

## About Legacy Iron Ore

Legacy Iron Ore Limited ("Legacy Iron" or the "Company") is a Western Australian based Company, focused on iron ore, base metals, tungsten and gold development and mineral discovery.

Legacy Iron's mission is to increase shareholder wealth through capital growth, created via the discovery, development and operation of profitable mining assets.

The Company was listed on the Australian Securities Exchange on 8 July 2008. Since then, Legacy Iron has had a number of iron ore, manganese and gold discoveries which are now undergoing drilling and resource definition.

## Board

**Sumit Deb**, Non-Executive Chairman

**Amitava Mukherjee**, Non-Executive Director

**Somnath Nandi**, Non-Executive Director

**Devanathan Ramachandran**, Non-Executive Director

**Rakesh Gupta**, Director and Chief Executive Officer

**Ben Donovan**, Company Secretary

## Key Projects

Mt Bevan Iron Ore Project

South Laverton Gold Project

East Kimberley Gold, Base Metals and REE Project

## Enquiries

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Chief Executive Officer

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31<sup>st</sup> October 2022

The Company Announcements Office  
ASX Limited

Via E Lodgement

## REPORT FOR THE QUARTER ENDED 30<sup>th</sup> September 2022

Please find attached the Company's Quarterly Activities Report for the quarter ended 30<sup>th</sup> September 2022.

Yours faithfully  
**LEGACY IRON ORE LIMITED**

Rakesh Gupta  
Chief Executive Officer

## HIGHLIGHTS

### EXPLORATION AND DEVELOPMENT

#### ***Mt Celia:***

- JT Metallurgical Services continues work on toll treatment options analysis. The possibility of treating the ore at nearby mills is being explored and talks are being held with the prospective mills for finalisation of a processing agreement.
- Negotiations for a heritage and mining agreement were undertaken with a Native Title group. The mining agreement finalisation has reached to an advanced stage and the Heritage Protection Agreement was executed in the month of September 2022.
- A heritage survey at the Mt. Celia project has been initiated with the Native Title group.
- The pit optimization and mining studies for the Mt. Celia project are being carried out by AMC Consulting, Perth, using the revised resource model and various mining scenarios. The mining studies are nearing completion.
- The work of drafting the mining proposal for the Mt. Celia project has commenced and all the relevant data is being compiled. The work is carried out through consultant Integrate Sustainability Pty Ltd.
- An aerial survey of the Mt. Celia tenements to generate accurate contours and a pre-mining orthophoto has been completed through the agency Rocketmine.
- Surface hydrology studies required for the mining proposal is being assessed and talks are underway with the consultant for finalising the study package.
- Talks are being held with various mining contractors and ore haulage contractors for finalisation of a works contract for the proposed mining activities.

#### ***Mt Bevan:***

- Works in relation to the Pre-feasibility studies are being undertaken by the JV Partner Atlas Iron, as per the JV agreement executed last quarter.
- RC and diamond rigs have been mobilised to the site to undertake planned drilling at the project to support the pre-feasibility studies.
- First phase of heritage survey completed.
- Major packages of works including hydrogeology, resource and metallurgical testing have been awarded.

#### ***Patricia North:***

- The heritage Protection agreement has been executed with the Nyalpa Pirniku group during September 2022.
- Heritage survey at the project has been initiated to gain heritage clearance for the planned RC drilling activities.

***Sunrise Bore:***

- The results of the follow up RC drilling completed during June 2022 were received in the current quarter.
- The results for the drilling were analysed and reported to ASX (ASX announcement dated 20<sup>th</sup> July 2022).

***Koongie Park:***

- RC drilling is awaiting heritage clearance for the Koongie Park project following up targets presented by the MLEM Survey conducted during the last year.
- The heritage survey for the planned RC drilling was conducted during the quarter and the report of the survey is awaited.

***Kimberley Tungsten tenements:***

- RC drilling is awaiting heritage clearance for the Sophie Downs project following up targets presented by the MLEM Survey conducted during last year.
- The heritage survey for the planned RC drilling at Sophie Downs was conducted during the quarter and the report of the survey is awaited.
- The drone magnetics survey planned in the Sophie Downs, Ruby Plains and Taylor Lookout tenements was completed during July 2022 to assist generation of new targets.

## EXPLORATION

### Projects Overview

Legacy Iron Ore (**Legacy Iron** or the **Company**) has a committed focus on the company's objective of development of gold, iron ore, and base metal deposits in the Western Australia through exploration. The Company has 10 promising projects encompassing 22 tenements in the Western Australian known mineralised belts (Fig.1). The Company is advancing the projects into higher stages of exploration and development through systematic exploration activities.

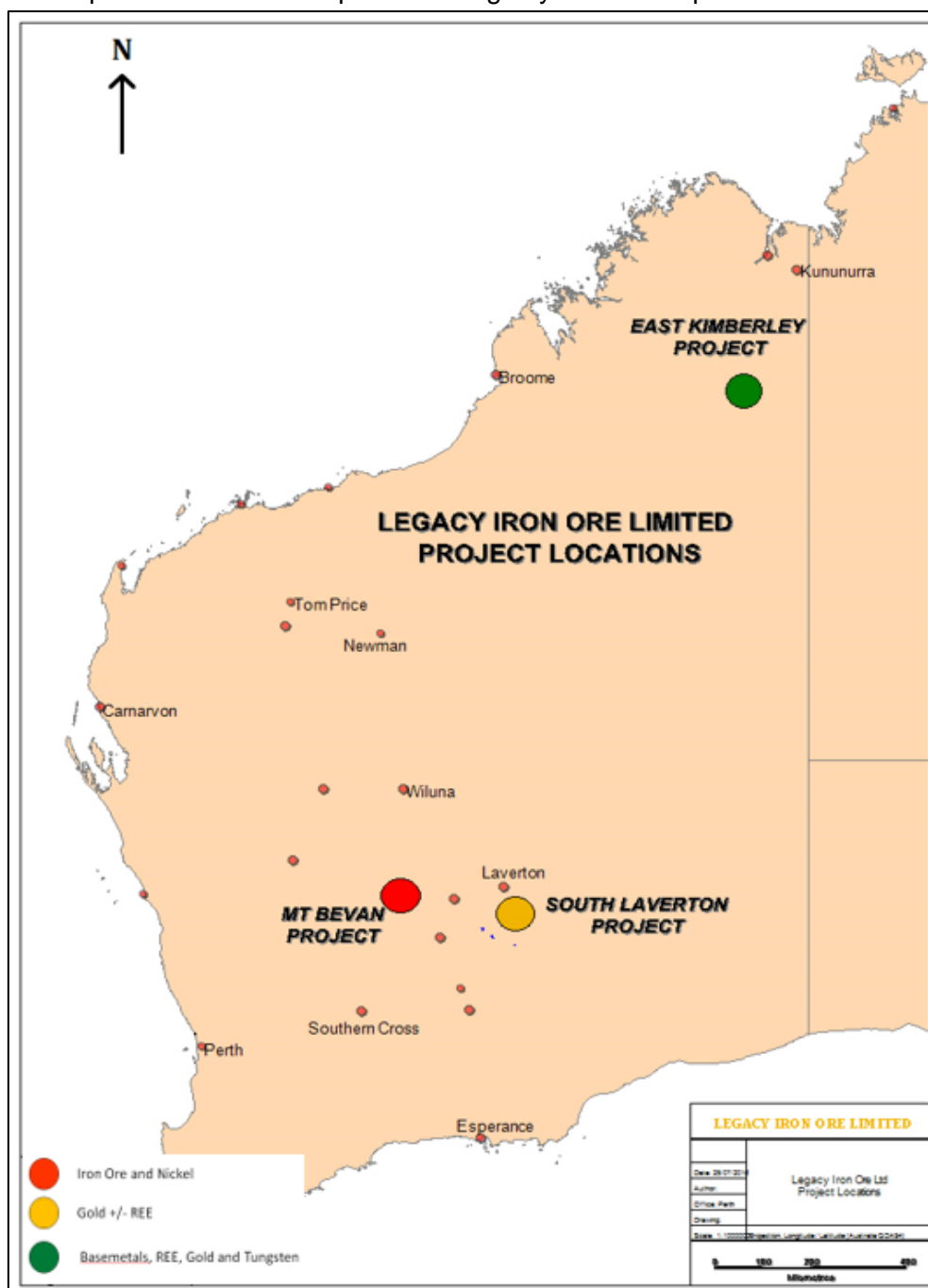


Figure 1 Legacy Iron – Project Location

## DIRECTORS' REPORT (continued)

### South Laverton Gold Hub

Legacy Iron's South Laverton Gold hub includes the projects; Mt Celia, Yerilla, Yilgangi, Sunrise Bore and Patricia North shown in (

Figure 2).

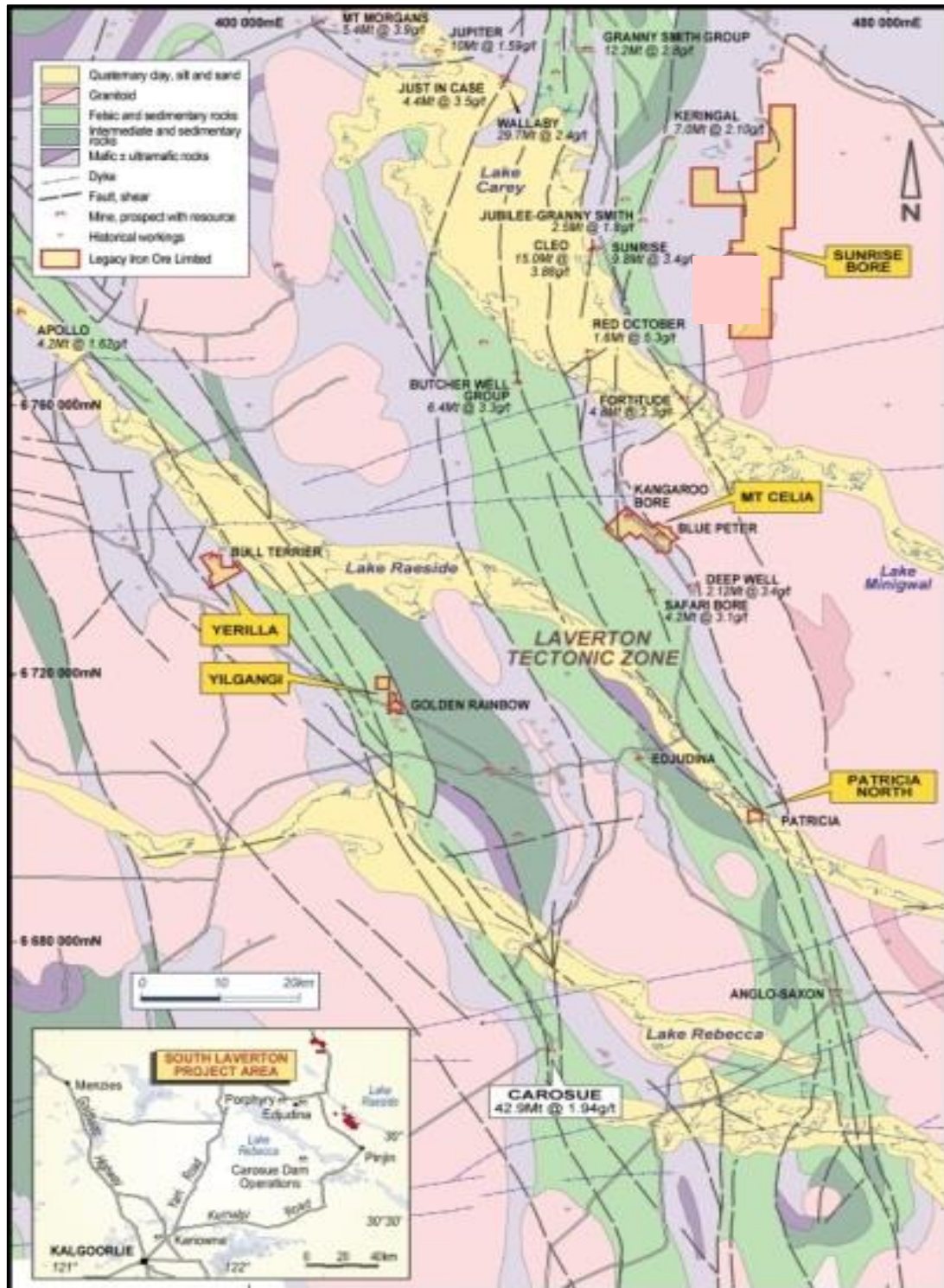


Figure 2 Legacy Iron's South Laverton Gold Projects on regional geology

## **DIRECTORS' REPORT (continued)**

### ***Mt Celia:***

The Company is working towards the completion of pre-feasibility study and development of the Mt Celia projects including the Kangaroo Bore and Blue Peter deposits. A Heritage Protection agreement has been executed with the native title group and heritage survey related works at the project have been initiated. The mining agreement has also reached the finalisation stage and should be executed in the coming quarter.

Talks are being held with various mining and ore haulage contractors for finalisation of a works contract for proposed mining activities. Various mining scenarios were evaluated for the proposed mining activities at the project and the final pit design is nearing completion. A Mining proposal is being drafted for submission to the department and all the relevant information are being compiled in the document by the consultant engaged.

### ***Sunrise Bore:***

The results for RC drilling undertaken at Sunrise Bore during the previous quarter were received and analysed. The highlights of the RC drilling results are as follows:

- Drilling intersected gold mineralization in 3 holes out of 17 (total drilled meters 1,440m).
- The intersections are:
  - **2 m @ 0.67 g/t Au from 57 m in SBRC018**
  - **3 m @ 1.36 g/t Au from 59 m and  
2m @ 0.67g/t Au from 74m in SBRC019**
  - **1 m @ 1.26 g/t Au from 53 m in SBRC033.**
- Drilling was targeted to test the strike continuity of mineralization identified from 2021 drilling.
- Current results to be followed up with further RC drilling to define the continuity and extension of the mineralized zone.

The results improve confidence in the project and provides additional targeting for follow up drilling in the future.

The results were reported to the ASX (Encouraging gold mineralisation continues at Sunrise Bore Project, ASX announcement dated 20<sup>th</sup> July 2022).

The map showing the summary of results of the two rounds of RC drilling at the project is shown below:



## DIRECTORS' REPORT (continued)

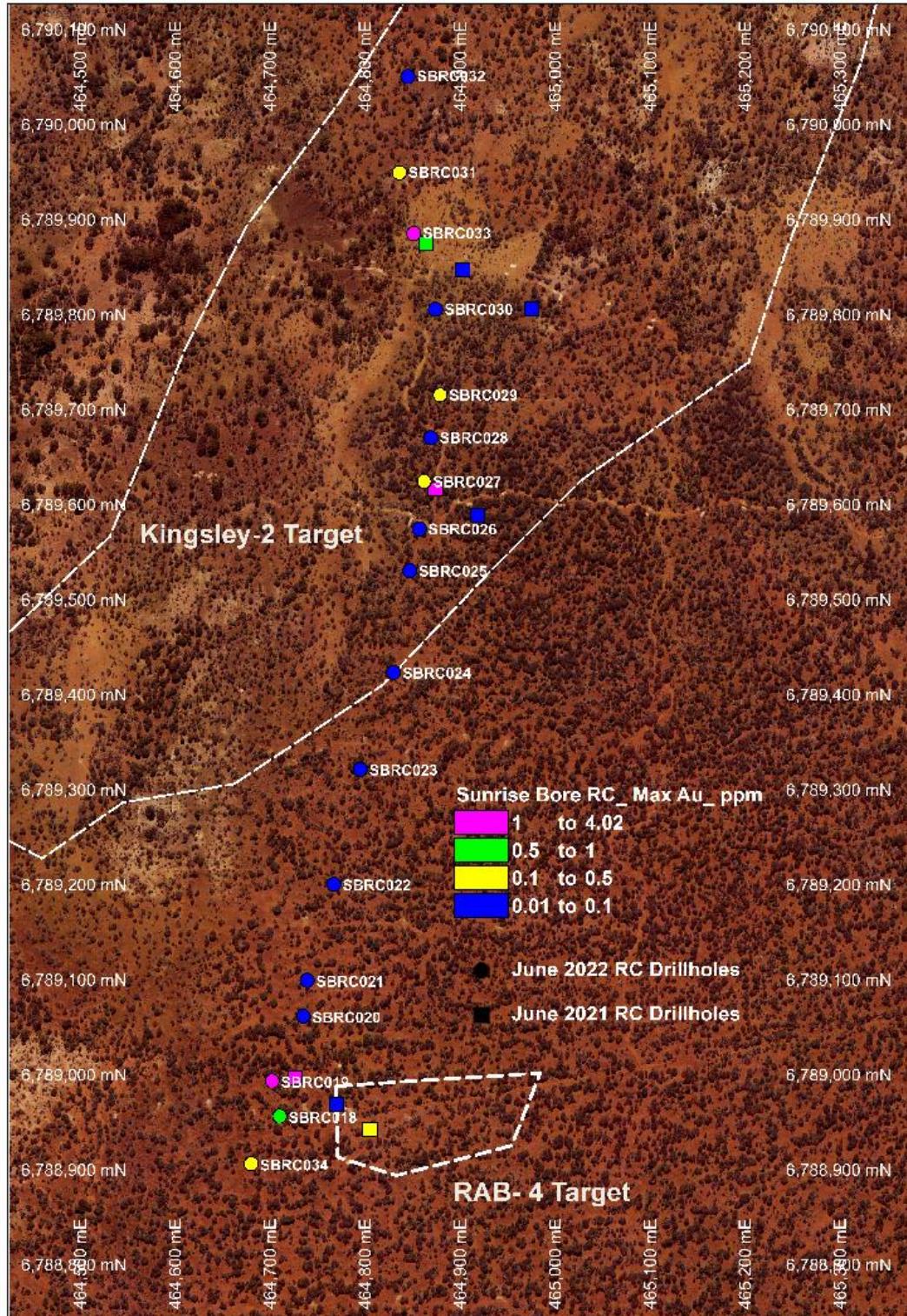


Figure 3 Sunrise Bore RC drilling results

## **DIRECTORS' REPORT (continued)**

### ***Patricia North:***

During the quarter, the heritage protection agreement was executed with the Nyalpa Pirniku group during September 2022. The process of heritage survey at the project has been initiated for gaining heritage clearance for the planned RC drilling activities.

### **Next Quarter Agenda**

The next quarterly plan for the South Laverton gold hub includes the following main objectives:

- Execution of Mining Agreement for the Mt. Celia tenements with the native title claimants.
- Completion of heritage surveys of the project areas (Mt. Celia and Patricia North tenements).
- Completion of mining studies of the project and work towards the financial model of the project.
- Work on finalization of a mining / ore haulage contractor and toll treatment mill for the proposed mining activities at the Mt. Celia project.
- Finalization of mining proposal of the project and submission of the document to the department for approval of the same.
- The Company continues to work through the required regulatory approvals, including heritage studies, and enter into other agreements.

### **Mt Bevan Project (E29/510-I) Iron and Nickel**

During the previous quarter the joint venture of Mt Bevan saw the inclusion of Hancock Magnetite Holdings Pty Ltd (**Hancock**) as a joint venture partner. Hawthorn Resources Limited (**Hawthorn**) now holds 28% interest, Legacy holds 42% and Hancock holds 30% interest (*ASX: Mt Bevan Joint Venture Update 3 May 2022*).

The project is situated 250km north of Kalgoorlie in Western Australia. The project is on a large tenement E29/510 which hosts 1,170 Mt of magnetite resource @ 34.9% Fe.

The Company aims to progress the world class magnetite project through joint venture partnership with Hancock. Simultaneously exploring for lithium and nickel-copper mineralisation in the tenement.

The Pre-feasibility studies related planned works are being undertaken by the JV Partner Atlas Iron, as per the JV agreement executed last quarter. RC and diamond rigs have been mobilised to the site for conducting planned drilling at the project to support the pre-feasibility studies. First phase of heritage survey has been completed at the project. Major packages of works including hydrogeology, resource and metallurgical testing have been awarded.



## DIRECTORS' REPORT (continued)

**Table 1 Mt Bevan BIF Resource Estimate**

Mt Bevan Fresh BIF Resource											
Class	Material	Tonnes x 10 <sup>6</sup>	Fe %	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	CaO %	P %	S %	LOI %	MgO %	Mn %
Indicated	<i>In situ</i> Total	322	34.7	46.2	0.57	1.35	0.054	0.131	-1.05	1.91	0.31
	<i>In situ</i> Magnetic*	44.18%	30.0	2.4	0.01	0.08	0.005	0.053	-1.38	0.05	0.01
	Concentrate	142	68.0	5.5	0.02	0.18	0.012	0.130	-3.12	0.12	0.03
Inferred	<i>In situ</i> Total	847	35.0	45.6	0.77	2.00	0.063	0.39	-1.15	1.77	0.04
	<i>In situ</i> Magnetic*	45.70%	30.8	2.8	0.01	0.06	0.004	0.042	-1.37	0.03	0.01
	Concentrate	387	67.5	5.9	0.03	0.14	0.009	0.096	-3.00	0.06	0.02
Total	<i>In situ</i> Total	1,170	34.9	45.8	0.71	1.82	0.060	0.137	-1.12	1.81	0.11
	<i>In situ</i> Magnetic*	45.28%	30.6	2.7	0.01	0.07	0.004	0.045	-1.37	0.03	0.01
	Concentrate	530	67.7	5.80	0.03	0.15	0.010	0.105	-3.03	0.07	0.02

\*In situ Magnetic is the material that is expected to report to the magnetic fraction. The in situ Magnetic quantities in the Tonnes column are expressed as the percentage of the in situ Total tonnes (as estimated from Davis Tube Mass recovery) The Company confirms that it is not aware of any new information or data that materially affects the information included in these announcements and that all material assumptions and technical parameters underpinning the resource estimate in the prior announcements continue to apply and have not materially changed. - See Announcements 17<sup>th</sup> December 2013)

### Mt Bevan exploration for nickel/copper and lithium and associated metals:

During the quarter, a non-binding agreement was signed with JV partner Hancock, for exploration Nickel/ Copper and Lithium at the Mt. Bevan Project. Under the deed, Legacy Iron and Hawthorn have granted Hancock the exclusive right to undertake a desktop study to assess nickel, lithium and copper on the Mt Bevan project. The exclusive period is for a period of three months and commences on the date of Hancock receiving all exploration data held by Legacy Iron and Hawthorn.

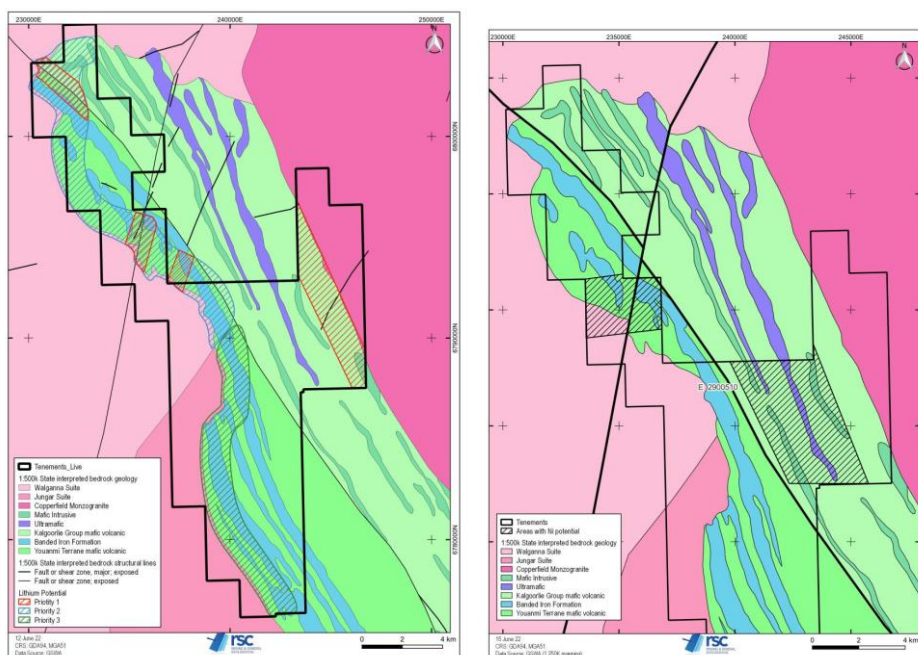


Figure 4 Target areas for Lithium (left) and Nickel (right) identified in recent study.

## DIRECTORS' REPORT (continued)

### East Kimberly Projects

The ground works for the planned RC drilling at the Koongie Park and Sophie Downs projects are awaiting heritage clearances. The heritage survey for the work programme clearance has been completed and the report of the survey is awaited.

**Drone magnetics survey:** During the reporting period, drone magnetics surveys were carried out in the identified areas of interest of the projects (Sophie Downs, Taylor Lookout and Ruby Plains). The work was carried out to assist in interpretation of the various structures at the projects. The drone magnetics survey was carried out by Atlas Geophysics during early July 2022. A specialised unmanned rotary wing geophysical survey aircraft was equipped with Pegasus autonomous flight control and a terrain following system. The aircraft was used to tow a Pegasus designed and built bird which housed the geophysical sensors and Pegasus data acquisition system.

The processed data was received after the completion of the survey. The map showing Total magnetic Intensity reduced to Pole is attached as figures below.

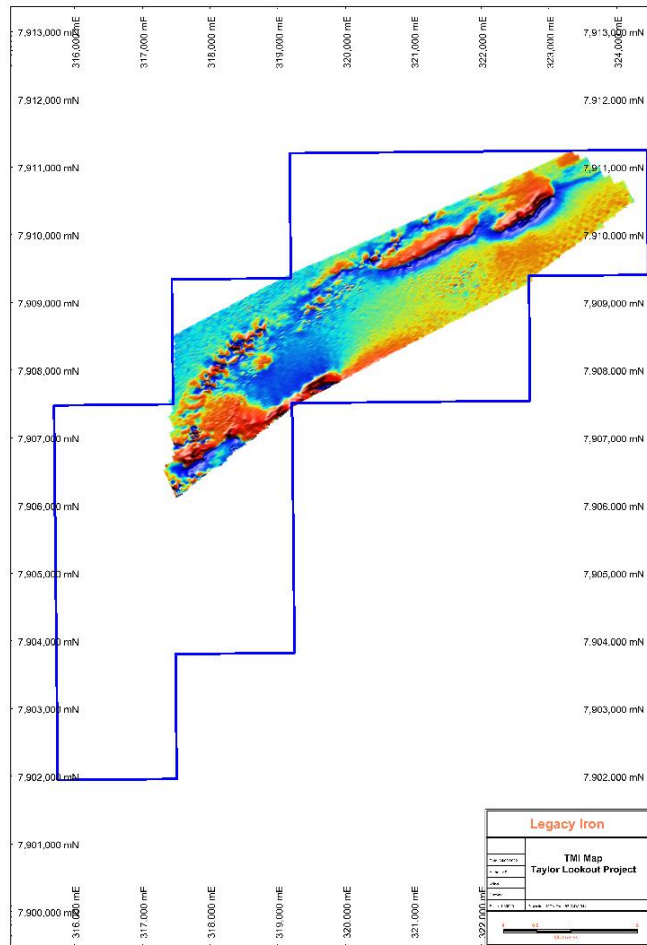


Figure 5 TMI map for the Taylor Lookout Project

## DIRECTORS' REPORT (continued)

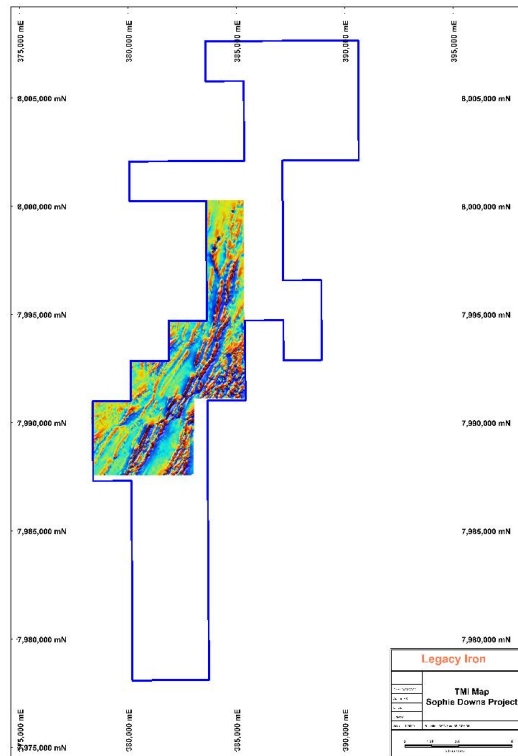


Figure 6 TMI map for the Sophie Downs Project

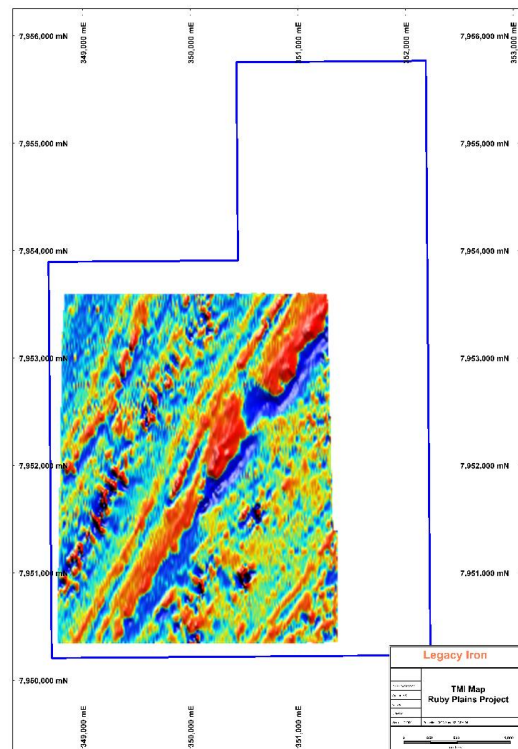


Figure 7 TMI map for the Ruby Plains Project



#### Next quarter Agenda

- Work program clearance for the planned RC drilling at the Koongie Park and the Sophie Downs project.

#### **PLANNED ACTIVITIES – December 2022 quarterly period.**

Main exploration activities planned in the next three months is likely to comprise of:

##### **Mt Celia project**

- Completion of pit optimisation studies.
- Work on financial model of the project.
- Completion of heritage survey.
- Execution of mining agreement with the Native Title group.
- The Company continues to work through the required regulatory approvals.
- Finalisation of ore processing location.
- Assessing Infrastructure and contract requirements
- Finalization and submission of Mining Proposal.

##### **Patricia North:**

- Completion of heritage survey.

##### **Sunrise Bore:**

- Plan follow up RC programs

##### **Mt Bevan Project:**

- Atlas Iron will continue to progress the project to PFS

##### **Koongie park:**

- Work program clearance for the planned RC drilling at the Koongie Park project after the heritage survey report.

##### **Kimberley Tungsten:**

- Work program clearance for the planned RC drilling at the Sophie Downs project after the heritage survey report.

For the purpose of Section 6 of the Appendix 5B, all payments made to related parties have been paid in relation to director fees.

#### **Competent Person's Statement:**

*The information in this report that relates to Exploration Results is based on information compiled by Colin Earl who is a member of Australian Institute of Geoscientists (AIG) and was the Exploration Manager of Legacy Iron Ore Limited during most of the reporting period. Mr Earl has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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 Earl consents to the inclusion in this report of the matters based on his information in the form and the context in which it appears.*

### Tenement Schedule in accordance with ASX Listing Rule 5.3.3

#### Tenements held at the end of the September 2022 Quarter

Location	Tenement	Project	Date of Grant	Equity (%) Held at start of Quarter	Equity (%) Held at end of Quarter
WA	E80/4221	Koongie Park	14/12/2009	100%	100%
WA	E31/1034	Patricia North	19/09/2013	100%	100%
WA	M31/0426	Yilgangi	12/01/2009	100%	100%
WA	M31/0427	Yilgangi	12/01/2009	90%	90%
WA	E31/1019	Yilgangi	10/04/2013	90%	90%
WA	E31/1020	Yilgangi	10/04/2013	90%	90%
WA	E39/1443	Mt. Celia	10/11/2009	100%	100%
WA	M39/1125	Mt Celia	7/06/2018	100%	100%
WA	M39/1126	Mt Celia	7/06/2018	100%	100%
WA	M39/1127	Mt Celia	7/06/2018	100%	100%
WA	M39/1123	Mt Celia	7/11/2018	100%	100%
WA	M39/1124	Mt Celia	7/11/2018	100%	100%
WA	M39/1128	Mt Celia	7/11/2018	100%	100%
WA	E39/1748	Sunrise Bore	1/07/2014	100%	100%
WA	E29/0510	Mt. Bevan	7/07/2005	42%	42%
WA	E80/5066	Taylor Lookout	18/07/2018	100%	100%
WA	E80/5067	Sophie Downs	18/07/2018	100%	100%
WA	E80/5068	Ruby Plains	18/07/2018	100%	100%
WA	E39/2040	Kangaroo Bore North	18/09/2018	100%	100%