

### ASX:LEG | 13 OCTOBER 2022

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#### LEGEND MINING LIMITED

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#### CONTACT

Mr Mark Wilson Managing Director

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#### PROJECTS

Rockford - Fraser Range: Nickel-Copper (Ni-Cu) Copper-Zinc-Silver (Cu-Zn-Ag) Gold (Au)

### HIGHLIGHTS – Rockford Project, Fraser Range

- Phase one diamond drilling completed at Mawson, seismic reprocessing underway
- +\$1M 24km<sup>2</sup> 3D seismic survey commissioned at Octagonal
- New prospective areas identified by regional aircore drilling and innovative EM programmes
- Cash \$12.2M at 30 September 2022

### **OVERVIEW**

Legend has continued to advance the Rockford Project during the September 2022 Quarter with field activities including the completion of a five-hole (4450m) diamond drill programme at Mawson and regional aircore drilling and innovative EM programmes. Data from the five diamond drillholes will provide essential input for the refinement of the Mawson seismic cube ("seismic reprocessing") and the regional programmes have identified prospective new areas for future diamond drilling.

In addition, HiSeis has been engaged to carry out a +\$1M 24km<sup>2</sup> 3D seismic survey over the fertile intrusion known as the Octagonal prospect. Logistics are well under way, with the data collection phase of the survey to be conducted from mid-October through late November 2022.

The details of these activities are discussed in the body of the report.

Legend also welcomed Hilary Macdonald to the board of the Company on 6 September 2022. Her appointment adds a new dimension to the board's existing skillset, and we are looking forward to the benefit of her contribution.



### **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 considered prospective for mineralisation styles including magmatic nickel-copper, VMS zinc-copper-silver and structurally controlled gold.

The Rockford Project comprises 14 granted exploration licences covering a total area of 3,016km<sup>2</sup> (see Figure 1). A detailed breakdown of ownership, area and manager is given below:

- Legend (100%) 168km<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 24km<sup>2</sup> with IGO manager

Exploration activities continued during the September 2022 Quarter at the Rockford Project, with diamond drilling testing seismic targets at the lead Mawson Prospect, while regionally, innovative EM and aircore drilling continued to identify a new pipeline of prospective Ni-Cu targets.

3D model evolution utilising updated geological and geophysical modelling, including 3D seismic, continues to drive focused exploration targeting at Mawson. The aim of the seismic survey was to define the architecture of the Mawson intrusion in relation to the stratigraphic package, to a depth of investigation of a minimum 1000m below surface across a 6.5km<sup>2</sup> area. Phase one diamond drilling of select seismic targets has been completed, with initial results supporting the application of seismic as a targeting technique in the Fraser Range.

At the Octagonal prospect, a +\$1M 24km<sup>2</sup> 3D seismic survey has been commissioned, with the aim to define the architecture of the fertile and highly prospective Octagonal Intrusive Complex to a depth of 1500m below surface.

Regionally, extensive datasets have continued to be expanded and interrogated to generate a new pipeline of prospective Ni-Cu-Co sulphide targets. Over 13,000m of first pass aircore drilling has been completed across new and existing priority areas. Additionally, innovative MLTEM and FLTEM surveys continue across selected areas at the Rockford Project.





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



#### MAWSON

Exploration activity continued at the Mawson prospect during the September 2022 Quarter, including diamond drilling testing areas identified from interpretation of the 3D seismic, associated DHTEM and physical property surveys. Below is an overview of diamond drillholes RKDD083, RKDD084, and RKDD085 completed during the September 2022 Quarter (see Figure 2).



Figure 2: Updated and extended Mawson chonolith, diamond drillholes, and section location

Diamond drillhole RKDD083 was designed to target a seismic feature interpreted to be prospective chonolith below the Mawson discovery zone, offset by the Mawson fault (see Figures 2 and 3). The drillhole intersected the mineralised chonolith and metasedimentary packages, as predicted, above the Mawson fault. Below the fault, an assemblage of metasedimentary units and lesser mafic intrusive suites were intersected, including narrow veins of cross-cutting massive sulphide mineralisation (see Photo 1). The upper level of the main target zone encountered a prospective ultramafic unit with large amounts of digested metasediment. Marginal to this unit, a zone of heavy disseminated to net-textured magmatic sulphide was intersected at 751m downhole (see Photo 2). Further data analysis is underway, including structural vectoring and additional drilling, which will aid in refinement of this new target zone.





Figure 3: 3D Seismic section C-C' showing the Mawson chonolith with diamond drillhole RKDD083





Photo 1: Cross-cutting massive sulphide vein from RKDD083 from 480m, NQ2



Photo 2: Heavy Disseminated and Net-textured sulphide from RKDD083 from 751m, NQ2



Diamond drillhole RKDD084 was designed to interrogate an area of seismic signature interpreted to be a continuation of prospective chonolith below existing RC drilling (see Figures 2 and 4). The drillhole intersected a mineralised mafic intrusive package below existing drilling levels, confirming the Mawson chonolith extends at depth as predicted by the 3D seismic. The intrusive package was intersected over a wide zone as an intense array of norite and gabbronorite flat-lying and cross-cutting dykes into the metasedimentary assemblage. Importantly, this metasedimentary assemblage contained a large abundance of carbonate, identified for the first time in abundance at Mawson. A <1m zone of massive magmatic sulphide with intense carbonate digestion was intersected at 450m downhole (see Photo 3). This intercept is strong evidence of carbonate horizons acting as preferential mineralisation traps. These carbonate stratigraphic horizons act as preferential pathways for the intrusion to propagate and focus into a zone in the country rock, as well as supplying easily digestible volatile for the mineralised intrusion. This is a significant identification in the understanding of the Mawson chonolith host stratigraphy, as the carbonate stratigraphic horizon is the host of the Nova chonolith and hosts the Nova and Bollinger orebodies. Detailed analysis is now underway on RKDD084.



Figure 4: 3D Seismic section D-D' showing the Mawson chonolith with diamond drillhole RKDD084





Photo 3: Massive sulphide with digested carbonate from RKDD084 from 450m, NQ2

Diamond drillhole RKDD085 was designed to intersect a seismic signature replication of that identified by diamond drilling ~150m south (see Figures 2 and 5). The geological, structural, and seismic interpretation was that the mineralised chonolith continues to the north-west of existing diamond drilling coverage. The drillhole intersected and extended the mineralised chonolith as predicted, confirming the chonolith extends and remains open to the north-west. The upper level of the main target zone encountered a prospective mafic intrusive with lesser ultramafic. The lower target zone intersected more ultramafic intrusive with variable zones of disseminated to blebby magmatic sulphide (see Photos 4 and 5). The drillhole finished in a metasedimentary package as predicted by the seismic interpretation. Further data analysis is underway, including structural vectoring and additional aircore drilling, which will aid in refinement of this new target zone.

Diamond drilling for the current programme has been completed. Current outstanding data includes physical property data, detailed structural analysis, and critical multi-element assay data. These datasets are key components to reprocessing, modelling, and interpretation of the 3D seismic cube at Mawson. Once received, reprocessing of the 3D seismic data will be undertaken to refine existing models, refine existing targets, and define new targets across the Mawson intrusion.





Figure 5: 3D Seismic section E-E' showing the Mawson chonolith with diamond drillhole RKDD085



Photo 4: Ni-Cu sulphide mineralisation from RKDD085 from 234m





Photo 5: Ni-Cu sulphide mineralisation from RKDD085 from 237m downhole

### **Regional Rockford**

### **OCTAGONAL**

HiSeis has been engaged by Legend to conduct a 3D seismic survey at the highly prospective Octagonal prospect within the Rockford Project, Fraser Range, WA (see Figure 6). The aim of the survey is to define the architecture of the Octagonal Intrusive Complex in relation to the stratigraphic package, to a depth of investigation of a minimum 1500m below surface. The decision to conduct this +\$1M survey is based on the results Legend is generating from the drilling of seismic targets at the Mawson prospect.

HiSeis are scheduled to mobilise to site in mid-October 2022 to commence the data acquisition phase of the 3D seismic survey which is planned to be completed by the end of November 2022. Processing of the data and delivery of the final 3D model is scheduled for May 2023.

On receipt of the results of this 3D seismic survey, Legend will conduct an intensive process of interrogation, including incorporation of existing geophysical, geological, geochemical, and structural datasets with the aim to define and rank new diamond drilling targets for the 2023 field season at Octagonal.





Figure 6: 3D Seismic Survey lines across the Octagonal Intrusive Complex with geology map

#### **Octagonal Prospect Background**

The Octagonal Intrusive Complex ("Octagonal") was originally targeted by the Creasy Group due to its distinctive "eye" aeromagnetic feature, which has remarkably similar shape and size characteristics with the Nova "eye" (see Figures 6 and 7). Soil sampling and aircore drilling across Octagonal returned anomalous Ni-Cu values and identified highly favourable Ni-Cu host rocks including olivine gabbronorite, troctolite, peridotite, gabbronorite and norite. RC and diamond drilling was then undertaken, mainly on the south-eastern and southern margins of the intrusive complex targeting EM conductors and IP features.





Figure 7: Nova AMAG 'eye feature' left and Octagonal AMAG 'eye feature' right (scale 1:1)

Significantly, the RC and diamond drilling intersected multiple intervals of massive, semi-massive, net textured, stringer and disseminated pyrrhotite-pentlandite-chalcopyrite sulphides associated with the mafic/ultramafic intrusives. The mineralisation identified to date is discontinuous, however it demonstrates all the characteristics of a fertile magmatic Ni-Cu sulphide system, akin to the known deposits of Nova-Bollinger and Silver Knight in the Albany-Fraser Belt. Significantly, Octagonal sits within the same structural corridor that host the Nova and Silver Knight intrusions and Ni-Cu-Co deposits.

Legend drilled its first diamond hole into the Octagonal Intrusive Complex in August 2021 (see ASX Announcement 20<sup>th</sup> September 2021 and Photo 6 below).



Photo 6: Ni-Cu sulphide mineralisation from OCDD001 from 545.2m and 579.5m at the Octagonal Prospect



#### **Aircore Drilling**

A total of 161 aircore holes (RKAC1480-1640) for 13,047m have been completed year to date over selected areas within the greater Rockford Project (see Figure 1). This drilling is part of an extensive 30,000m regional aircore programme planned across the greater Rockford Project.

The completed drilling was targeting a combination of aeromagnetic and gravity features interpreted to represent ultramafic and mafic intrusives within the same structural domain as Mawson. This domain is characterised by an elevated gravity and low magnetic response which extends southwest and northeast of Mawson and has only been tested with limited aircore drilling to date.

Newly identified Areas W, X, and Y are detailed below.

#### Area W

Area W was selected for first pass aircore drilling targeting a folded "eye" like feature in aeromagnetic data (see Figure 8). The drilling intersected anomalous nickel and copper associated with olivine bearing websterite in multiple drillholes, within a regional metasedimentary package (see Figure 8 and Table 1). The assay result from RKAC1566 of 12m @ 0.1% and 0.09%Cu from 58m in a favourable ultramafic host rock is an encouraging first pass result. Geochemically, three wide-spaced aircore drillholes across Area W display the key indicator elements associated with fertile Ni-Cu intrusions when plotted against the fertile intrusion datasets of the Fraser Range including Nova, Mawson, and Octagonal (see Figures 9, 10 and 11).

Innovative high power MLTEM surveying over the area identified a deep, poorly constrained conductor located west south-west of the anomalous aircore holes. Follow up FLTEM surveying to better define the feature identified a conductor plate with modelled parameters of ~300m x 300m in size, with a conductance of 2,500-4,500S at a depth of 600-650m (see Table 2). Further evaluation of this conductor and anomalous aircore geochemistry is planned.









#### Area X and Area Y

First pass aircore drilling was completed over Area X and Area Y, located 5-10km directly south-west of Mawson, targeting a combination of aeromagnetic and gravity features (see Figure 8). The drilling has intersected extensive ultramafic and mafic intrusives including olivine websterite and gabbronorite, visually similar to those which host Ni-Cu mineralisation at Mawson. Geochemistry supports the visual assessment that these identified intrusions plot on or proximal to prospective trends as defined in Figures 9, 10, and 11. Given the wide-spaced nature of first pass aircore, these results are encouraging as early indications suggest a potential cluster of newly identified fertile Ni-Cu intrusions.

Infill aircore and high-power moving loop electromagnetic surveying is planned to further evaluate the Areas W, X, and Y.

Table 1: Aircore Drill Assays >0.05% Ni								
Hole	From	То	Int	Ni%	Cu%	Co%	Cr%	Fe%
RKAC1491	54	66	12	0.06	0.01	0.01	0.09	10.83
RKAC1498	63	67	4	0.05	0.02	0.01	0.04	11.11
RKAC1509	79	83	4	0.05	0.01	0.01	0.14	12.66
RKAC1510	80	112	32	0.05	0.02	0.01	0.14	10.50
RKAC1566	58	70	12	0.10	0.09	0.02	0.38	15.11
RKAC1571	58	66	8	0.06	0.02	0.02	0.20	15.00
RKAC1605	65	68 EOH	3	0.05	0.06	0.01	0.02	9.09



Figure 9: Zr vs Cu for Table 1 bottom of hole aircore for Areas W, X, Y and Fraser Range mafics compared with the Nova, Mawson, and Octagonal mineralised intrusions. Mineralised intrusion samples are defined by Zr-Cu values on the Cu-rich side of the mantle line. These compositions are interpreted as fractionated sulphide magmas which have the ability to form orebodies. \*





Figure 10: Cu vs Ni plot highlighting Table 1 bottom of hole aircore drillholes from Areas W, X, and Y compared to known mineralised intrusions of Mawson and Octagonal.



# Figure 11: Ni-Cr-Ti plot comparing mineralised intrusion of Nova, Mawson, and Octagonal with Table bottom of hole aircore samples for Areas W, X, and Y. Plot of immobile elements applicable as a proxy in the weathered environment to identify prospective mineralised intrusions. \*

\*Figures 2 & 4 data sourced from WAMEX open file No.96247. Geochemical plots referenced from Lithogeochemistry in exploration for intrusion-hosted magmatic Ni-Cu-Co deposits, Stephen J Barnes 2022.



#### **EM Surveying**

Following a review of regional aeromagnetic and gravity datasets, previous aircore drilling, and lithological domain mapping, 12 areas were selected for follow up with innovative high power electromagnetic surveying (see Figure 8). Four of the twelve areas have been completed to date, with surveying currently underway at the fifth area. Conductors have been identified at all four areas surveyed (see Table 2). This technique has proven successful in detecting conductive bodies beneath thick, conductive transported cover for Legend across the Rockford Project.

#### Conductors C and D

MLTEM follow up of elevated 2021 aircore geochemistry was completed over two areas in the north of the Rockford Project (see Figure 8). Conductors were identified at both areas and modelled as large, moderate strength features. These conductors, along with previously reported Conductors A and B, parallel the regional stratigraphic trend and are considered low priority areas for follow up work.

Table 2: Modelled MLTEM/FLTEM Conductor Parameters							
Conductor	Conductance	Dimensions	Depth to Top	Plate Orientation	Plate Dip		
Conductor A	2,500-5,000S	>1,000m x 1,000m	75-125m	NE-SW	55-75 <sup>0</sup> NW		
Conductor B	500-1,500S	>1,000m x 1,000m	50-100m	NE-SW	30-50 <sup>0</sup> SE		
Conductor C	1,000-1,500S	750m x >750m	50-75m	NNE-SSW	65-75 <sup>0</sup> ESE		
Conductor D	750-1,750S	>1,000m x 1,000m	75-125m	NE-SW	65-75 <sup>0</sup> NW		
Area W (FLTEM)	2,500-4,500S	~300m x 300m	600-650m	NE-SW	20-40 <sup>0</sup> SE		

### **Future Programmes**

- Detailed structural analysis of completed diamond drillholes at Mawson
- Collation of all downhole geophysical and petrophysical data from Mawson
- Reprocessing of the Mawson 3D seismic model with new downhole datasets
- Incorporate completed drilling, geophysics, geochemistry, structural, and existing 3D modelling into seismic model for diamond drilling target ranking and planning at Mawson
- Octagonal seismic data acquisition underway October through November 2022
- Octagonal seismic data processing November 2022 March 2023
- Final 3D seismic model for Octagonal to be received April-May 2023
- Aircore drilling over selected areas ongoing
- Data analysis ongoing identifying new and advancing existing areas



### **IGO Joint Venture**

IGO Limited completed the following exploration activities across the Joint Venture tenements E28/2190, E28/2191, E28/2675, E28/2676, and E28/2677 (see Figure 1).

- Moving Loop Electromagnetic survey at Scherf including processing and interpretation.
- Results and interpretation of the bulk geochemical analysis of aircore samples from Bellissimo, Tiger Shark West, Waddy SE, Mafic SE, Cullen East as well as reverse circulation (RC) chip samples from Cullen.
- Petrology on aircore selected samples.

### CORPORATE

#### Half Year Report

The Company's Half Year Financial Report for the period ending 30 June 2022 was lodged and released on ASX on 31 August 2022.

#### **Director Appointment**

Experienced corporate and mining lawyer, Hilary Macdonald, was appointed to Legend's board, as announced to the ASX on 6 September 2022.

#### Lapse of unlisted Options

As previously advised to the market on 3 October 2022, 44,743,571 unlisted options exercisable at 7.2 cents lapsed unexercised on 30 September 2022.

#### **Options Vesting**

During the September 2022 Quarter, 1.5 million zero exercise price options expiring on 10 August 2025, issued to Mr Oliver Kiddie in August 2020, vested on their terms.

#### ASX Additional Information

- 1. ASX Listing Rule 5.3.1: Exploration and Evaluation Expenditure during the September 2022 Quarter was \$2,450,000. Full details of exploration activity during the September 2022 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 September 2022 Quarter.
- ASX Listing Rule 5.3.5: Payments to related parties of the Company and their associates during the September 2022 Quarter: \$212,000 - 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 Mark Wilson, Managing Director.



#### **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 previously released to ASX by Legend Mining (29 July 2022, 17 August 2022 and 15 September 2022) and Mr Oliver Kiddie consent to the inclusion of these Results in this report. Mr Kiddie have advised that this 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 <u>www.legendmining.com.au</u> for further information and announcements.

#### For more information: Mr Mark Wilson Managing Director Ph: (08) 9212 0600

Mr Oliver Kiddie Executive Director Ph: (08) 9212 0600



### Appendix 1: Tenement Schedule as at 30 September 2022

### **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
E28/2404	Fraser Range, Western Australia	100%	N/A	100%	100% Legend
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
E28/2677	Fraser Range, Western Australia	30%	N/A	30%	30:70 JV
E28/2795	Fraser Range, Western Australia	100%	Withdrawn	0%	100% Legend

#### Farm-In or Farm-Out Arrangements

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