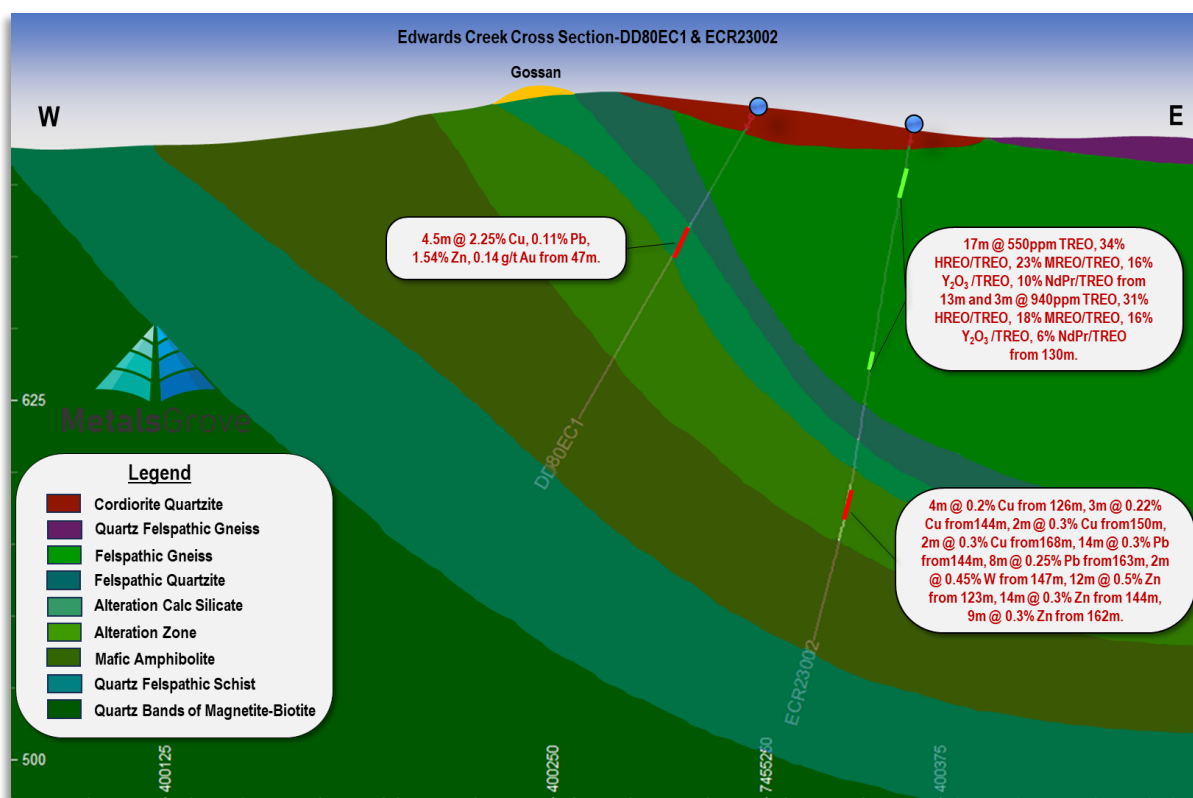


Figure 5: Cross Section DD80EC1 and ECR23002 at the Edwards Creek Prospect.

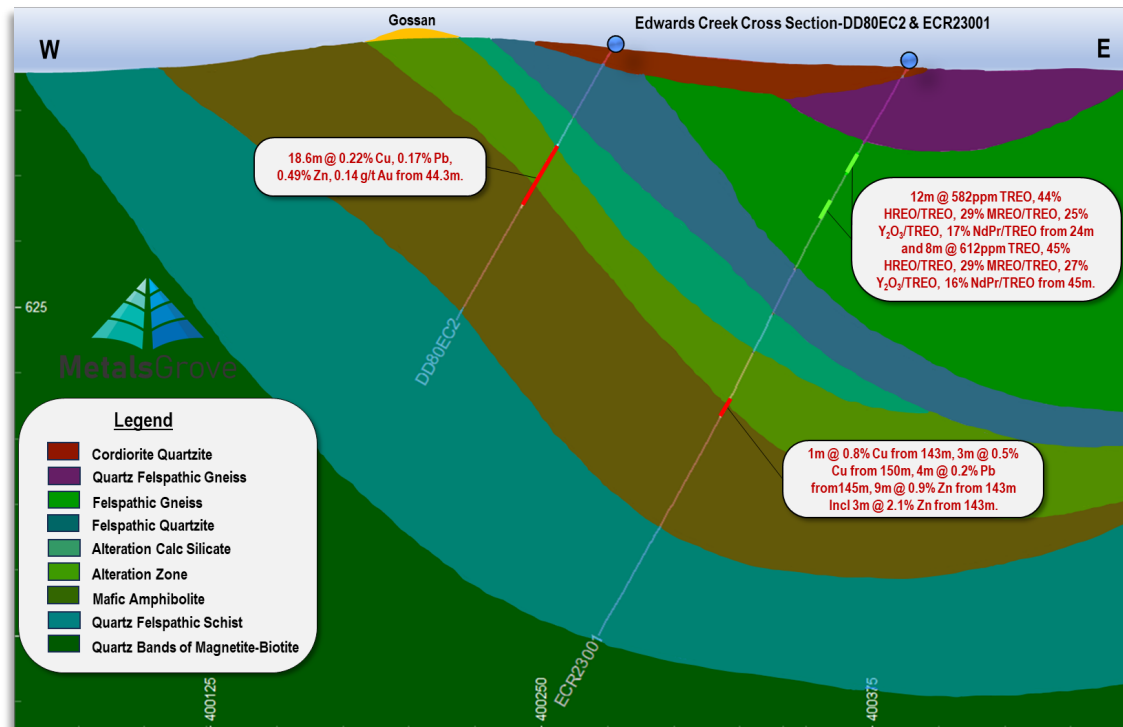


Figure 6: Cross Section DD80EC2 and ECR23001 at the Edwards Creek Prospect.

Best Assay Results

- ECR23001: 12m @ 582ppm TREO, 44% HREO/TREO, 29% MREO/TREO, 25% Y₂O₃/TREO, 17% NdPr/TREO from 24m and 8m @ 612ppm TREO, 45% HREO/TREO, 29% MREO/TREO, 27% Y₂O₃/TREO, 16% NdPr/TREO from 45m.
- ECR23002: 17m @ 550ppm TREO, 34% HREO/TREO, 23% MREO/TREO, 16% Y₂O₃/TREO, 10% NdPr/TREO from 13m and 3m @ 940ppm TREO, 31% HREO/TREO, 18% MREO/TREO, 16% Y₂O₃/TREO, 6% NdPr/TREO from 130m.
- ECR23001: 1m @ 0.8% Cu from 143m, 3m @ 0.5% Cu from 150m, 4m @ 0.2% Pb from 145m, 9m @ 0.9% Zn from 143m Incl 3m @ 2.1% Zn from 143m.
- ECR23002: 4m @ 0.2% Cu from 126m, 3m @ 0.22% Cu from 144m, 2m @ 0.3% Cu from 150m, 2m @ 0.3% Cu from 168m, 14m @ 0.3% Pb from 144m, 8m @ 0.25% Pb from 163m, 2m @ 0.45% W from 147m, 12m @ 0.5% Zn from 123m, 14m @ 0.3% Zn from 144m, 9m @ 0.3% Zn from 162m.

Hole ID	Sample ID	FROM (m)	TO (m)	TREO ppm	LREO ppm	HREO ppm	MREO ppm	NdPr ppm	HREO/TREO	MREO/TREO	NdPr/TREO	Y ₂ O ₃ /TREO
ECR23001	MG06862	21	22	576	351	246	173	100	43%	30%	17%	24%
ECR23001	MG06863	22	23	622	355	289	186	103	46%	30%	17%	27%
ECR23001	MG06864	23	24	810	462	375	243	134	46%	30%	17%	26%
ECR23001	MG06865	24	25	685	392	316	207	115	46%	30%	17%	26%
ECR23001	MG06866	25	26	779	437	367	227	126	47%	29%	16%	28%
ECR23001	MG06869	28	29	519	362	175	163	106	34%	32%	20%	18%
ECR23001	MG06872	31	32	727	440	311	219	126	43%	30%	17%	24%
ECR23001	MG06873	32	33	744	406	363	217	116	49%	29%	16%	28%
ECR23001	MG06887	45	46	686	370	338	200	108	49%	29%	16%	29%
ECR23001	MG06888	46	47	760	432	353	225	125	46%	30%	16%	27%
ECR23001	MG06889	47	48	699	415	308	213	124	44%	30%	18%	26%
ECR23001	MG06892	50	51	537	294	260	149	80	48%	28%	15%	29%
ECR23001	MG06893	51	52	772	434	364	230	126	47%	30%	16%	27%
ECR23001	MG06894	52	53	618	355	282	179	100	46%	29%	16%	27%
ECR23002	MG07114	13	14	522	348	198	120	45	38%	23%	9%	19%
ECR23002	MG07115	14	15	526	375	176	120	48	33%	23%	9%	16%
ECR23002	MG07117	16	17	514	389	150	122	54	29%	24%	11%	13%
ECR23002	MG07118	17	18	580	448	161	137	60	28%	24%	10%	11%
ECR23002	MG07119	18	19	617	462	185	147	65	30%	24%	10%	13%
ECR23002	MG07120	19	20	583	435	177	140	62	30%	24%	11%	13%
ECR23002	MG07123	22	23	547	411	163	130	56	30%	24%	10%	13%
ECR23002	MG07124	23	24	636	445	221	149	60	35%	23%	9%	16%
ECR23002	MG07126	24	25	593	432	189	140	59	32%	24%	10%	14%
ECR23002	MG07127	25	26	618	419	228	140	53	37%	23%	9%	18%
ECR23002	MG07128	26	27	600	411	217	136	52	36%	23%	9%	18%
ECR23002	MG07129	27	28	578	376	226	131	51	39%	23%	9%	20%
ECR23002	MG07130	28	29	602	421	208	139	58	34%	23%	10%	17%
ECR23002	MG07131	29	30	529	294	252	110	43	48%	21%	8%	27%
ECR23002	MG07236	130	131	613	348	288	115	34	47%	19%	6%	26%
ECR23002	MG07237	131	132	1494	1198	351	233	95	23%	16%	6%	12%
ECR23002	MG07238	132	133	720	588	168	135	48	23%	19%	7%	9%

Table 2 Best intersections from the 2023 Edwards Creek RC drill programme, intersections are reported as down-hole widths using a cut-off of 500ppm TREO.

Further details on the outcomes from the maiden drilling programme at Edwards Creek can be reviewed in the ASX announcement dated 3 October 2023.

Edwards Creek Prospect Summary

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.

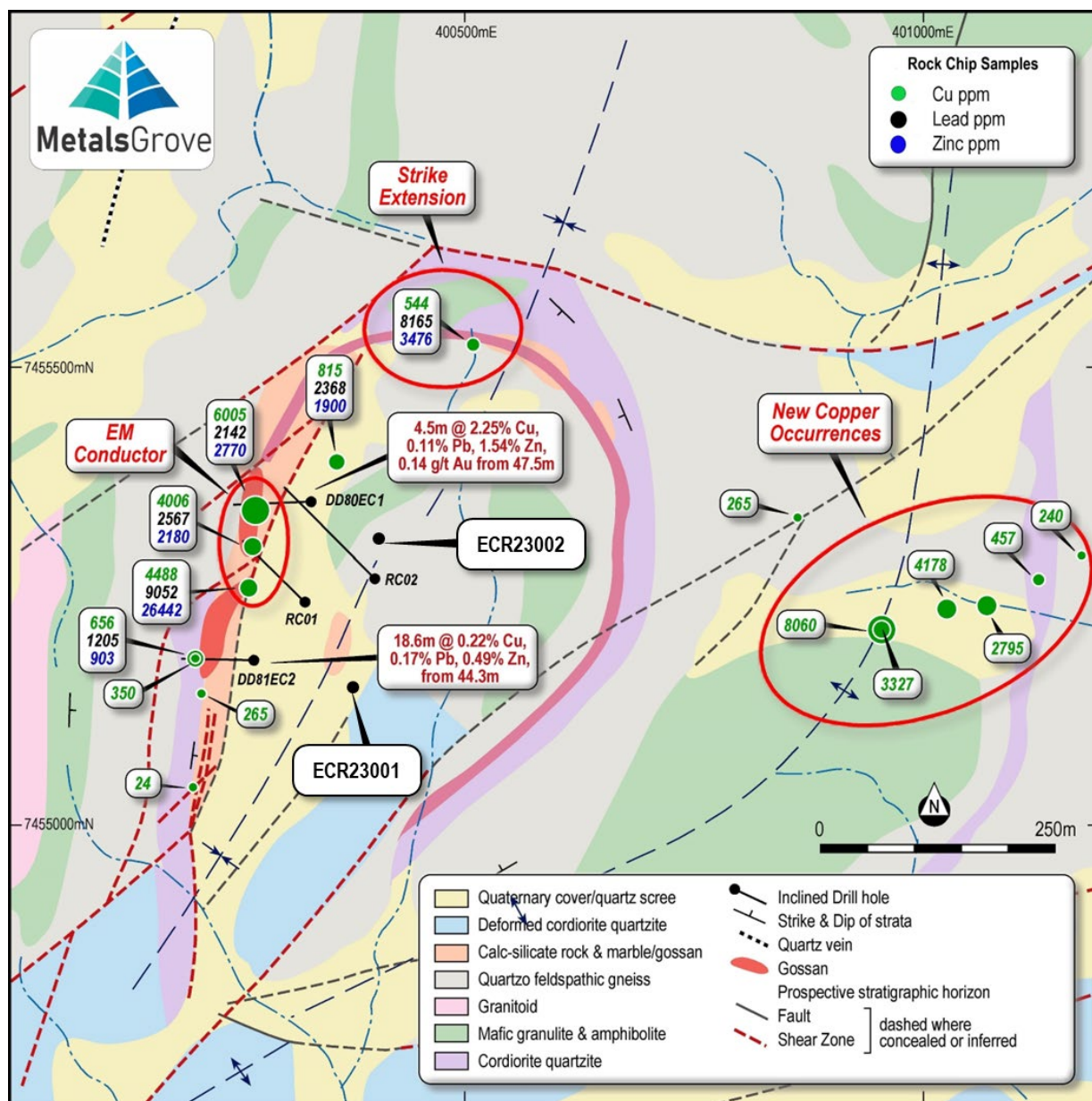


Figure 7: Edwards Creek Historical Drilling and Targets Location Plan.

Arunta Project Next steps

- Continue detailed field mapping in the areas west of Whistleduck, Bruce Prospect, to further enhance the geological modelling.
- Follow-up drilling programme (P2) at Edwards Creek once complete the maiden drilling data is collated, analysed and the geology interpreted.

UPPER COONDINA LITHIUM, TIN AND TANTALUM-WA

The Company's Upper Coondina Project is located 85km south-west of Marble Bar in the East Pilbara district of WA. The Project is located approximately halfway between the major mining regional service centres of Port Hedland and Newman, located approximately 200 km northwest and 180 km south-southeast of the project, respectively.

As reported in April (see ASX release dated 19 April 2023), RC drilling intersected multiple stacked Spodumene Pegmatites¹ including an intersection of:

- **Up to a 40m-wide mineralised zone, 0.20% Li_2O , 0.6% Rb_2O and 118ppm Ta_2O_5 .**

Further exploration including detailed geophysics and structural mapping are required to delineate main high grade mineralisation zone of lithium bearing pegmatites. The detailed modern exploration technology and high-level structural mapping will identify mineralization at depth and pegmatites undercover to determine new targets within and outside of the drilling areas.

No further exploration work was completed at this project during the September quarter and further updates on exploration plans for Upper Coondina will be provided in due course.

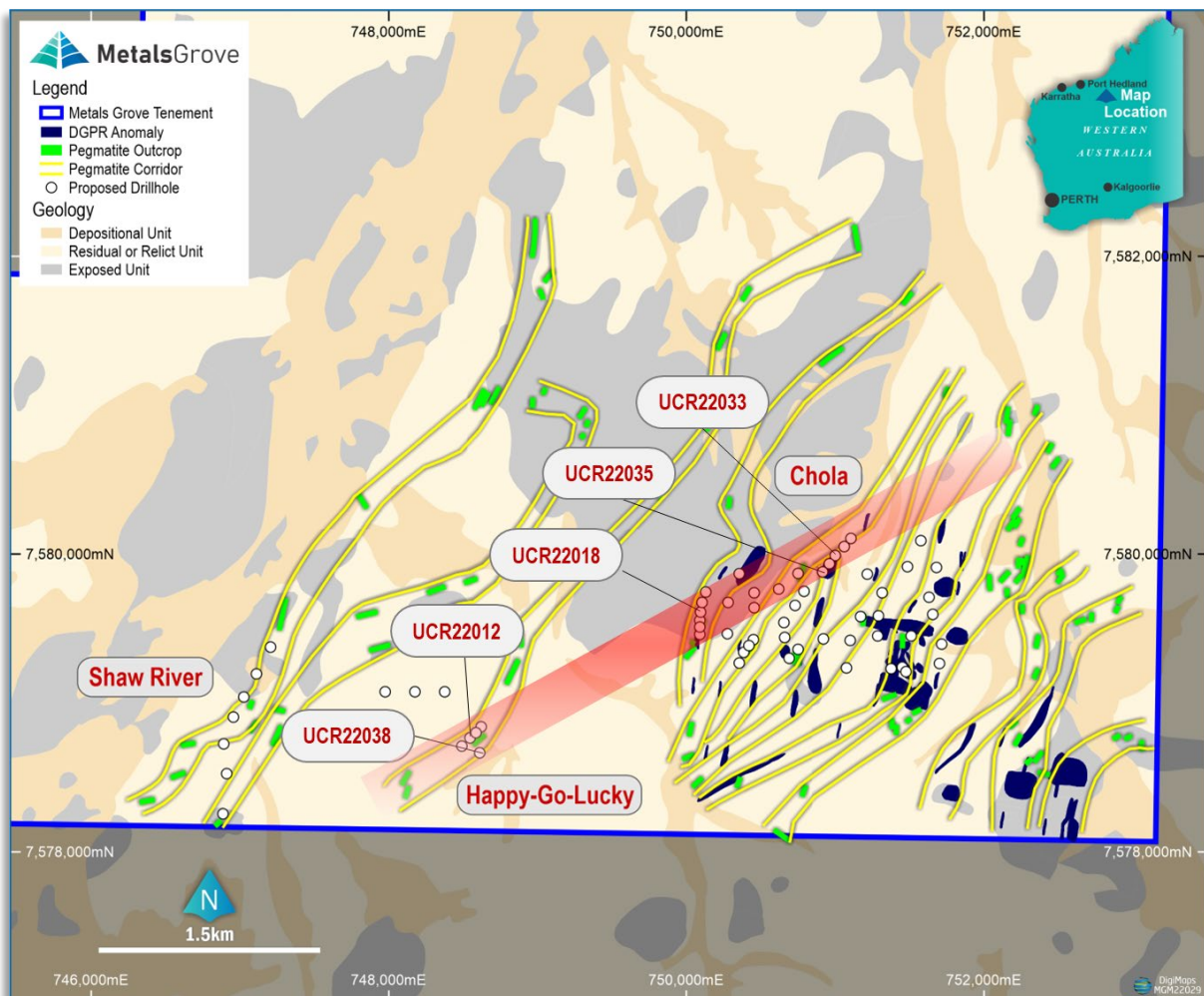


Figure 8: Upper Coondina Lithium projects showing pegmatites outcrop with drill hole location and pegmatite structural corridor.

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 exploration work was undertaken at this project during the September quarter.

BUSINESS DEVELOPMENT

In addition to systematically exploring the Company's advanced portfolio, MetalsGrove is continuing to assess opportunities of resource assets that have a strategic fit, with the intention of providing maximum value to Shareholders. Further updates on this strategy will be provided in due course.

CORPORATE

Cash Position

At quarter-end the Company held \$2,058,000 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 \$736,000.
- 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 Sep 2023 Quarter	Balance Remaining
Upper Coordina	\$1,685,865	1,291,382	394,483
Bruce	\$1,453,000	1,051,422	401,578
Box Hole	\$423,000	208,854	214,146
Edwards Creek	\$427,000	255,701	171,299
Woodie Woodie North	\$450,000	241,941	208,059
Cash Settlement-SHH and TLPL	\$60,000	60,000	-
Estimated costs of the offer	\$696,264	696,264	-
Working capital	\$1,141,736	473,302	668,434
Administration costs	\$524,000	524,000	-
Total	\$6,860,865	4,802,865	2,058,000

- ASX Listing Rule 5.3.5:
The company advises that there were \$94,000 payments made to related parties of the Company and their associates during the quarter.



TENEMENTS

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

Seven (7) new applications were made during the quarter by the Company to acquire new exploration licences and with no surrender its existing licenses.

Project	Tenement	Holder	Lease Status
Woodie Woodie North	E45/5945	MetalsGrove Mining Ltd	Granted
Upper Coondina	E45/5952	MetalsGrove Mining Ltd	Granted
Bruce	EL 31225	Territory Lithium Pty Ltd	Granted
Box Hole	EL 32419	Territory Lithium Pty Ltd	Granted
Edwards Creek	EL 32420	Territory Lithium Pty Ltd	Granted
Buningonia	E28/3358	MetalsGrove Mining Ltd	Application
Forrest	E45/6546	MetalsGrove Mining Ltd	Application
Dundas	E63/2359	MetalsGrove Mining Ltd	Application
Dundas	E63/2360	MetalsGrove Mining Ltd	Application
Dundas	E63/2363	MetalsGrove Mining Ltd	Application
Dundas	E63/2364	MetalsGrove Mining Ltd	Application
Dundas	E63/2366	MetalsGrove Mining Ltd	Application

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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MEDIA ENQUIRIES

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