25 February 2019

ASX ANNOUNCEMENT

Iron Road Limited (Iron Road, ASX:IRD)

REVISED CEIP DEVELOPMENT STRATEGY REDUCES PROJECT CAPEX REQUIREMENTS BY 56%

New project delivery model enhances leverage to strong iron ore price environment

KEY OUTCOMES

- Less capital intensive and lower risk Central Eyre Iron Project (CEIP) delivery model consistent with investor strategy announced at Iron Road AGM on 23 November 2018.
- Total project capital requirements reduced to US$1.74 billion (12Mtpa dry production target, including pre-strip), down from US$4.00 billion (24Mtpa dry production target, including pre-strip).
- Lower production target of 12Mtpa at a grade of 66.7% iron (13Mtpa wet) frees mine to port operational constraints, enabling a more capital light product haulage methodology.
- Capital intensity of US$134 per wet metric tonne remains industry competitive considering high value-in-use iron grade product is increasingly sought by the seaborne market.
- Life of mine Free On Board (FOB) total operating costs of US$44.50/wmt (ex-state royalty).
- Current high grade 65% Fe index prices approximating US$100/dmt (CFR China) implies spot case operating margin of US$35/dmt (inclusive of sustaining capex requirements, state royalty obligations, ocean freight and accounting for 8% product moisture content).
- Under spot scenario and 60% project gearing:

  IRR (post-tax) = 33.5%
  NPV_{10} (post-tax) = US$1.68B
  15% discount to spot prices generates 20% IRR.

- Major reduction in reliance on electricity – mean project power demand decreased to 212MW and energy consumption reduced by 66%.
- Heavy haulage rail replaced by high capacity dual-powered road trains (DPRTs) operating on a private haul road at an estimated cost of AUD 5 cents per tonne kilometre over the 136km route.
- Cape Hardy deep water port delivery model adapted to Build, Own, Operate (BOO) with take or pay provision that incorporates a commensurate rate of return including development risk.
- Waste rock and tailings management methodology retained, maintaining no requirement for conventional tailings storage.

Key Metrics – 2019 CEIP Plan

Capital Cost Estimate	US$ M	Comment
Mining	644.8	Includes contractor pre-strip, heavy and continuous mining equipment
Ore processing facility	551.8	Design and delivery mode unchanged, two process trains (reduced from three)
Mine site facilities	179.5	Includes reduced High Voltage electrical infrastructure and conveyors
Off-site facilities	149.5	Includes module access route, roads, reduced electrical infrastructure, etc
Indirects	217.3	Includes owners systems, ancillary equipment, land access, contingencies
Total	**1,742.9**	**2019 CEIP plan**

Notes

- Foreign currency denominated capital expenditure components converted at the following rates:
  AUD/USD = 0.7169
  AUD/EUR = 0.6301
  AUD/CNY = 4.8668
  AUD/GBP = 0.5571

CEIP Operating Cost Estimate	Life of Mine US$/wmt
Mining operations – includes contractor margin, waste and tailings management and water supply	23.80
Ore processing and loadout	11.22
Concentrate transport to port	5.44
Port charges	4.04
Total FOB operating cost	**44.50**
Sustaining capital	3.80

Notes

- Life of Mine represents 22 year ore mining schedule producing 250Mt of (dry) iron concentrate at a grade of 66.7% iron
- OPEX includes G&A expenses
- Financial model indexes operating cost profile at 2% pa
- Key input costs at commencement of operating phase include:
  - Delivered electrical power A$83/MWh
  - Delivered diesel (price net of excise rebate) A$0.81/L

Iron Road Limited (Iron Road or Company, ASX: IRD) is pleased to announce that following the recent ASX announcement "Investor Strategy Drives New Mine Plan" released on 29 January 2019, the Company has completed a whole of project review at its 100% owned Central Eyre Iron Project (CEIP) in South Australia. The CEIP delivery model described here is a direct result of the new investor strategy announced at the Iron Road AGM on 23 November 2018.

The comprehensive reassessment of the project has resulted in significantly reduced capital costs[1], improved optionality and lowered the development risk profile. Despite the delivery model resulting in higher infrastructure operating costs, competitive industry margins are maintained, driven by a lower strip ratio and robust market demand for premium iron ore products, such as the 65% Fe index, which is currently trading around 15% above the 62% iron benchmark grade.

Geared, post-tax (tax rate of 30%) IRR at Financial Close

		High Grade 65% iron Index Price (US$/dmt)			
		80	*90*	*100*	*110*
AUD/USD	*0.650*	**21.0%**	30.9%	39.1%	46.5%
	0.717	**14.1%**	**25.0%**	**33.5%**	40.8%
	0.750	10.3%	**22.1%**	**30.8%**	**38.2%**
	0.800	3.8%	17.7%	26.8%	**34.3%**

Geared financial model represents a project financing scenario for the CEIP whereby financing costs also include a debt service reserve account (DSRA), interest during construction (IDC), commitment fees, upfront fees as well as advisory and due diligence costs. An alternative corporate financing model would result in lower overall sources and uses of funds for the CEIP and would lead to higher IRR's than those illustrated in the sensitivity table above.

CEIP Physicals

Item	Unit	2019 Rob Roy	2017 Murphy South / Boo-Loo
LoM ore production	Year	22	27
LoM strip ratio	waste:ore	0.97:1	1.34:1
Concentrate production	Mtpa (dry)	12	24
LoM concentrate grade	% iron	66.7	66.7
Notes: LoM – life of mine			

Of the 1,701 million tonnes of magnetite mineralisation contained within the Rob Roy pit shell; 92% reports to the Measured, 6% to the Indicated and 2% to the Inferred Mineral Resource categories. The Rob Roy pit shell is derived entirely from within the Murphy South / Boo Loo Mineral Resource detailed in Table 1.

There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

[1] CEIP Study Confirms Compelling Commercial Case (26 February 2014), Optimisation Studies Complete at CEIP (13 October 2015), Mine Review Drives Further Value Accretion Opportunities at the CEIP (31 October 2017)

Basis for CEIP Review

The CEIP definitive feasibility study and subsequent optimisation studies[2] established that the CEIP could credibly deliver premium quality iron concentrate at high annual production rates up to 24Mtpa (dry). These plans were specifically designed to achieve highly efficient movement of very large volumes of ore and waste to underpin high annual concentrate production targets with competitive life of mine cost profiles.

The scale of former mining and beneficiation proposals, together with the supporting infrastructure required, indicated previous total upfront capital hurdles of approximately US$4.0 billion (including pre-strip). Flagged funding tasks of this magnitude have proven prohibitive for potential CEIP partners and many greenfield development proposals globally have experienced difficulty maintaining momentum. Volatile commodity markets and a sustained environment where corporate strategies remain heavily skewed towards capital management and returning cash to shareholders, in preference to growth, have been other key inhibiting factors.

In the absence of timely Chinese backed equity funding materialising for the CEIP and following constructive feedback from other potential investors, the Company initiated work in Q4 2018 assessing the viability of a smaller start-up mine with a production target of approximately 12Mtpa iron concentrate (dry). The mine plan restructure has allowed for a critical re-assessment of all CEIP components in terms of scale and optionality, and as a consequence capital costs across the project have reduced significantly.

Project Changes

A smaller scale production target of 12Mtpa iron concentrate (dry) has allowed for rescaling key components and enhanced optionality across the CEIP. Some of these are briefly discussed below.

Mine

- Single open pit, substantially reduced pre-strip and waste mining requirements over life of mine.
- Conventional truck and shovel, incorporating an ex-pit (and later in-pit) crushing and conveying (EPCC/IPCC) hybrid mining solution, evolving with mine depth over time.
- Mining electrical power demand reduced by 80%.
- New mine design embeds optionality, permitting for a later cut-back of the southern wall and extraction of additional mineralisation within the global Mineral Resource.

Ore Processing Facility

- Ore processing facility to produce 12Mtpa of iron concentrate (dry) at a grade of 66.7% iron and grind size 106µm (p80).
- High intensity modules, with two parallel processing lines (previously three lines). Early commissioning conducted offsite reducing schedule risk.
- Site layout suitable for potential future expansion.
- Well understood conventional ore grinding and magnetic separation.
- Processing facility power demand reduced by 51%.

[2] CEIP Study Confirms Compelling Commercial Case (26 February 2014), Optimisation Studies Complete at CEIP (13 October 2015), Mine Review Drives Further Value Accretion Opportunities at the CEIP (31 October 2017)

Waste Rock and Water Management

- Reduced volume of mine waste as well as coarse and fine tailings from two process trains.
- Coarse grinding and tailings dewatering eliminates requirement for a conventional tailings dam.
- Combined tails and waste rock placed on a smaller integrated waste landform (IWL) by mobile spreader.
- Iron Road received an environmental commendation in 2015 by the Premier of South Australia for its approach to waste management.
- Lower raw water requirement, with resulting smaller bore field and water reticulation system.

Electrical Power

- Average CEIP power demand reduced substantially to 212MW and energy consumption reduced by 66%.
- Power supply from reinforced grid (via Yadnarrie West sub-station)..

Product Delivery to Port

- Iron concentrate from the mine site to be transported along private haul road (situated within the infrastructure corridor) to the port precinct at Cape Hardy by means of large capacity dual-powered road trains (DPRTs).
- DPRT option costed and optimised for CEIP conditions by experienced operator, based on actual operating data. CEIP site conditions (flat topography, no bridges, short 136km haul) ideally suited to DPRT low capital haulage strategy.

Port

- Loadout and ancillary iron concentrate handling infrastructure modified to reflect the use of large capacity DPRTs for concentrate transport.
- Following market discussions, port delivery model adapted to Build, Own, Operate (BOO) with take or pay provision, replacing owner operator.
- Credible parties have expressed both the appetite and capability under this alternative BOO model.

- ENDS -

Note

The Optimisation study referenced in this announcement was released on 13 October 2015 as “Optimisation Studies Complete at CEIP” and updated on 20 April 2016 as “Continuing Cost Reductions at Central Eyre Iron Project” and 3 July 2017 as “CEIP Capital Cost Estimate Reduction”. The Company has provided an updated Production Target and updated material assumptions on 29 January 2019 as “Investor Strategy Drives New Mine Plan” and is not aware of any other new information or data that materially affects the information included in this announcement. The Mineral Resources underpinning the Production Target have been prepared by competent persons in accordance with the requirements of the JORC code.

For further information,
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Tables

Table 1 – CEIP Global Mineral Resource

Location	Classification	Tonnes (Mt)	Fe (%)	SiO_2 (%)	Al_2O_3 (%)	P (%)	LOI (%)
Murphy South/Rob Roy	Measured	2,222	15.69	53.70	12.84	0.08	4.5
	Indicated	474	15.6	53.7	12.8	0.08	4.5
	Inferred	667	16	53	12	0.08	4.3
Boo-Loo/Dolphin	Indicated	796	16.0	53.3	12.2	0.07	0.6
	Inferred	351	17	53	12	0.09	0.7
Total		**4,510**	**16**	**53**	**13**	**0.08**	**3.5**

The Murphy South/Rob Roy Mineral Resource estimate was carried out following the guidelines of the JORC Code (2004) by Iron Road Limited and peer reviewed by Xstract Mining Consultants. The Murphy South - Boo-Loo/Dolphin oxide and transition Resource estimate was carried out following the guidelines of the JORC Code (2004) by Coffey Mining Limited. The Boo-Loo/Dolphin fresh Mineral Resource estimate was carried out following the guidelines of the JORC Code (2012) by Iron Road Limited and peer reviewed by AMC Consultants. This report includes results that have previously been released under JORC 2004 and JORC 2012 by the Company on 30 June 2010, 28 May 2013 and 27 February 2015. The Company is not aware of any new information or data that materially affects the information included in this announcement and all material assumptions and technical parameters underpinning the Mineral Resource continue to apply and have not materially changed.

Table 2 – CEIP Indicative Concentrate Specification – 106 micron (p80)*

Iron (Fe)	Silica (SiO_2)	Alumina (Al_2O_3)	Phosphorous (P)
66.7%	**3.36%**	**1.90%**	**0.009%**

* The concentrate specifications given here are based on current data from metallurgical test work and simulation modelling designed specifically to emulate the proposed beneficiation plant.