

QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING 31 DECEMBER 2023

HIGHLIGHTS:

Zimbabwe

- **MGA enters into a strategic agreement to acquire six new lithium claims and ten new lithium tenement applications in Zimbabwe.**
- **Recent rock chip samples at the Arcturas Project have returned grades up to 2.5% Li₂O and at the Beatrice Project 2.1% Li₂O from the surface outcrops.**
- **Claims are located close to the world-class Arcadia Minerals lithium producing mine in Zimbabwe. The Arcadia mine is one of the world's largest lithium mines.**

Australia

- **Maiden RC drilling programme comprising two holes for 431m completed at Edwards Creek to test downdip extension of major structure.**
- **RC drilling intersected a mineralised shear zone – up to 17m* including:**
 - **Up to 3.5% zinc, 0.8%** copper, 0.5% tungsten, 0.2% lead and 1500ppm TREO.**
 - **ECR23001: 17m @ 550ppm TREO, 34% HREO/TREO, 23% MREO/TREO, 16% Y₂O₃/TREO, 10% NdPr/TREO from 13m.**
- **Phase two (P2) soil sampling at Plenty River confirms large footprint of rare earth mineralisation at the Plenty River target within the Bruce Prospect in the Northern Territory – best results include:**
 - **Up to 1,130***ppm TREO, 35% HREO/TREO, 30% MREO/TREO, 22% NdPr/TREO, 19% Y₂O₃/TREO.**

CORPORATE SUMMARY:

- **Cash position as at 31 December \$1,398,826**
- **Management attendance and presentation at 121 Mining and Energy Investment Conference in London**

MANAGEMENT COMMENTARY

Commenting on the December quarter, Managing Director Sean Sivasamy said: "The December quarter was a fantastic period for the business, highlighted by the strategic acquisition of six high-quality lithium claims in Zimbabwe.

The addition of these advanced Zimbabwe lithium assets adds considerable depth and optionality to our portfolio, whilst complementing the significant amount of exploration work completed to date on our Australian critical metals projects. We plan to hit the ground running in Zimbabwe early in the new year, with initial exploration plans confirmed and an in-country team ready to commence work. MGA also continued to make solid progress across our Northern Territory projects during the quarter, with assays further confirming the considerable REE potential along our 9km mineralised trend at the Bruce Prospect. Further work plans for the Arunta tenements will be reported to the market early in this quarter."

*Drilling widths reported are downhole and no estimate of true width is given with 4m internal dilution.

** Some numbers are rounded to one decimal place for the elements and rounded to whole number for REE values.

*** Some numbers are rounded to the closest numbers.



Date

25 January 2024

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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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 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 seven projects, two lithium assets in Zimbabwe, two located in Western Australia (WA) and three in the Northern Territory (NT).



Figure 1: MetalsGrove Mining Ltd Australia and Zimbabwe Projects location map.

ZIMBABWE LITHIUM PROJECT ACQUISITION

In December, MGA entered into strategic agreements to acquire six, contiguous and highly prospective lithium-tin-tantalum claims in Zimbabwe ("the Projects").

The Company's wholly owned subsidiary MetalsGrove Global (Private) Limited ("MGG") has executed agreements with two local Zimbabwe entities ("local entities") as follows:

- La Rich Resources Pty Ltd: Arcturas Lithium Project
- CN Mining Syndicate: Beatrice Lithium Project

The total cash consideration for the assets is USD\$60,000 payable to the local entities upon transfer of the property to MGG.

Each of the local entities will retain a 5% free carried interest in the respective Projects until a decision to mine is reached. Further details are provided in the transaction summary within the ASX announcement dated 11 December 2023.

LITHIUM ASSET SUMMARY

The Arcturas Lithium Project (ALP) is situated 35km northeast of Harare and the Beatrice Lithium Project (BLP) is located 55km south of Harare in Zimbabwe, inclusive of six new lithium claims 510ha (Figure1). The ALP is close to the Arcadia Lithium Mine and Arcturas Gold Mine. It is the most well-known pegmatite zone in this region that is mineralised in **spodumene, lepidolite, beryllium, tantalum and caesium**.

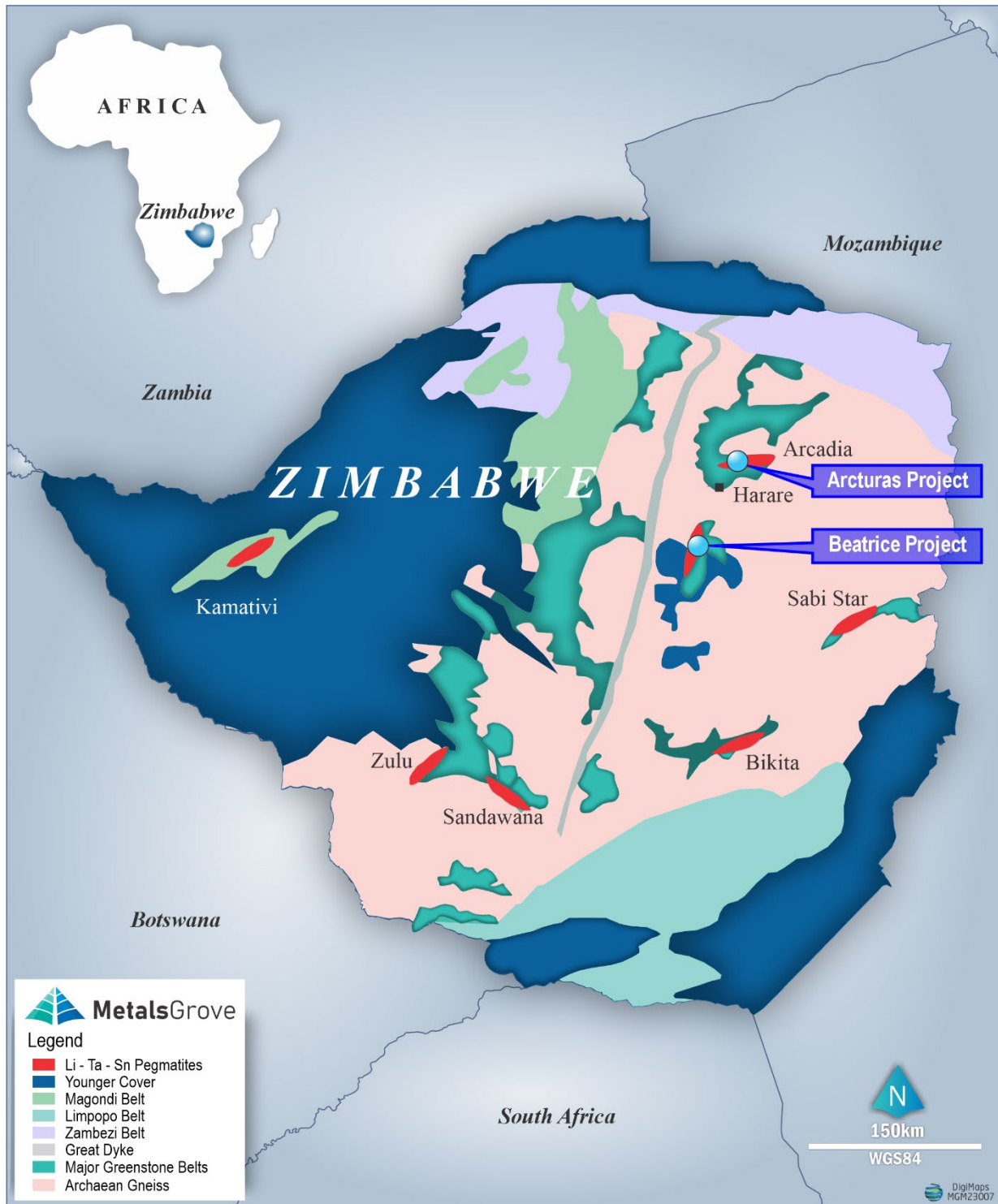


Figure 2: Arcturas and Beatrice Lithium Projects Location Plan

ARCTURAS LITHIUM PROJECT

An extensive exploration and mining review was carried out within the project area. Based on the Company's review of existing publicly available information (including historic exploration, trenching and production history), MGA believes that there is clear potential for a large tonnage open cut mine to be established.

The Zimbabwe assets could be developed independently, depending on the results of exploration and mineral resource delineation. The Zimbabwe assets cover significant pegmatite outcrops and extend up to 1.5km with 3m to 15m thick flat laying multiple beds mineralised pegmatite and artisanal mine workings for lithium.

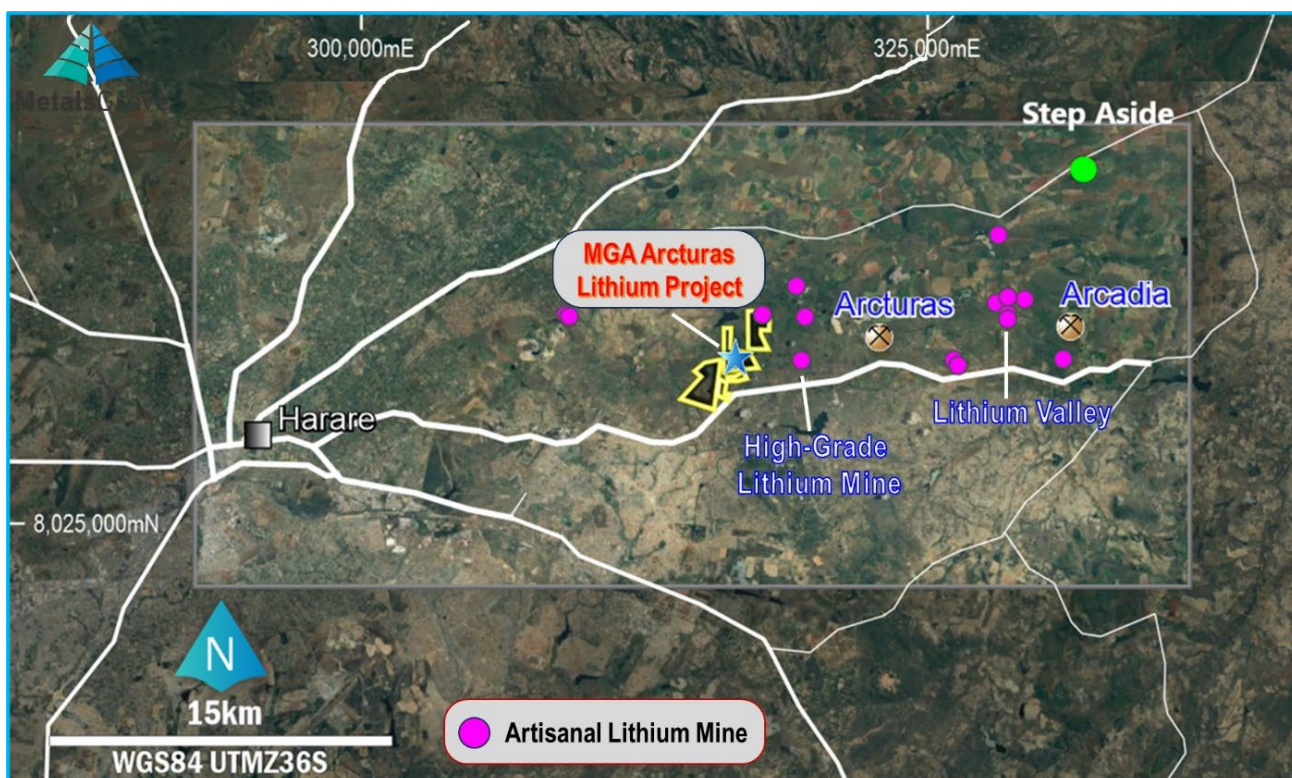


Figure 3: Location of Arcturas Lithium Prospect.

Sample ID	East	North	Li ₂ O (%)
2023/LRAC	315192	8031495	2.50
2023/MICAH	316500	8031700	0.05

Table 1: Surface Rock Chip Sample Assay Result – Arcturas Lithium Project.

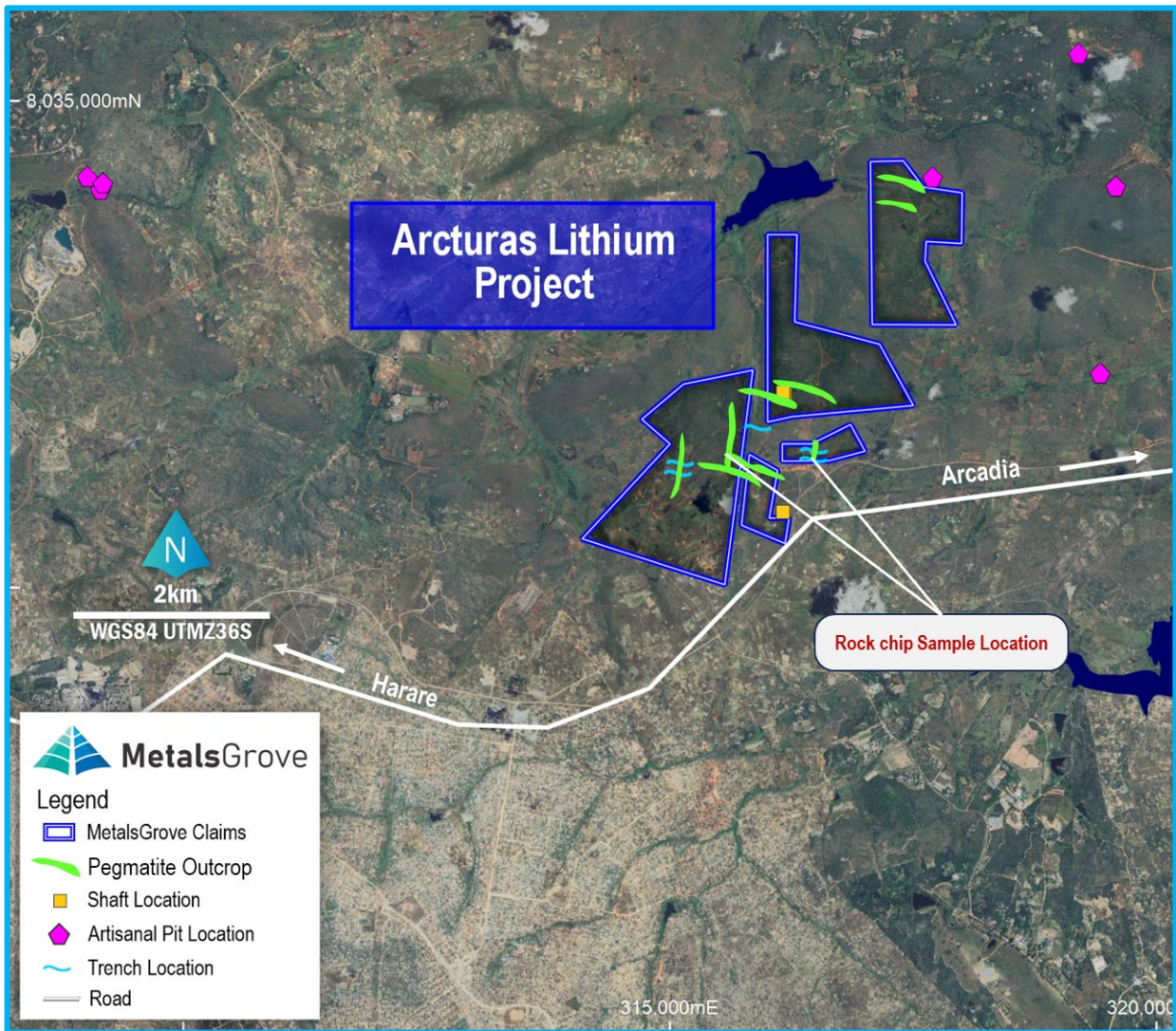


Figure 4: Current Known Pegmatite Outcrop, Trenches and Artisanal Workings at Arcturas Lithium

BEATRICE LITHIUM PROJECT

The Beatrice Lithium Project is close to the Joyce Gold mine and a lithium processing facility. It is a well-known pegmatite zone that is mineralised in **lithium, lepidolite, tantalum and caesium**. The Beatrice project is located approximately 55km south of Harare.

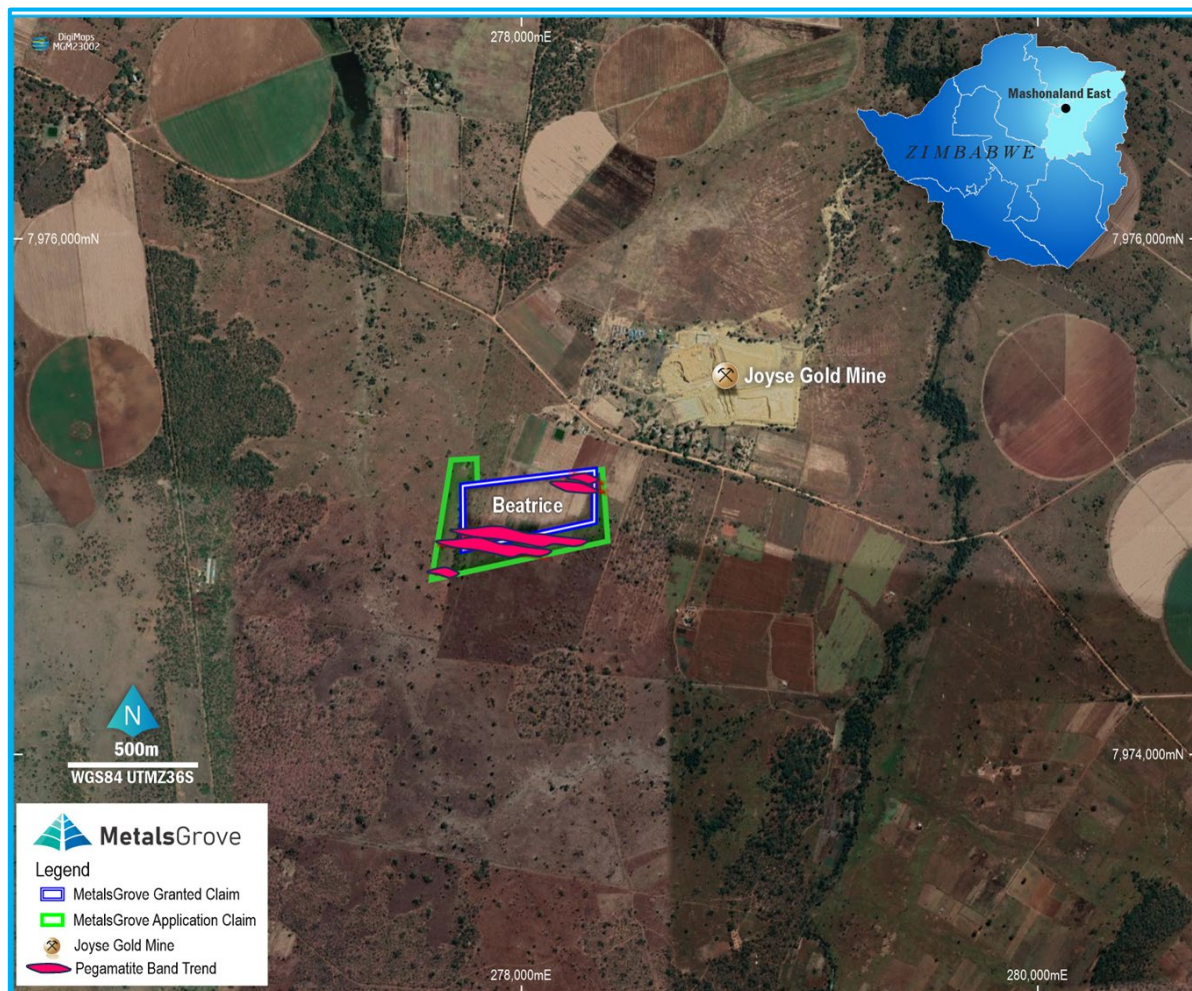


Figure 5: Beatrice Pegmatite Outcrops and Band Trend.

An extensive exploration and mining review was carried out within the project area. Based on the Company's review of existing publicly available information (including historic exploration, trenching and production history) for this project, MGA believes that there is potential for a high-grade open cut mine.

The recent rock chip sample assay results at Beatrice **returned up to 2.1% Li₂O.**

Sample ID	East	North	Li2O (%)
H001	277980	7974849	0.50
H002	277974	7974853	1.00
H003	277970	7974857	0.70
H004	277966	7974859	1.10
H005	277962	7974869	0.80
H006	277960	7974874	0.60
H007	277958	7974877	0.05
H008	277953	7974879	0.40
H009	277981	7974849	0.50
H010	277866	7974829	1.10
H011	277874	7974833	2.10
H012	277869	7974831	1.20

Table 2: Surface Rock Chip Sample Assay Result - Beatrice



Figure 6: Pegmatite sample from Trench work.

Extensive exploration and mining activities were carried out within the project area. Based on the Company's review of existing publicly available information (including historic exploration, trenching and production history) the prospect has the potential for a large tonne open cut mine.

Further details on the Zimbabwe lithium assets acquisition can be reviewed in the ASX announcement dated 16 October 2023.

ARCTURAS AND BEATRICE PROJECT NEXT STEPS

- Detailed surface field mapping and sampling.
- 3D geological modelling and interpretation.
- Phase-1 maiden drilling programme and interpretation.

ARUNTA PROJECT – NORTHERN TERRITORY

EDWARDS CREEK COPPER-GOLD, REE

Maiden RC Drilling Programme Completed at Edwards Creek

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.

In early October, 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.

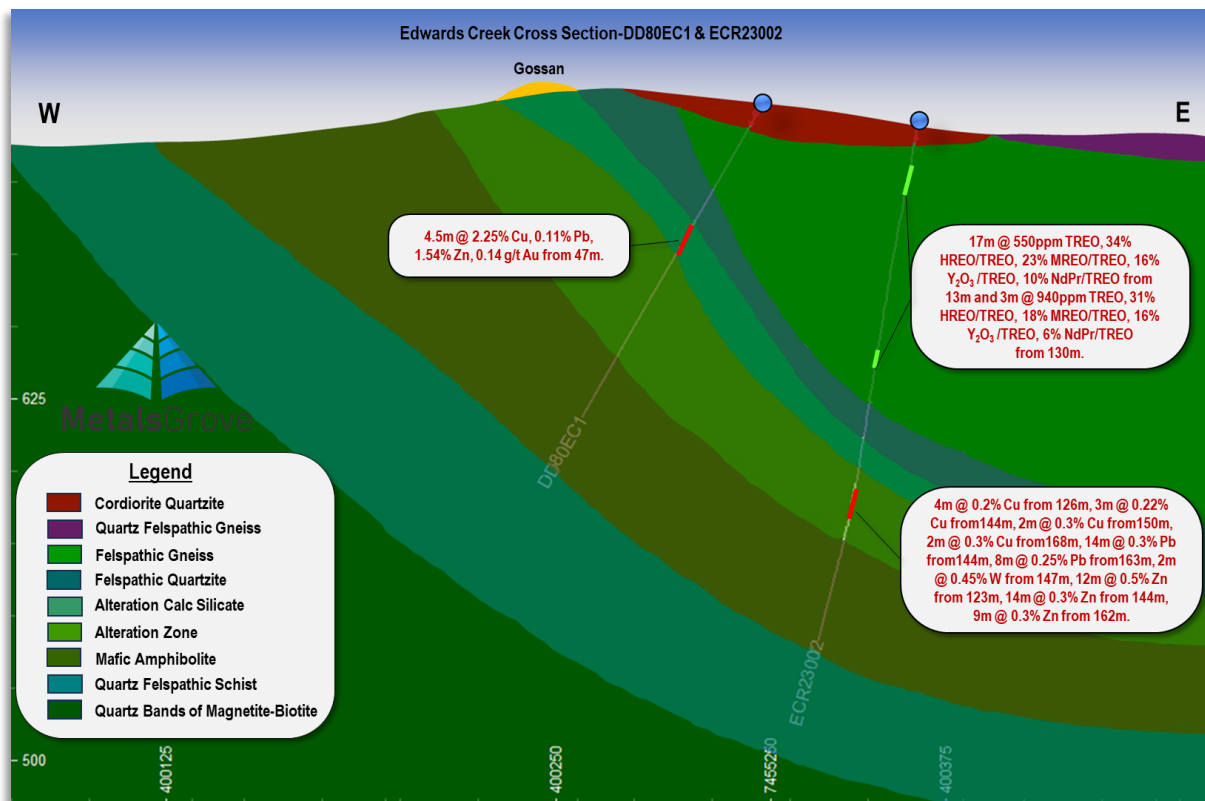


Figure 7: Cross Section DD80EC1 and ECR23002 at the Edwards Creek Prospect.

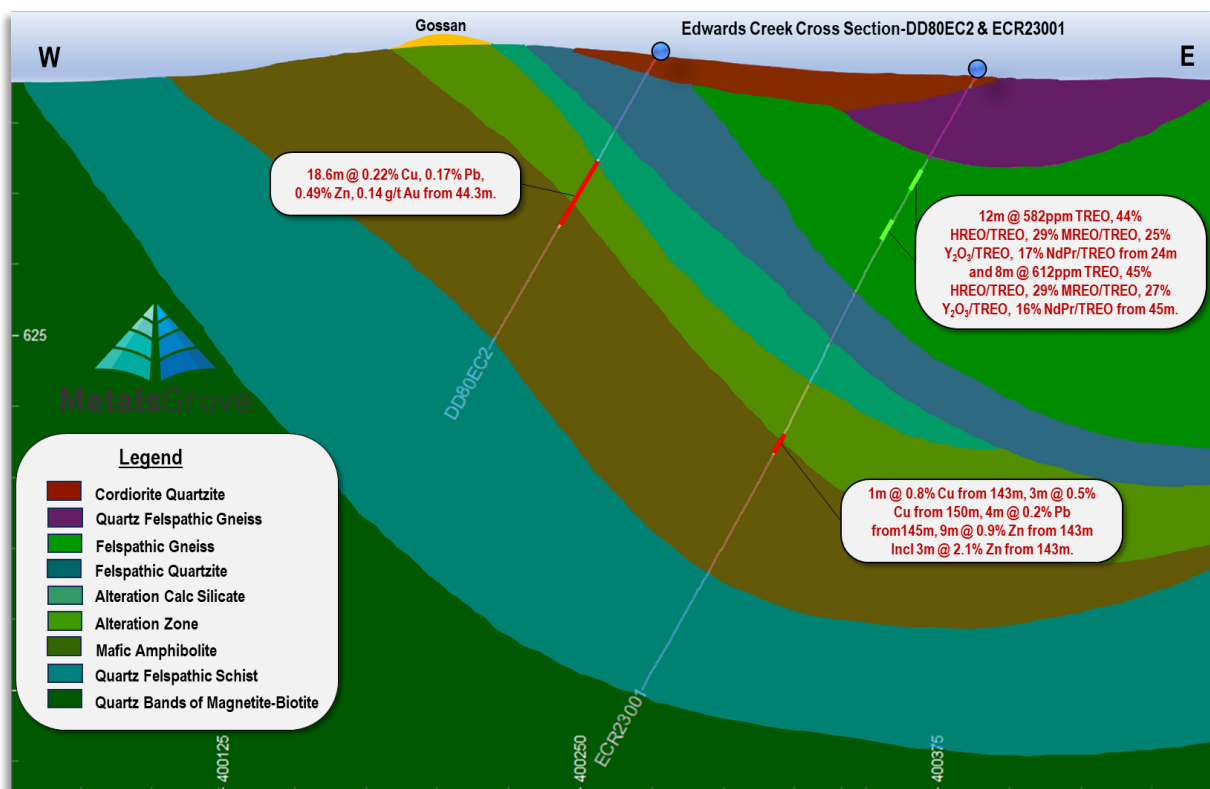


Figure 8: Cross Section DD80EC2 and ECR23001 at the Edwards Creek Prospect.

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	LREO	HREO	MREO	NdPr	HREO/	MREO/	NdPr/	Y ₂ O ₃ /
				ppm	ppm	ppm	ppm	ppm	TREO	TREO	TREO	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 3: Best intersections from the 2023 Edwards Creek RC drill programme, intersections are reported as down-hole widths using a cut-off of 500ppm TREC.

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

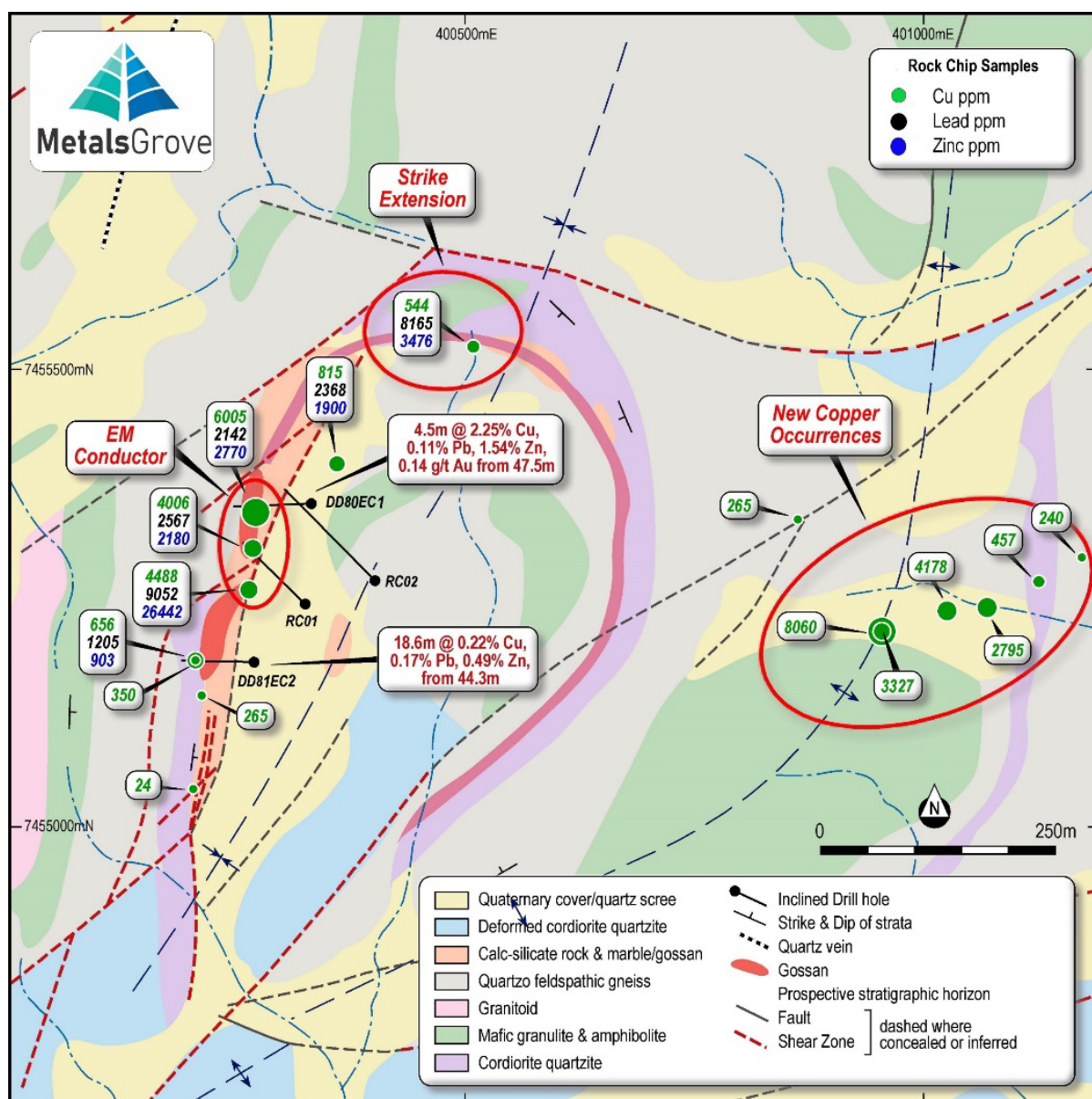


Figure 94: Edwards Creek Historical Drilling and Targets Location Plan

BRUCE - RARE EARTH (REE)

Mineralogy Test Confirm Strong REE Potential at Bruce / Arunta

In October, MGA reported that mineralogy analysis of Reverse Circulation ("RC") chip samples had 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.

Previously reported 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.

Further details on the outcomes from the mineralogy test work at Bruce can be reviewed in the ASX announcement dated 16 October 2023.

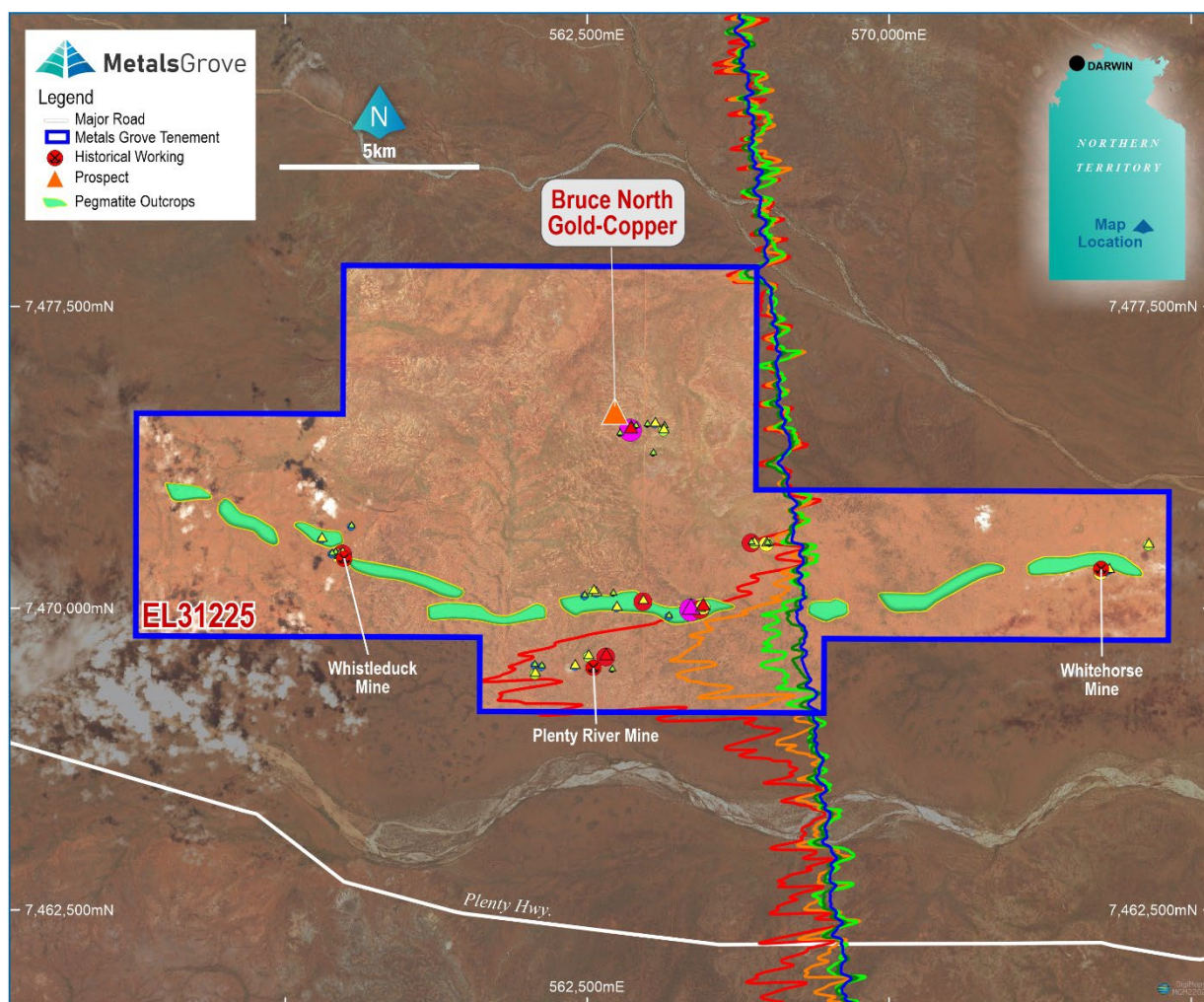


Figure 10: Bruce High Potential Rare Earth (REE) Targets Location Map.

Phase 2 Soil Sampling Extends REE Horizon

During the quarter, the Company reported that assays had been received from the Phase two ("P2") follow-up grid spaced soil sampling programme at the Bruce Prospect.

Assays from the P2 grid spaced soil sampling programme returned several excellent outcomes, including the **confirmation of two 3,000m by 300m carbonatite REE anomalies at the Plenty River target** which sits within the Bruce Prospect. Assays results are shown in the Table 1 and 2.

Best soil sampling assays from the recent programme include:

- 1,130ppm TREO, 35% HREO/TREO, 30% MREO/TREO, 22% NdPr/TREO, 19% Y₂O₃/TREO.

As previously reported (see ASX announcement dated 14 August 2023), the Company's maiden RC drilling programme at Bruce confirmed high-grade REE carbonatite mineralisation. Highlights from this maiden drilling programme included carbonatite REE grades of up to 7,000 ppm (0.70%) TREO, 35% MREO/TREO, 28% NdPr/TREO and 36% Y₂O₃/TREO with multiple zones of mineralisation. Drilling has also highlighted exceptionally high-grade carbonatite of 38% MREO/TREO, 58% HREO/TREO 28% NdPr/TREO and 36% Y₂O₃/TREO.

Arunta Project Next steps

- Continue detailed field mapping and sampling in the areas west of Whistleduck to further enhance the geological modelling.
- Phase-2 follow-up drilling programmes at Plenty River 3 km long carbonatite dyke outcrops.

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 have been intersected including:

- **Up to 40m-wide mineralised zone, 0.20% Li₂O, 0.6% Rb₂O and 118ppm Ta₂O₅.**

Further exploration including detailed geophysics and structural mapping are required to delineate main zone high grade mineralisation lithium bearing pegmatites. The detailed modern exploration technology and high-level structural mapping will identify mineralisation 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 December quarter and further updates on exploration plans for Upper Coondina will be provided in due course.

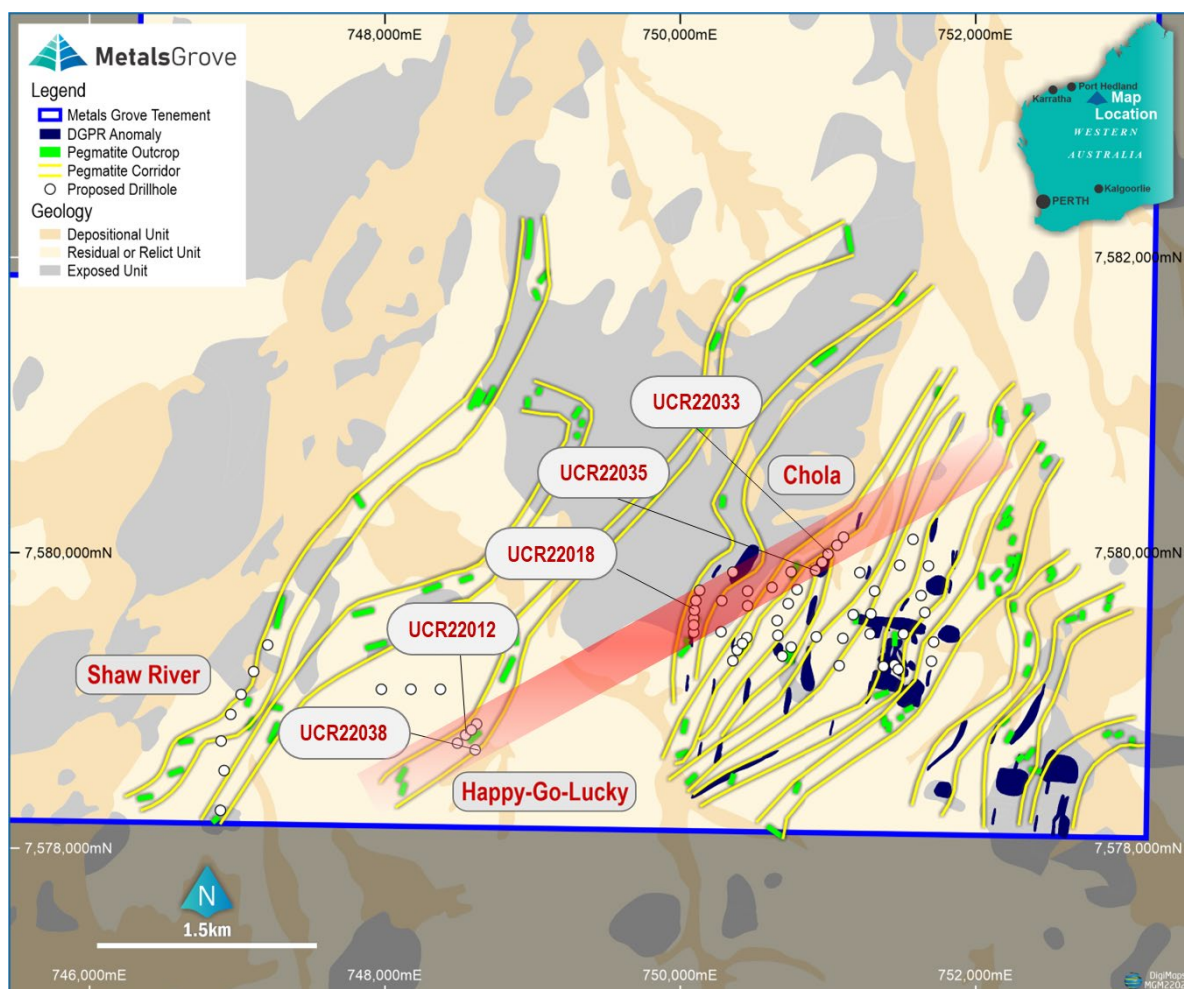


Figure 11: Upper Coondina Lithium projects showing pegmatites outcrop with drill hole location and pegmatite structural corridor.

CORPORATE SUMMARY

Cash Position

At quarter-end the Company held \$1,398,826 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 \$411,000.
- 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 2023 Quarter	Balance Remaining
Upper Coondina	\$1,685,865	\$1,293,595	\$392,270
Bruce	\$1,453,000	\$1,053,666	\$399,334
Box Hole	\$423,000	\$209,903	\$213,097
Edwards Creek	\$427,000	\$256,866	\$170,134
Woodie Woodie North	\$450,000	\$242,990	\$207,010
Cash Settlement-SHH and TLPL	\$60,000	\$60,000	-
Estimated costs of the offer	\$696,264	\$696,264	-
Working capital	\$1,141,736	\$1,124,756	\$16,980
Administration costs	\$524,000	\$524,000	-
Total	\$6,860,865	\$5,462,040	\$1,398,825

- 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

During the quarter a total of ten new applications were made and six new licenses were acquired by the company. No surrender of its existing licenses. Below table details the tenement portfolio.

Project	Tenement ID	Holder	Lease Status
Upper Coondina	E45/5952	MetalsGrove	Granted
Woodie Woodie North	E45/5945	MetalsGrove	Granted
BRUCE	EL 31225	Territory Lithium	Granted
BOX HOLE	EL 32419	Territory Lithium	Granted
EDWARDS CREEK	EL 32420	Territory Lithium	Granted
BEATRICE	00062AA	MetalsGrove Global	Granted
ARCTURAS	000450AA	MetalsGrove Global	Granted
ARCTURAS	016956AA	MetalsGrove Global	Granted
ARCTURAS	016961BA	MetalsGrove Global	Granted
ARCTURAS	016982BA	MetalsGrove Global	Granted
ARCTURAS	005434AA	MetalsGrove Global	Granted
FORREST	E45/6546	MetalsGrove	Application
DUNDAS	E63/2359	MetalsGrove	Application
DUNDAS	E63/2360	MetalsGrove	Application
DUNDAS	E63/2363	MetalsGrove	Application
DUNDAS	E63/2364	MetalsGrove	Application
DUNDAS	E63/2366	MetalsGrove	Application
LEAKE	E77/3149	MetalsGrove	Application
LEAKE	E77/3152	MetalsGrove	Application
BUNINGONIA	E28/3358	MetalsGrove	Application
BUNINGONIA	E28/3388	MetalsGrove	Application

Note: Territory Lithium Pty Ltd and MetalsGrove Global Private Limited 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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