



ASX ANNOUNCEMENT

Iron Road Ltd (Iron Road, ASX: IRD)

INDEPENDENT TECHNICAL REVIEW VERIFIES ORE PROCESSING FLOW SHEET

**Advances Central Eyre Iron Project due diligence activities
and ongoing partnership process**

Highlights

- Highly regarded specialist consulting firm to the iron ore and steel industries, Metalytics, has verified that the step-wise tonnage streams and mass balances required to implement the 12Mtpa Central Eyre Iron Project (CEIP) mine plan are consistent with the proposed flow sheet
- Process flow designed to deliver a high-grade iron product (66.6% Fe) that is competitive with both existing global magnetite and hematite concentrates
- The coarse-grain structure of the in-situ CEIP gneissic ore facilitates beneficiation, especially compared with fine grained banded iron formation (BIF) magnetite projects in Western Australia
- 60% material mass rejection at front-end processing stage has important and advantageous implications for CEIP's projected capital and operating costs
- Low chemical variability of CEIP gneissic ore complements the consistency of its mineralogical and physical characteristics providing confidence of efficient processing performance in producing high-grade iron concentrate of consistent quality
- Flexible market product well positioned for growth in seaborne trade with higher iron content than Brazilian high-grade 65% Fe fines (principally Carajás iron ore mine) - the volume supply and trade benchmark in this high-quality market segment

Iron Road Ltd (Iron Road or Company, ASX: IRD) is pleased to advise that Metalytics has completed its independent technical review of the Central Eyre Iron Project (CEIP) ore processing flow sheet. Their detailed report and associated premium grade market commentary is now being made available on a confidential basis to potential CEIP partners. Metalytics is a highly regarded specialist consulting firm to the iron ore and steel industries and their industry professionals have decades of experience consulting to resource companies (including iron ore majors), steel producers, the financial sector and public sector entities.

Importantly, the independent review by Metalytics verifies the process flow sheet design used by Iron Road in its previously announced feasibility and optimisation studies to achieve expected ore processing outcomes.

On a first inspection of headline project parameters, Metalytics notes the CEIP in-situ ore grade of 15.9% Fe appears unpromising by comparison with existing magnetite mining and concentrating operations. However, in Metalytics' opinion, this must be assessed against the recognition that most other magnetite ores, including the BIF ores in Western Australia and the taconite ores in the USA, are markedly finer grained, significantly harder and more abrasive than the CEIP gneissic ore.

The factors Metalytics regard as most relevant to the economic viability of a magnetite operation are the quality (and hence the market value) of the saleable concentrate product (particularly its iron content and impurity levels) and the operating cost of producing it, whatever the Fe grade of the in-situ ore.

A key finding of the Metalytics report is that the coarse grain size and moderate hardness of the CEIP ore, combined with its lack of chemical and mineralogical variability, make it possible to reject 60% of the run-of-mine (ROM) mass at the Rougher Magnetic Separation (RMS) step, i.e. after semi-autogenous grinding (SAG mill crushing) to 3mm particle size.

Consequently, only the remaining 40% mass flow enters a ball mill circuit for grinding. This 40% stream is estimated by Metalytics to have an average iron grade of around 27% Fe, which is well within the usual range for magnetite mines. The resultant material is then beneficiated to the finished concentrate product at a mass recovery of 37% and an iron recovery of 90% – levels that are, respectively, favourable, and very high by comparison with existing or under-construction Australian and Canadian high-grade iron concentrate projects.

In Metalytics' opinion, these distinct features have important implications for CEIP's projected capital and operating costs. They highlight substantial reductions in the cost of electric power for both coarse and fine grinding that would be required with flow sheets to treat comparable tonnages of finer-grained, harder, and more abrasive magnetite ores. In particular, ore pre-concentration via the rejection of 60% of the ROM mass at the RMS step means that only 32.6 Mtpa of ore enters the ball mill circuit for comminution from a steady-state average of 81.7 Mtpa of ROM, substantially reducing the capacity that would otherwise be required for downstream processing.

The chemical composition of CEIP concentrate, as determined by Metalytics in Table 1, fits within the range of typical chemistries of high-grade fines and concentrates supplied to international markets.

Metalytics analysis and underlying modelling aligns closely with the Company's consistently disclosed indicative specifications for CEIP concentrate (66.7% Fe, 3.36% Silica, 1.90% Alumina and 0.009% Phosphorous).

Table 1 **CEIP Concentrate Chemistry (dry basis)**

Content	Fe	Silica	Alumina	Phos.	Sulphur	Mn	CaO	MgO	Na ₂ O	K ₂ O	TiO ₂	LOI
%	66.63	3.51	1.94	0.009	0.003	0.70	0.11	0.40	0.08	0.13	0.29	-2.8

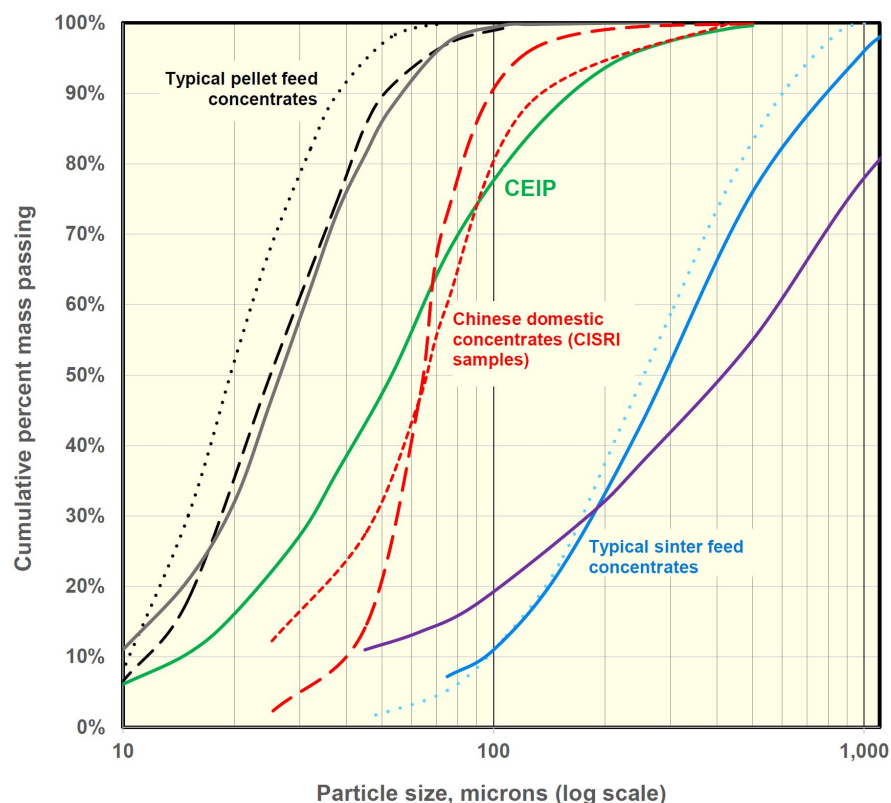
Source: Metalytics analysis and modelling of technical information from Iron Road

With respect to CEIP concentrate marketability, Metalytics notes that the proposed saleable product would have a unique grain size distribution among traded seaborne iron ore products, positioned between the ultra-fine sizing of typical pellet feed concentrates and the coarser sizing typified by sinter feed concentrates, while exhibiting certain sizing similarities to some domestic Chinese iron ore concentrates.

Figure 1, sourced from proprietary data from Metalytics database, illustrates particle size distributions (PSD's) for typical Australian and Brazilian pellet-feed concentrate products and for sinter-feed concentrates from Canada and Sweden. The planned PSD for 66.6% Fe CEIP magnetite concentrate lies between those two generic product types, and more closely resembles some domestic Chinese iron ore concentrates, including data sourced from the China Iron and Steel Research Institute (CISRI). This affords Iron Road and CEIP partner(s) a degree of marketing flexibility in negotiating CEIP concentrate offtake agreements with both Chinese and non-Chinese steelmakers.

Subject to value-in-use assessments by steelmakers, CEIP concentrate could potentially contribute to either sintering or pelletising feed blends, or directly substitute for some Chinese domestic ores.

Figure 1 Iron Ore Concentrates – Comparison of Particle Size Distributions



Premium high-grade iron ore products reduce energy consumption and plant emissions of CO₂, other pollutants and dust, and increase blast furnace productivity and reduce slag generation. China, the world's dominant iron ore market, is continuing to push its environmental policy and regulatory agenda to reduce pollution, energy consumption and CO₂ emissions. Steel companies are subject to operational restrictions to control emissions and to eliminate inefficient, obsolete, and small-scale facilities.

Magnetite products with a wide range of properties and from geographically diverse sources are currently traded in international markets. Magnetite is the dominant iron-bearing mineral mined in North America, China, the C.I.S. and Europe. The Chinese steel industry has been underpinned by domestic magnetite ores, although many have complex chemistries, some containing multiple metals and other undesirable elements including sulphur.

Magnetite accounts for around 55% of China's iron ore reserves, and when vanadium-bearing and titanomagnetite ores are included, the share rises to almost 70%. While hematite products are estimated to account for more than 90% of China's iron ore imports, the use of magnetite concentrates in sinter feed blends and as pellet feed is widespread.

Authorised for release by the board of Iron Road Ltd

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