**An NMDC Company** 

ASX Announcement 15 October 2018

# **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**

**N. Baijendra Kumar,** Non-Executive Chairman

Narendra Kumar Nanda, Non-Executive Director

Tangula Rama Kishan Rao, 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**

Rakesh Gupta Chief Executive Officer Phone: +61 8 9421 2000

**ASX Codes: LCY** 

LEVEL 2 1-5 HAVELOCK STREET WEST PERTH WA 6005

PO BOX 5768 ST GEORGES TERRACE WA 6831

Phone: +61 8 9421 2005
Fax: +61 8 9421 2001
Email: info@legacyiron.com.au
Web: www.legacyiron.com.au

ASX Market Announcements ASX Limited Via E Lodgement

# POSITIVE OUTCOME FROM PIT OPTIMISATION STUDY AT MT CELIA GOLD PROJECT

# Highlights include:

- Significant step forward in Company's aspiration to be a gold producer.
- Mt Celia project's current 2012 JORC inferred mineral resource of total 3.4 Mt @ 1.68 g/t Au, (184,100 oz Au metal) was optimised at the gold price of AUD A\$1,650/oz.
- Initial Scoping Study completed by the Company confirms that the Mt Celia project has potential to be a technically and economically viable project.
- Study provides a strong case for further extending and enhancing the resource at both the deposits via additional infill as well as drilling along strike and at depth.
- Additional work to be undertaken to confirm preliminary findings of the study that there is potential to generate strong positive cash flows for either a stand-alone mining option or, one that assumes trucking ore to an off-site plant.
- AMC Consulting was engaged in carrying out this study.
- The next phase of exploration drilling is planned to take place in mid-October 2018.
- Discussions are underway with processing plant operators in the area for delivery of ore by semi-trailer.

Legacy Iron Ore Limited (Legacy Iron or the Company) is pleased to announce that it has taken the next step in its aspiration to be a gold producer following encouraging results from the pit optimisation study completed for Mt Celia deposits (Figure 1).

The Company has a current 2012 JORC inferred resource at the Mt Celia Project (Kangaroo Bore and Blue Peter as shown in Table 1 and Figure 1:

Table1: Current Inferred Resource at Mt Celia

| Deposit          | Classification | Cut-off (g/t) | Tonnage (t) | Grade (g/t) | Metal (OZ) |
|------------------|----------------|---------------|-------------|-------------|------------|
|                  |                |               |             |             |            |
| Kangaroo Bore    | Inferred       | 0.7           | 2,800,000   | 1.48        | 133,000    |
|                  |                |               |             |             |            |
| Blue peter       | Inferred       | 1             | 607200      | 2.62        | 51,100     |
| Total (Mt Celia) | Inferred       |               | 3,407,200   | 1.68        | 184,100    |

(See ASX announcement dated 22 March 2018)

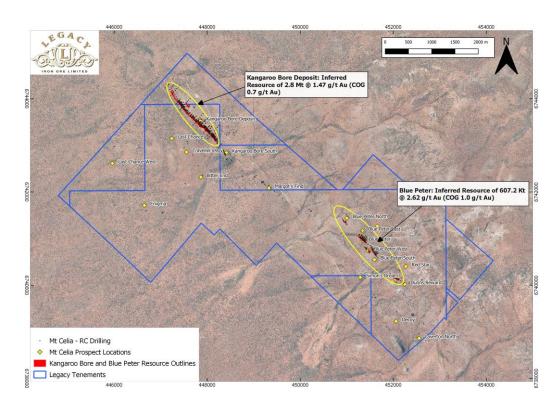


Figure 1: Mt Celia Project- Aerial image showing various prospect locations including Kangaroo Bore and Blue Peter

Using this existing inferred resource\*, the pit optimisation study was undertaken to investigate the mining potential at the Mt Celia Project and the potential for cashflow. (\* see assumption below)

### **Pit Optimisation Parameters**

The study was undertaken by AMC Consulting using Whittle Four-X software and was completed using the Table 1 inferred resource and a base case gold price of A\$1,650/oz.

AMC Consulting prepared models by adding cost, recovery, royalty and revenue drivers to individual blocks within the models using Datamine macros. This process provides an audit trail and reduces errors in assigning optimisation parameters. Royalties, administration charges, ore processing costs and other ore related costs were all aggregated to create a total ore related cost which was assigned to ore blocks. Mining costs common to all material types were assigned to all model blocks.

Parameters from the inferred resource exploration drilling work were used in the study. A total of 207 drill holes including 24 diamond holes (totaling 15,099 m of drilling) were considered for use in the Kangaroo Bore estimates. Majority of the data used for resource estimation was derived from historical drilling. For Blue Peter, A total of 122 RC holes (totalling 9,356 m of drilling) were considered for use in the estimates. The majority of the data used for Blue Pater resource estimation was derived from drilling programmes conducted by Legacy since the start of 2010.

Where parameters weren't known, AMC Consulting applied mining cost parameters based on similar sized operations in the region from AMC's database.

All parameters used were in the range of normally acceptable cost limits of similar mining operations, with Table 2 summarising these parameters provided in Annexure 1.

# **Study Results**

The results from this high-level pit optimisation study are highly encouraging, for both the Kangaroo Bore and Blue Peter deposits and provide the Company with significant confidence moving forwards.

Nested pit shells were generated at varying metal prices and evaluated at the base case metal price. The optimal outcome was shown as being Pit shell 31 in all cases. This shell was selected as the basis for pit design for both the Blue Peter and the Kangaroo Bore deposits.

Pit shell 31 returned the optimal outcome when scheduled, but there is potential for a smaller pit shell to provide a stronger positive outcome.

An isometric view of the optimal pit shell and the inferred mineral resource model is shown in Figure 2 and 3 below.

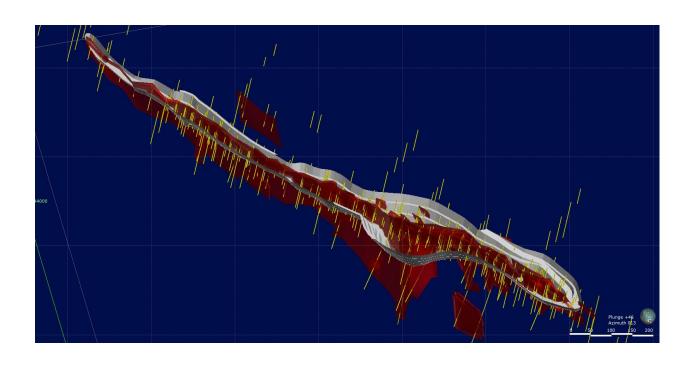


Figure 2: Mt Celia Gold Project – Isometric View of the Kangaroo Bore starter pit.

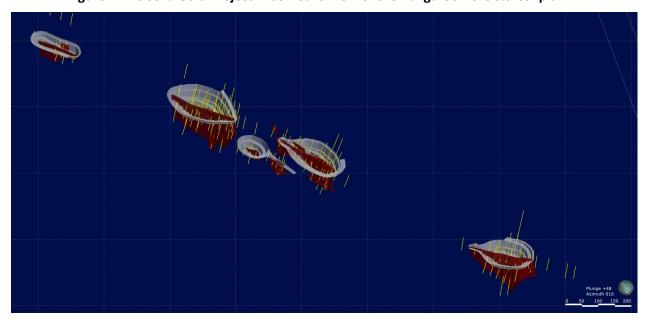


Figure 3: Mt Celia Gold Project – Isometric View of the Blue Peter starter pit.

# **Next Steps**

The Company has already taken steps to convert the tenements associated with the Mt Celia project into mining leases plans, with 3 out of 7 licences currently converted mining leases.

This is an important next step as the Company moves to commencing mining.

As a result of the encouraging results from the study, the Company has already planned the

next phase of exploration work.

This will include additional RC and diamond drilling to understand geo-metallurgical and geo-

technical aspects of the orebody, together with additional drilling to test the ore bode along

strike and also at depth.

The ultimate aim of the Company is to not only increase the overall inferred resource size for

the Mt Celia project but also increase the confidence to a higher JORC Code category.

The Company will also undertake some infill drilling between the Kangaroo Bore and the

Blue Peter deposits to test whether there is some joining of the deposits leading to better

overall economics.

**Chief Executive Officer Comments** 

Commenting on the study results, Chief Executive Officer Rakesh Gupta said, "The

Company has been progressing the Mt Celia project with the view towards product and

cashflow generation. These study results are the next step on that path and provide the

Company with significant encouragement to seek the necessary approvals to move towards

mining. Additional upside will also come from further drilling which is aimed to further expend

the known resources along strike and at depth, but also improve the JORC classification.

There is an exciting path ahead for shareholders."

Yours faithfully,

Rakesh Gupta

Chief Executive Officer

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

The information in this statement that relates to the Mineral Resource estimates is based on work managed by Rodney Brown of SRK Consulting (Australasia) Pty Ltd. Rodney Brown is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code, 2012 edition). Mr Brown consents to the inclusion in this report of the matters based on his information in the form and the context in which it appears.

The information in this statement that relates to the pit optimisation study estimate is based on work managed by AMC Consulting Pty Ltd.

#### ASX Listing rule disclosure

In accordance with ASX Listing Rule 5.23.2, Legacy Iron confirms that it is not aware of any new information or data that materially affects the information included in the 22 March 2018 market announcement referred to above, and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in that announcement continue to apply and have not materially changed.

Legacy Iron acknowledges that there is a low level of confidence associated with inferred resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources. As the project currently only has an inferred resource, there is no basis to report a production target. Any production target is based on the Company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that any target will be met.

# **Annexure 1**

Table 2: A summary of the key input parameters and assumptions

| Key Area    | Item  | Details                        |  |
|-------------|---|--------------------------------|--|
|             |   |                                |  |
| Metal Price | Gold price (AU\$/oz)                          | 1,650                          |  |
|             |   |                                |  |
| Mining      | Method  | Conventional shovel dumper     |  |
|             | Mining dilution (%) *                         | 8-12%                          |  |
|             | Mine losses (%) *                             | 4-6%                           |  |
|             | Strip ratio (Kangaroo Bore)                   | Less than 6                    |  |
|             | Strip ratio (Blue Peter)                      | Less than 10                   |  |
|             | Over all slope angle of Pits (degrees) -      | For Kangaroo Bore 65-degree    |  |
|             | Kangaroo Bore                                 | batter angle with 5m berms     |  |
|             |   | equates to overall slope of 50 |  |
|             |   | degrees with ramps.            |  |
|             | Over all slope angle of Pits (degrees) - Blue | Blue peter 70-degree batter    |  |
|             | Peter   | angle and 5m berms equates     |  |
|             |   | overall slope of 50 degree     |  |
|             |   | with ramps.                    |  |
|             |   |                                |  |
| Processing  | Process                                       | Carbon in Leach plant          |  |
|             | Method  | Toll treated                   |  |
|             | Gold recovery (%) *                           | 90 to 93%                      |  |
|             |   |                                |  |
| Royalty     | Gold royalty (%)                              | 2.5                            |  |

Note: Where an item contains an Asterix (\*) these parameters have been assumed based on the database of junior gold explorers in the WA Midwest region, where AMC Consulting have undertaken similar engagements. These assumptions are based on recorded parameters of these projects and averaged when applied to the Company's project.

All other items are conventional items and methods used in gold mining and industry standards.