

# QUARTERLY REPORT

SEPTEMBER 2023

ASX:LEG | 17 OCTOBER 2023

## LEGEND MINING LIMITED

ASX Symbol: **LEG**

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## CONTACT

Mr Mark Wilson  
Executive Chair

Mr Oliver Kiddie  
Managing Director

## PROJECTS

### Rockford - Fraser Range:

Nickel-Copper (Ni-Cu)

Copper-Zinc-Silver (Cu-Zn-Ag)

Gold (Au)

## HIGHLIGHTS

- **Diamond drilling of 4 holes for 5,537.5m completed at Octagonal**
- **Nickel-Copper sulphide intersected in OCDD004 with associated DHTM conductors**
- **High Power Fixed Loop Electro Magnetic (HPFLTEM) survey across Octagonal underway**
- **Cash \$12.9M at 30 September 2023**

## OVERVIEW

The highlight for the September 2023 Quarter was the completion of a 4-hole diamond drilling programme at the Octagonal prospect. Two holes were completed in the June 2023 Quarter, and a comprehensive description of the two holes completed in the September 2023 Quarter is contained in the body of this report. The nickel-copper sulphide intersected in hole OCDD004, with the associated DHTM conductors and increasing nickel tenor at depth was further confirmation of the prospectivity for nickel-copper sulphide accumulations at Octagonal.

These 4 drillholes represent the first steps in unlocking the nickel-copper sulphide potential at Octagonal.

Whilst the myriad of data from this drill programme is being gathered and processed, a new HPFLTEM survey has commenced across Octagonal. It has been specifically designed to identify conductive bodies below a depth of 600m from surface. It is expected the results of this survey along with integration of seismic and other data sets will deliver the next generation of diamond drill targets at Octagonal.

Meanwhile the analysis of the Mawson seismic reprocessing and regional MLTEM surveys is ongoing.

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## ROCKFORD PROJECT (Fraser Range District) Nickel-Copper, Copper-Zinc-Silver, Gold

Legend’s Rockford Project is located in the highly prospective Fraser Range district of Western Australia and is considered prospective for mineralisation styles including magmatic nickel-copper, VMS zinc-copper-silver and structurally controlled gold.

The Rockford Project comprises 12 granted exploration licences covering a total area of 2,953km<sup>2</sup> (see Figure 1). A detailed breakdown of ownership, area and manager is given below:

- Legend (100%) 109km<sup>2</sup>
- Legend (70%)/Creasy Group (30%) two JVs covering 2,192 km<sup>2</sup> with Legend manager
- IGO (60%)/Creasy Group (30%)/Legend (10% free carry) JV covering 634km<sup>2</sup> with IGO manager
- IGO (70%)/Legend (30% free carry) JV covering 18km<sup>2</sup> with IGO manager

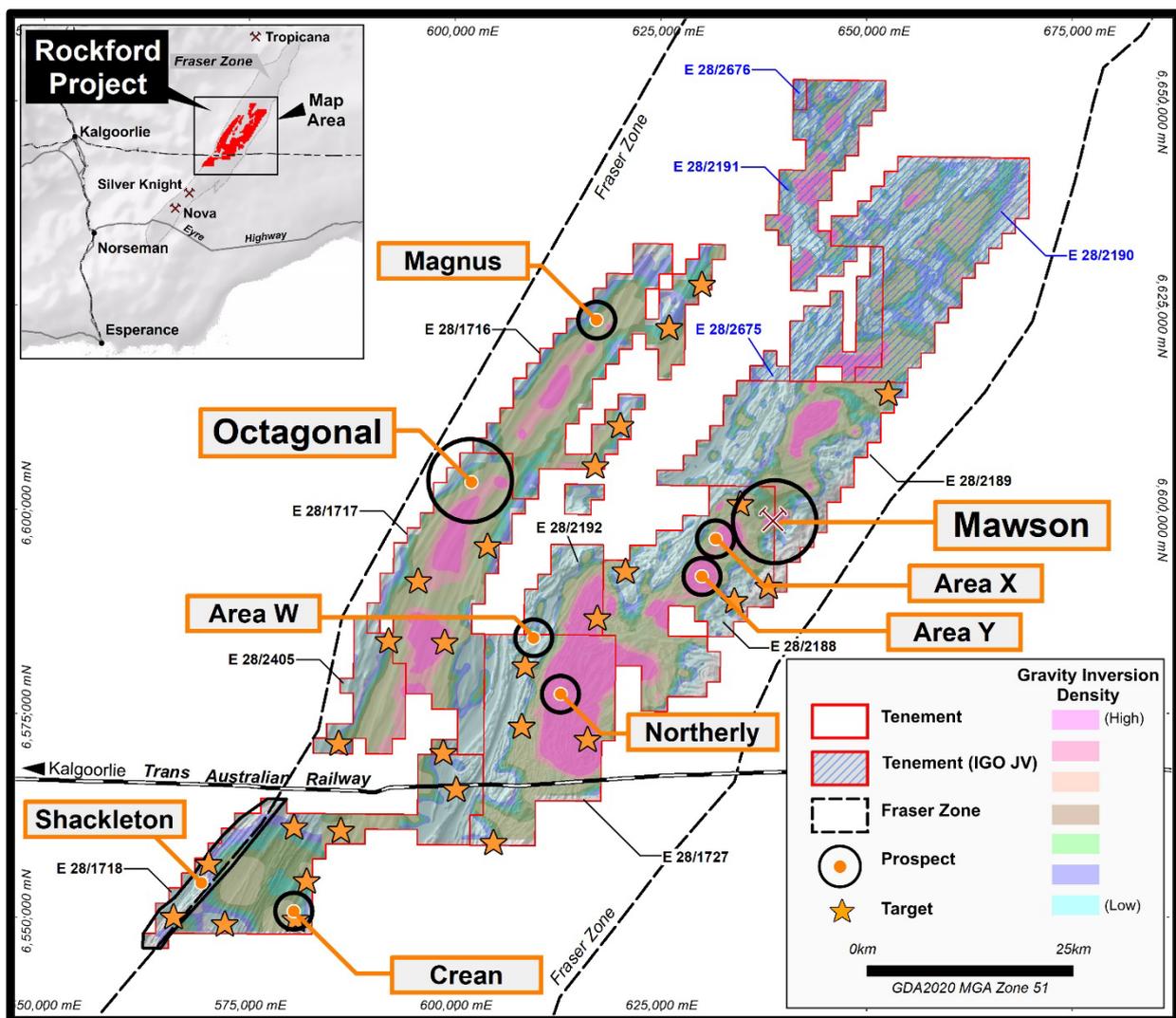


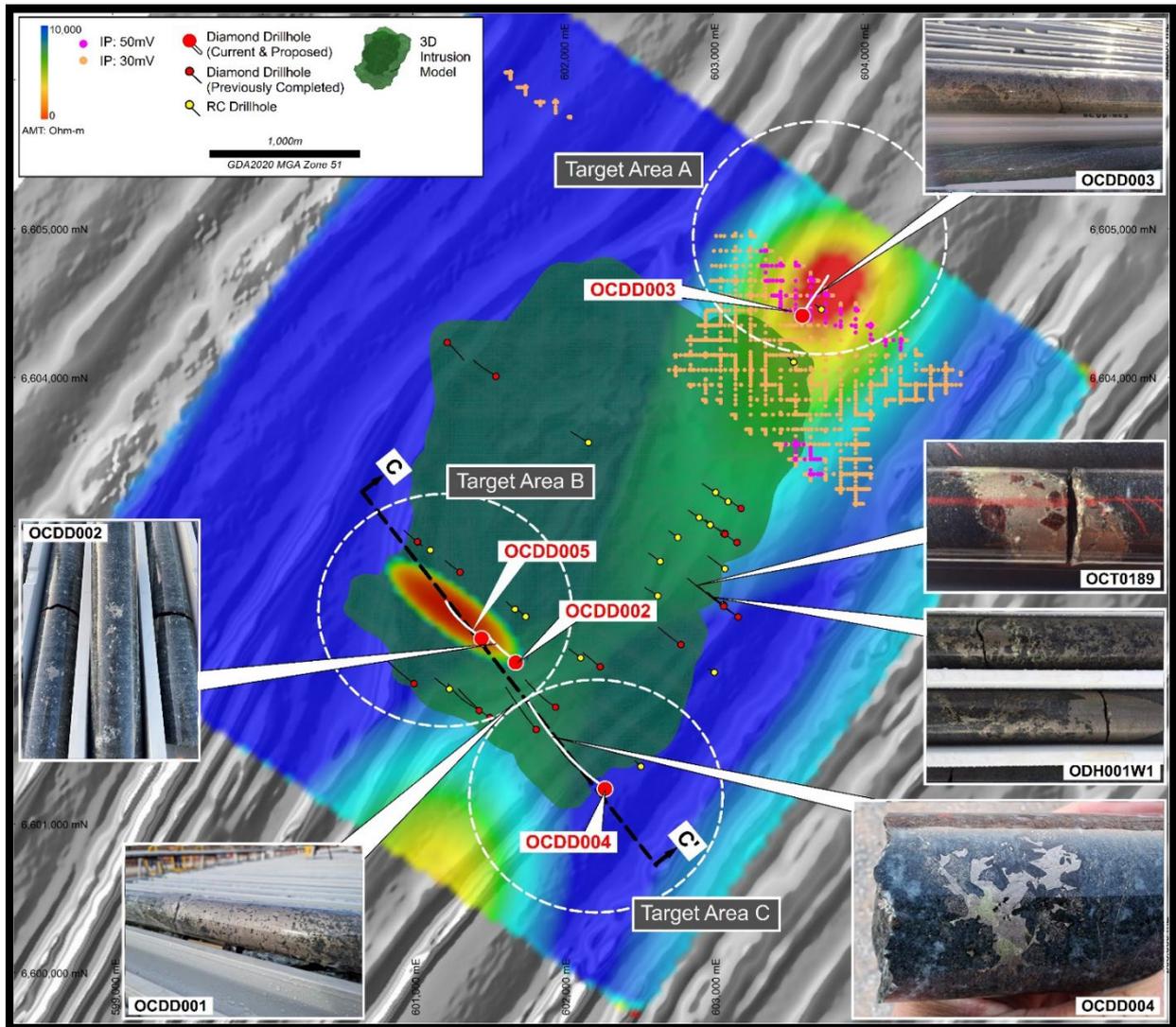
Figure 1: Rockford Project with current prospect locations and targets over regional gravity inversion

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## Octagonal Prospect

Diamond drilling completed during the September 2023 Quarter, with exploration continuing at the Octagonal prospect at the time of writing.

Below is a summary of the exploration activities across the three Target Areas (see Figure 1 and 2).



**Figure 2:** Priority target areas and diamond drillholes shown with Octagonal intrusion model, IP anomalies, 2D & 3D AMT anomalies and visual Ni-Cu mineralisation on AMAG.

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### Target Area B

Diamond drillhole OCDD005 targeted a coincidental seismic and AMT zone of the Octagonal intrusion (see Figures 2 and 3). The drillhole was completed at a bottom of hole depth of 1,662m. The seismic zone and associated AMT feature are now confirmed as a mixing zone of digested metasediments and gabbroic intrusions. Indications are the AMT feature is derived from magnetite and pyrrhotite within this mixing zone. The drillhole intersected an upper suite of gabbroic intrusions and leucocratic gabbroic intrusions before intersecting a varied suite of higher MgO intrusion consisting of olivine gabbroic intrusions, pyroxenites, and troctolites, with weakly mineralised zones. Extensive carbonate digestion in the mixing zone of intrusion and metasediments towards the basal contact supports the visual observations in OCDD004 that the Octagonal intrusion cracks into the underlying and surrounding metasediments. Reduced sulphide content in the drillhole suggests the sulphide content of the Octagonal Intrusive Complex (OIC) decreases towards the west. This is an important indicator, with strong evidence from completed drilling suggesting that sulphide content of the OIC increases towards the eastern margins. This vectoring will allow for more focused drillhole targeting. OCDD005 will provide valuable structural information in an area of the OIC not previously drilled, allowing the integration of physical structural data with seismic responses to map folding. This folding is a primary control of the OIC geometry.

DHTEM has been completed with no significant conductors identified.

Key takeaways from OCDD005 - Target Area B:

- Intrusion extends at depth, with increased carbonate digestion proximal to the basal contact
- Mixing zone of intrusion and metasediment supports the working model that the OIC cracks into the surrounding metasediments
- Sulphide decreased toward the west of the OIC, vectoring for mineralisation to targeting towards the eastern margins of the OIC
- Critical structural data to further understand the controls of the OIC

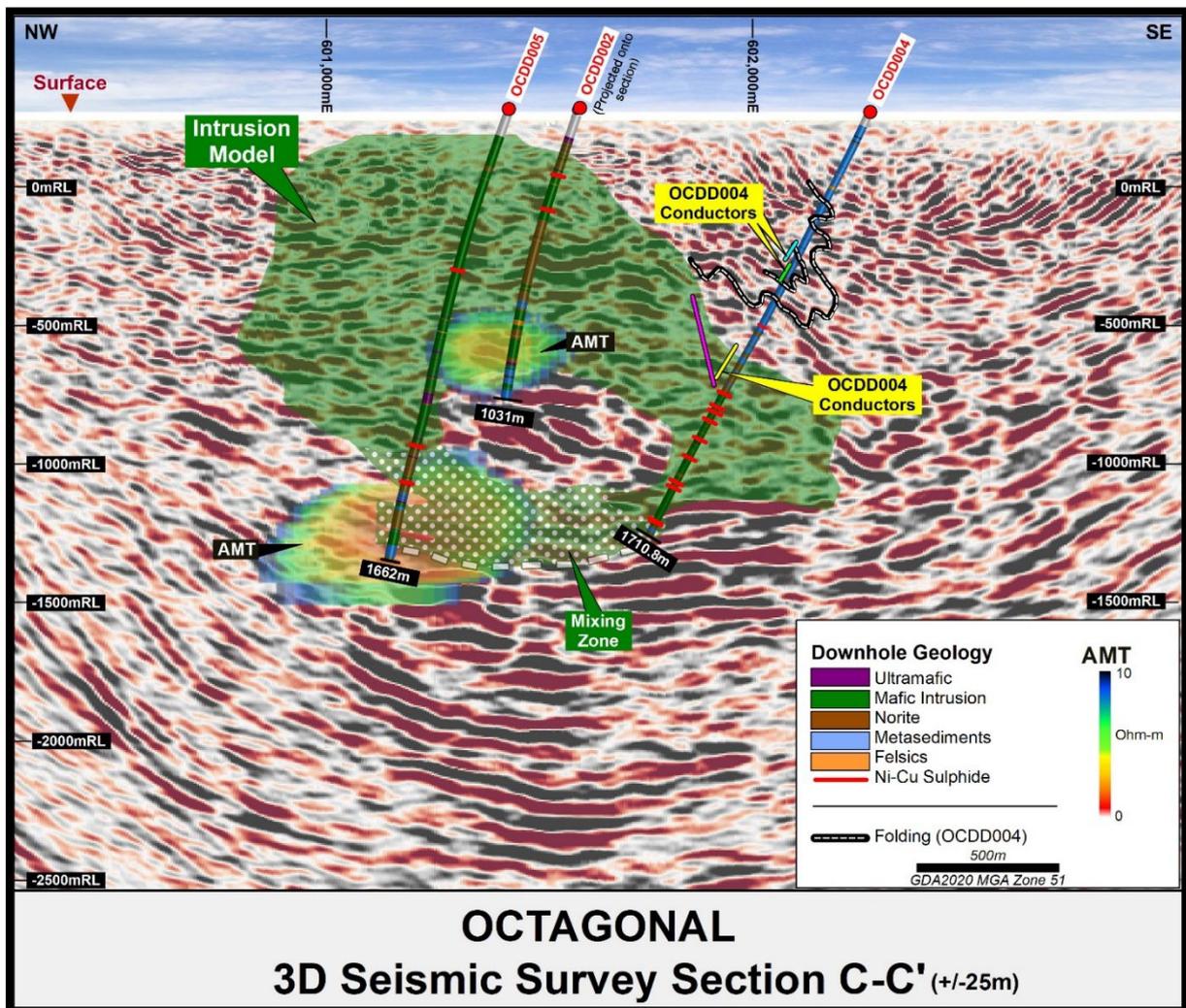


Figure 3: Section C-C' showing drillholes OCDD002, OCDD004 and OCDD005 on seismic section and DHTM conductors, downhole geology and structure, the Octagonal intrusion and interpreted intrusion, and AMT targets.

### Target Area C

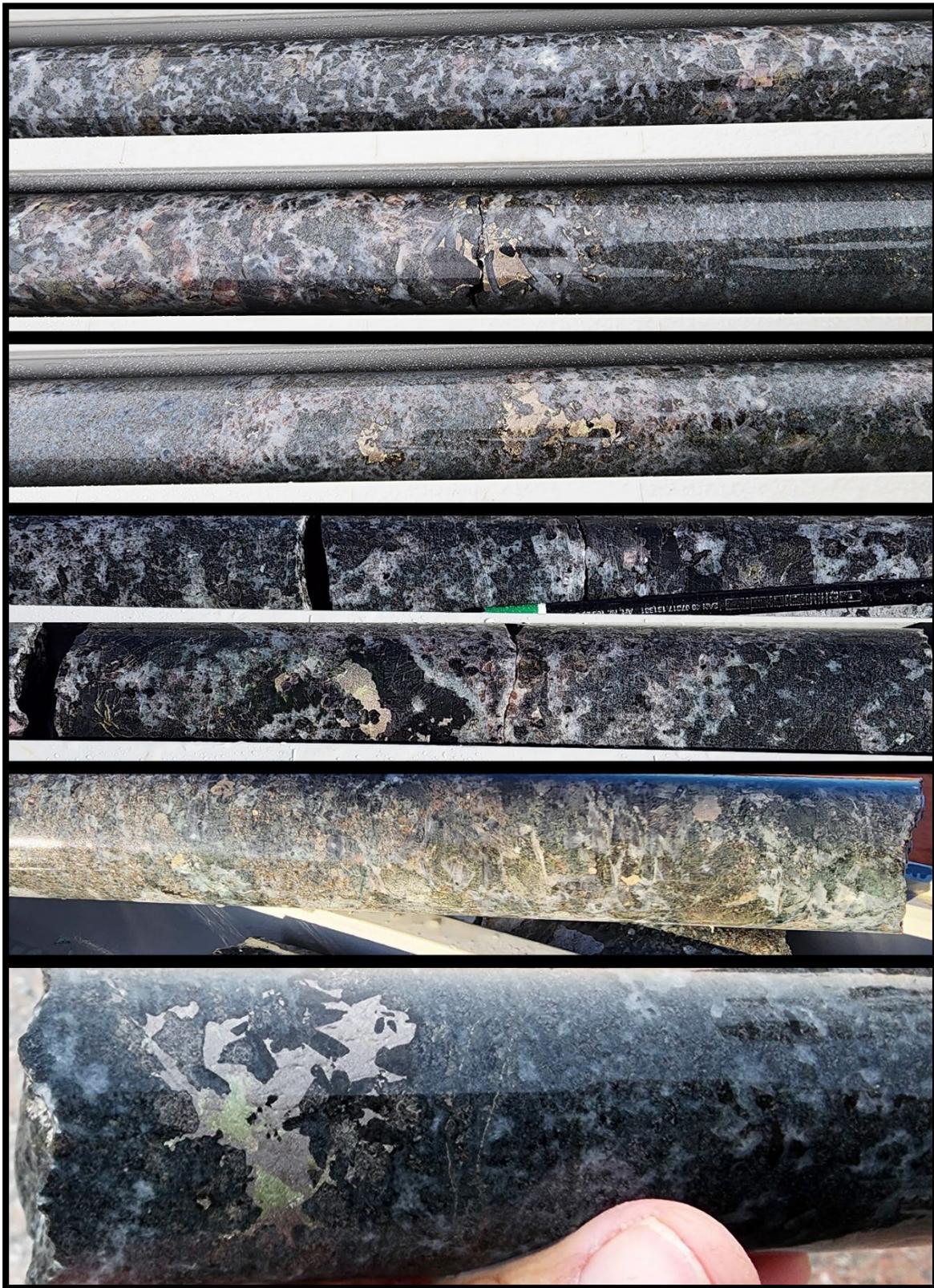
Diamond drillhole OCDD004 targeted the interpreted 'keel zone' of the Octagonal intrusion based on seismic interpretation (see Figures 2 and 3). The zone is defined by a junction of structures interpreted to be the source pathway of the Octagonal intrusion. The drillhole was extended to a bottom of hole depth of 1,710.8m to test a seismic zone below known intrusion. The interpreted zone is now confirmed as intrusion to 1,682m before intersecting metasediments, interpreted as the basal contact. The drillhole intersected a suite of mafic to ultramafic intrusives, including variably mineralised troctolite, olivine gabbronorite, and pyroxenite, with extensive carbonate digestion towards the basal contact. In a highly encouraging prospectivity indicator, fertile higher MgO intrusion was intersected at depth, with portable XRF confirming the presence of higher tenor nickel sulphide than previously encountered at Octagonal (see Photo 1). In addition, valuable structural information has been gathered from logging of the metasedimentary country rocks, allowing the integration of physical structural data with seismic responses to map folding. The OIC appears to have exploited the thick meta-conglomerate horizon,

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interpreted as a primary structural pathway for the OIC. This is a significant development in the understanding of the emplacement of the OIC and subsequent targeting of Ni-Cu accumulations. The known Ni-Cu-Co deposits of the Fraser Range (Nova-Bollinger, Silver Knight, and Mawson) are all located proximal to meta-conglomerate horizons.

### Key takeaways from Target Area C:

- Fertile intrusion extends at depth, with increased Ni-Cu sulphide towards basal contact
- High MgO intrusion intersected with highest nickel tenor to date identified at Octagonal
- Outstanding geological reconciliation with seismic interpretation allowing for confidence in drillhole targeting
- Compelling evidence of identification of the primary structure exploited by the OIC
- Evidence of mafic-ultramafic intrusions outside the main OIC



**Photo 1:** *Blebbly and disseminated Ni-Cu sulphide intervals from 1,195m to 1,496m in fertile troctolite, olivine gabbro, and pyroxenite in diamond drillhole OCDD004.*

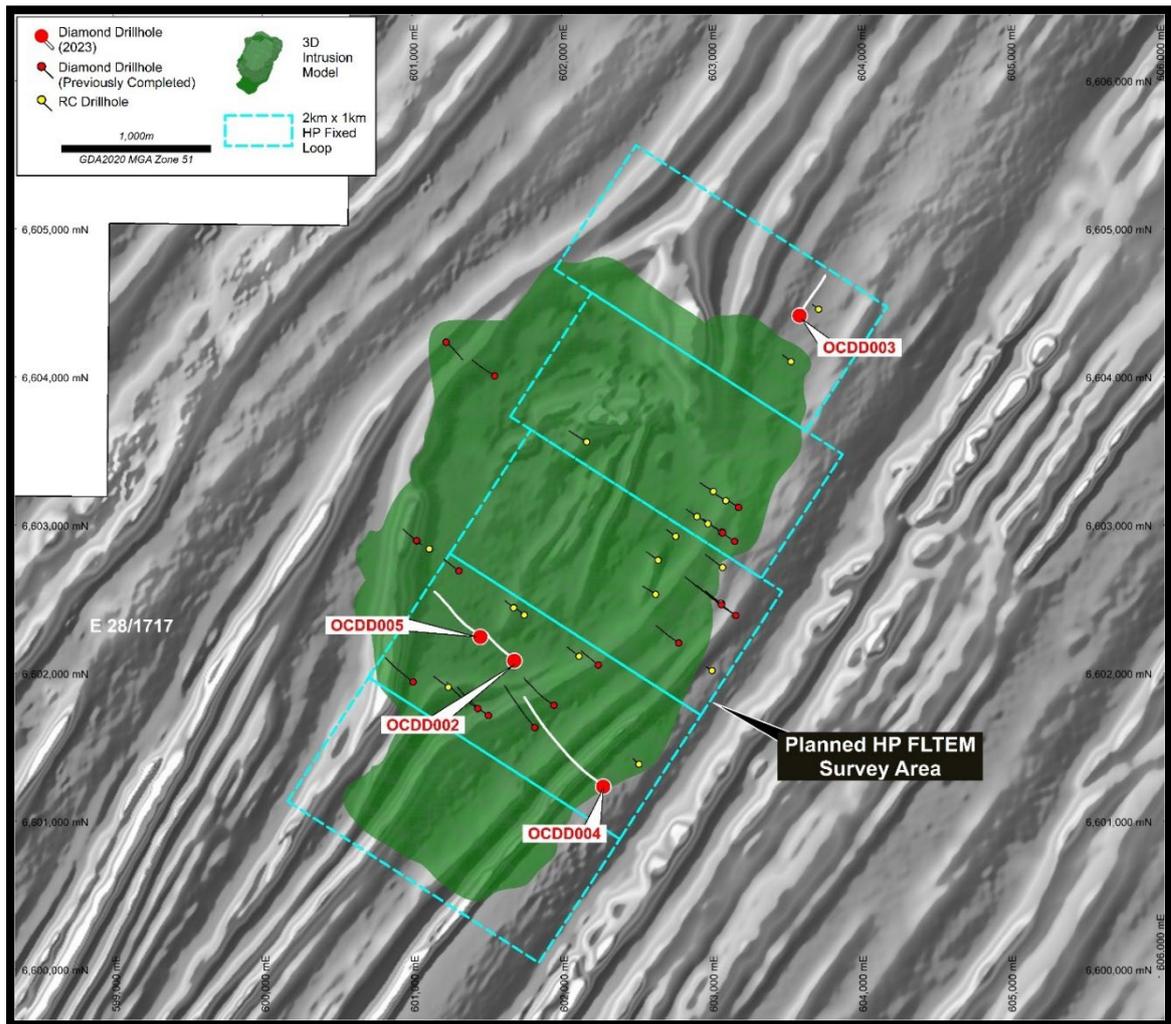
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DHTEM has been completed on drillhole OCDD004 and the associated models received (see Figure 3 and Table 1). Four off-hole conductors have been identified, two interpreted to be relating to mineralisation inside the Octagonal intrusion and along the eastern hanging wall contact.

<b>Table 1: DHTEM Conductor Parameters</b>					
<b>Conductor</b>	<b>Conductance</b>	<b>Dimensions</b>	<b>Plate Orientation</b>	<b>Depth to Plate</b>	<b>Plate Dip</b>
<b>OCDD004_1 (Off-hole)</b>	~1,250-1,750S	50m x >50m	ENE-WSW	~470m downhole	55-65° NW
<b>OCDD004_2 (Off-hole)</b>	~1,250-1,750S	50m x >50m	ENE-WSW	~565m downhole	55-65° NW
<b>OCDD004_3 (Off-hole)</b>	~1,250-1,750S	>300m x >100m	NE-SW	~800m downhole	55-65° NW
<b>OCDD004_4 (Off-hole)</b>	~1,000-1,500S	>300m x >200m	NE-SW	~665m downhole	65-80° SE

**Table 1:** DHTEM conductors from OCDD004

The observed increase in sulphide content and tenor in OCDD004 and DHTEM response has given encouragement to deploy a new High Power Fixed Loop Electro-Magnetics (HPFLTEM) across Octagonal, with the aim of identifying large sulphide bodies at depth (see Figure 4). Forward modelling conducted during the HPFLTEM programme design suggests large sulphide accumulations should be detectable below 600m depth with the large loop, high current, and ultra-low frequency parameters of the purpose-designed survey. The survey is underway at time of writing.



**Figure 4:** Octagonal plan view showing proposed HPFLTEM survey loops and the interpreted Octagonal intrusion model projected to surface on AMAG.

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### Mawson Prospect

#### Seismic Reprocessing and Target Generation

The 3D model evolution utilising updated geological and geophysical modelling, including 3D seismic, continues to drive focused exploration targeting at Mawson. Petrophysical data captured from diamond drilling completed in 2022 has been incorporated with existing data, with the resultant reprocessed seismic data defining diamond drill targets for future drilling. The final reprocessed cube has been received, with target generation and ranking continuing at the time of writing.

### Regional Rockford

#### Innovative MLTEM

Extensive datasets have continued to be expanded and interrogated to generate a new pipeline of prospective nickel-copper-cobalt sulphide targets across the Rockford Project. Ranking of these targets has resulted in the highest priority targets being scheduled for innovative MLTEM surveying before first pass aircore drilling. MLTEM has been completed over numerous targets across Rockford, with modelling and assessment underway at the time of writing.

### Future Programmes

- HPFLTEM survey and associated modelling at Octagonal
- Diamond drilling target generation at Octagonal
- Structural expert logging of completed diamond drillholes at Octagonal
- Interrogation of the reprocessed Mawson 3D seismic model
- Incorporate completed drilling, geophysics, geochemistry, structural, and existing 3D modelling into seismic model for diamond drilling target ranking and planning at Mawson
- Diamond drill target planning at Mawson
- Aircore drill planning over selected prospective areas
- Innovative EM survey design over selected prospective areas
- Data analysis ongoing identifying new and advancing existing areas

### IGO Joint Venture

IGO Limited advised that field work completed on the JV tenements for the September 2023 Quarter included:

- 8 aircore drillholes for 238m at the Waddy Central target (E28/2191)
- Completion of 3 MLTEM targets – Cullen West (E28/2191), Caldwell East and Caldwell West (E28/2190)

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## CORPORATE

### Exercise of Unlisted Options

As previously advised to the market on 21 September 2023, 3,000,000 unlisted zero exercise price options expiring on 10 August 2025 were exercised by the Company's Managing Director, Mr Oliver Kiddie.

### Directors interests

As previously advised on 21 September 2023, the Company's Managing Director, Mr Oliver Kiddie acquired 2,000,000 ordinary shares on market. Combined with the exercise of 3,000,000 unlisted zero exercise price options (see above), Mr Kiddie has increased his interest in the Company by 5,000,000 ordinary shares.

### Half Year Report

The Company's Half Year Financial Report for the period ending 30 June 2023 was lodged and released on ASX on 30 August 2023.

### Appointment of Auditor

As previously advised on 5 July 2023, Hall Chadwick WA Audit Pty Ltd was appointed as auditor of the Company following the resignation of Ernst & Young and ASIC's consent to this resignation. Hall Chadwick acted as auditors for the Company's Half Year Financial Report for the period ending 30 June 2023.

### ASX Additional Information

1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the Sept 2023 Quarter was \$2,519,000. Full details of exploration activity during the Sept 2023 Quarter are set out in this report.
2. ASX Listing Rule 5.3.2: There was no substantive mining production and development activities during the Sept 2023 Quarter.
3. ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the Sept 2023 Quarter: \$197,000 - The Company advises that this relates to non-executive director's fees and executive directors' salaries and entitlements only. Please see Remuneration Report in the Annual Report for further details on Directors' remuneration.

Authorised by Oliver Kiddie, Managing Director.

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### Competent Person Statement

*The information in this report that relates to Exploration Results is based on information compiled by Mr Oliver Kiddie, a Member of the Australasian Institute of Mining and Metallurgy and a full-time employee of Legend Mining Limited. Mr Kiddie has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration, and to the activity being undertaken, 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” (JORC Code). Mr Kiddie consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to Legend’s Exploration Results is a compilation of information previously released to ASX by Legend Mining (27 June 2023, 31 July 2023, and 31 August 2023) and Mr Oliver Kiddie consents to the inclusion of these Results in this report. Mr Kiddie has advised that his consent remains in place for subsequent releases by Legend of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. Legend confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters in the market announcements continue to apply and have not materially changed. Legend confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcements.*

### Forward Looking Statements

*This announcement contains “forward-looking statements” within the meaning of securities laws of applicable jurisdictions. Forward-looking statements can generally be identified by the use of forward-looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “believe”, “continue”, “objectives”, “outlook”, “guidance” or other similar words, and include statements regarding certain plans, strategies and objectives of management and expected financial performance. Forward-looking statements are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. These forward-looking statements are based upon a number of estimates, assumptions and expectations that, while considered to be reasonable by Legend Mining Limited, are inherently subject to significant uncertainties and contingencies, involve known and unknown risks, uncertainties and other factors, many of which are outside the control of Legend Mining Limited and any of its officers, employees, agents or associates.*

*Actual results, performance or achievements may vary materially from any projections and forward-looking statements and the assumptions on which those statements are based. Exploration potential is conceptual in nature, to date there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. Readers are cautioned not to place undue reliance on forward-looking statements and Legend Mining Limited assumes no obligation to update such information made in this announcement, to reflect the circumstances or events after the date of this announcement.*

Visit [www.legendmining.com.au](http://www.legendmining.com.au) for further information and announcements.

### For more information:

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Managing Director  
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## Appendix 1 - Tenement Schedule as at 30 September 2023

### Mining Tenements

Tenement Reference	Location	Interest at beginning of Quarter	Acquired / Withdrawn	Interest at end of Quarter	Comments
E28/1716	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/1717	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/1718	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/1727	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/2188	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/2189	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/2190	Fraser Range, Western Australia	10%	N/A	10%	10:60:30 JV
E28/2191	Fraser Range, Western Australia	10%	N/A	10%	10:60:30 JV
E28/2192	Fraser Range, Western Australia	70%	N/A	70%	70:30 JV
E28/2405	Fraser Range, Western Australia	100%	N/A	100%	100% Legend
E28/2675	Fraser Range, Western Australia	30%	N/A	30%	30:70 JV
E28/2676	Fraser Range, Western Australia	30%	N/A	30%	30:70 JV
E28/2404	Fraser Range, Western Australia	100%	Withdrawn	0%	100% Legend
E28/2677	Fraser Range, Western Australia	30%	Withdrawn	0%	30:70 JV

### Farm-In or Farm-Out Arrangements

Tenement Reference	Location	Interest at beginning of Quarter	Acquired / Withdrawn	Interest at end of Quarter	Comments
None	N/A	N/A	N/A	N/A	N/A

## Appendix 2 – Summary Drill Log of Ni-Cu Mineralisation

Hole	Interval	Sulphide Mode	Sulphide Type	Sulphide % (Visual Estimate)
OCDD004	848.94m - 849.34m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1130.55m - 1134.9m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1183.75m - 1184.1m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1200.1m - 1205.1m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1243.55m - 1251.6m	Disseminated	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1335.2m - 1336.45m	Disseminated	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1392.95m - 1393.7m	Disseminated	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%

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OCDD004	1484.0m - 1485.7m	Disseminated	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1520.5m - 1521.45m	Disseminated	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1521.45m - 1527.65m	Disseminated	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1656.76m - 1658.23m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD004	1658.23m – 1661.0m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD005	591.75m – 591.95m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD005	1251.1m – 1252.42m	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%
OCDD005	1381.94 – 1382.3	Disseminated & Blebby	Pyrrhotite-chalcopyrite-pentlandite	1% - 5%

**Cautionary Statement:** The sulphide percentage is a visual estimate of total sulphide. Visual estimates should never be considered a proxy or substitute for laboratory analysis where concentrations or grades are the factor of principal economic interest. Visual estimates also potentially provide no information regarding impurities or deleterious physical properties relevant to valuations. Legend regularly uses a portable XRF (pXRF) analyser to screen diamond drill core for mineralisation prior to cutting and sampling. This allows for understanding of the distribution of mineralisation prior to sampling to better ensure that the sampled core is representative of the type and style of mineralisation. Readings are obtained and recorded for future reference. The pXRF provides confirmation that mineralisation is present however it is not an accurate determination of the elemental concentration within the sample analysed. Limitations include; very small analysis window, possible inhomogeneous distribution of mineralisation, analytical penetration depth and possible effects from irregular rock surface. The pXRF readings are subject to confirmation by chemical analysis from an independent laboratory. Assay results are expected to be received for selected sample intervals during the December 2023 Quarter

## Appendix 3 – Octagonal Diamond Drillhole Details

Hole	Type	MGA2020-East	MGA2020-North	RL	Azimuth	Dip	Total Depth
OCDD002	DD	601,685	6,602,095	267	306	-70	1,031m
OCDD003	DD	603,595	6,604,425	263	034	-65	909.4m
OCDD004	DD	602,280	6,601,245	266	300	-65	1,935.1m
OCDD005	DD	601,375	6,602,285	268	302	-70	1,662.0m

Co-ordinates GDA2020 Zone 51

## Appendix 4 - Legend Field Logging Guidelines

Sulphide Mode	Percentage Range
Disseminated & blebby	1-5%
Heavy Disseminated	5-20%
Matrix	20-40%
Net-Textured	20-40%
Semi-Massive	>40% to <80%
Massive	>80%