

KOGI FINALISES AGBAJA PROCESSING PLANT DESIGN

Highlights

- Process plant design finalised featuring:
 - Moderate grinding intensity due to the relatively soft Agbaja material
 - Simple beneficiation process using magnetic separation
 - Favorable coarse final product particle size of 250 micron
- Processing cost estimate ~US\$16/t of iron ore concentrate, highly competitive for a magnetite project

Australian based iron ore development company, Kogi Iron Limited (ASX: KFE) ("Kogi", "Kogi Iron", or the "Company") and its 100% owned Nigerian operating company, KCM Mining Limited ("KCM") are pleased to report the finalisation of the processing plant design for its Agbaja Iron Ore Project in Kogi State, Nigeria ("Agbaja" or "Agbaja Project").

The processing plant design, which will be included in the Preliminary Feasibility Study ("PFS") that is nearing completion, has now been finalised and is based on a variety of test work programs carried out by Tenova Mining and Minerals (part of the global Tenova Iron & Steel and Mining Industries group) ("Tenova") and considers results from earlier metallurgical test work programs conducted by both Tenova and Trical Mining and Metallurgical Services ("Trical").

Tenova's PFS test work focussed on subjecting the mineralised Agbaja material to proven simple physical separation techniques to produce an iron ore concentrate with optimum finished product specifications. Test work found that the iron contained in the mineralised material begins to liberate at a size below about 1 mm, so a primary grind size of 600 micron has been selected for the processing plant, with a final grind size at a relatively coarse 250 micron.

Grinding will be followed by Low Intensity Magnetic Separation (LIMS) which is a robust, high capacity and well established mineral processing technology. For the Agbaja material, laboratory testing of LIMS has demonstrated sound primary separation of iron bearing material for a reasonable final product grade and yield, after regrinding of the material. Yield is expected to be ~45%, for a final iron ore concentrate grade of ~56% Fe.

Processing flow sheet description

A three stage crushing circuit has been designed comprising of two double deck banana scaling screens, one primary crusher/sizer, one secondary cone crusher, two tertiary crushers and three single deck final product screens delivering a <15mm product (P_{80}) to a conical mill feed stockpile (See Figure 1). The nominal throughput of the plant is 1,894t/hr to achieve 11.1Mtpa of feed. It is envisaged that crusher feed will be received in a primary crusher directly from the mine via dump trucks for the first stage of size reduction. From the primary crusher, material will report to an apron feeder sizer with >15mm material proceeding to secondary crushing and <15mm material feeding a ball mill via a 38,000t live stockpile.

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Kogi Iron Limited
ABN 28 001 894 033
KCM Mining Limited
(Nigerian Subsidiary)

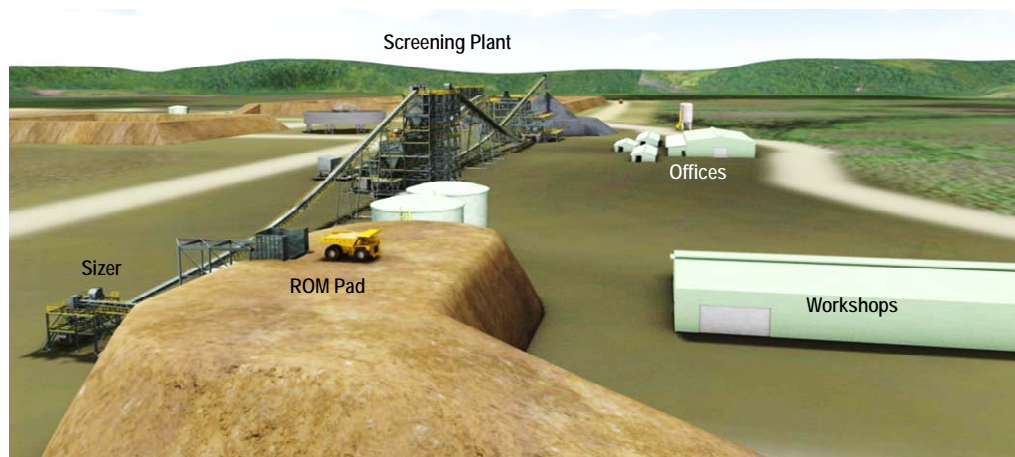
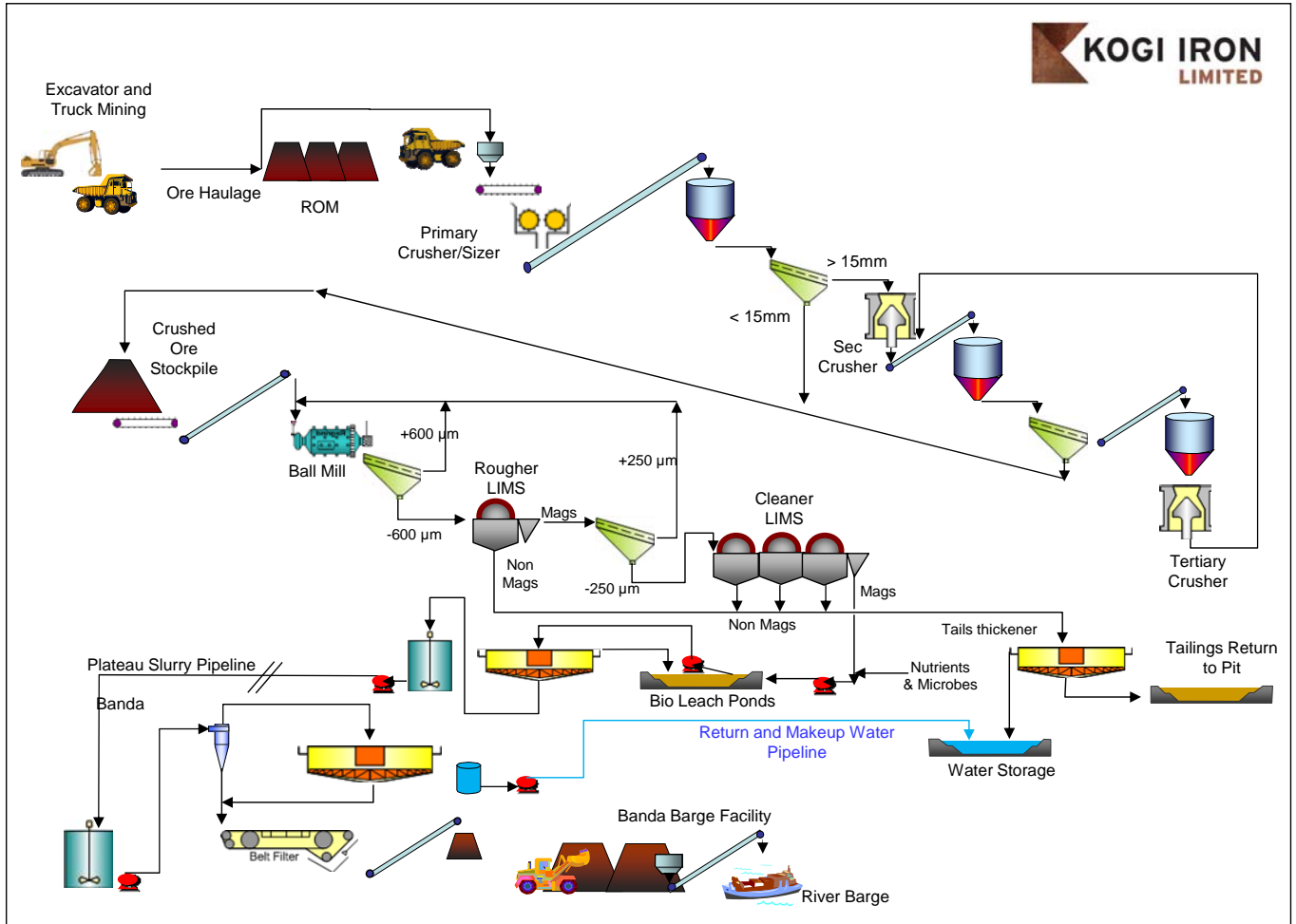
13 Colin Street
West Perth Western Australia 6005
Australia

PO Box 1934, West Perth
Western Australia 6872
Australia

Telephone: +61 8 9200 3456
Facsimile: +61 8 9200 3455
Website: www.kogiiron.com

The >15mm crushed material will be screened by a 3.0m wide by 7.3m long double deck banana screen with the oversize and middlings (>15mm) from both decks conveyed to a secondary cone crusher. The secondary crushed product will be screened by three 3.0m by 7.3m single deck banana screens and oversize material sent to third stage crushing consisting of two HP800 cone crushers. Discharge from the tertiary crusher will be combined with the secondary crusher feed.

Figure 1
Process Flow Sheet Schematic

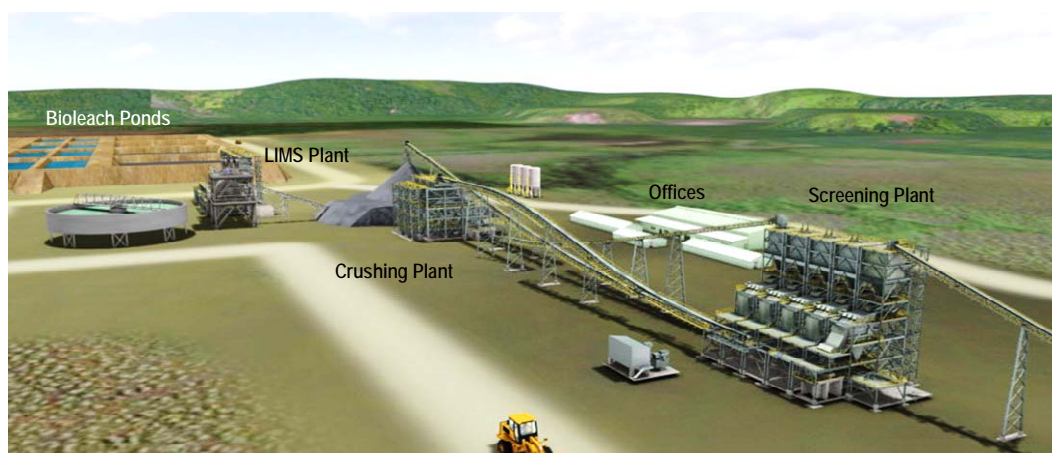


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The milling circuit will consist of one 6.7m diameter by 9.2m long ball mill with dual 4,500kW drives, operating in closed circuit with 30 multi-deck screens for classification of the solids. New feed to the grinding circuit will be reclaimed from the material stockpile by vibratory stockpile dischargers and conveyed to the mill hopper where it will be blended with screened mill oversize and Rougher Magnetic Separators (RMS) concentrate oversize. The mill will be sized to process a nominal, 3,900t/hr of solids based on a circulating load of 100% of new feed of 1,590t/hr. Mill discharge slurry density will be maintained at 70% solids by the controlled addition of water to the mill feed chute, and water addition to the mill discharge hopper will be controlled to ensure 50% solids density in the feed to one of the six sets of five multi deck screens. The objective of the multi-deck screen is to produce feed to the downstream Rougher Magnetic Separators (RMS) circuit from the undersize at a P_{80} of 250 μm . The oversize material ($>250 \mu\text{m}$) from the multi-deck screens will be returned to the ball mill. The underflow from the multi-deck screens will be collected, maintained at 35% density and fed to the RMS circuit.



Proposed overall plant layout at Agbaja

Each RMS unit will be a single drum, low intensity magnetic separator (LIMS), counter current and operating under approximately 2000 Gauss magnetic strength at a distance of 50mm from the drum surface. The resulting concentrate (magnetic stream) is expected to recover 67% of the feed to the circuit and produce concentrate slurry at 60% solids density. The RMS product will be fed to a cleaner magnetic separation circuit (CMS) consisting of three four-way gravity distributors feeding a total of 12 triple drum magnetic separators. Each CMS unit will be a triple drum, LIMS, counter current and operating at approximately 2000 Gauss magnetic strength at a distance of 50mm from the drum surface.

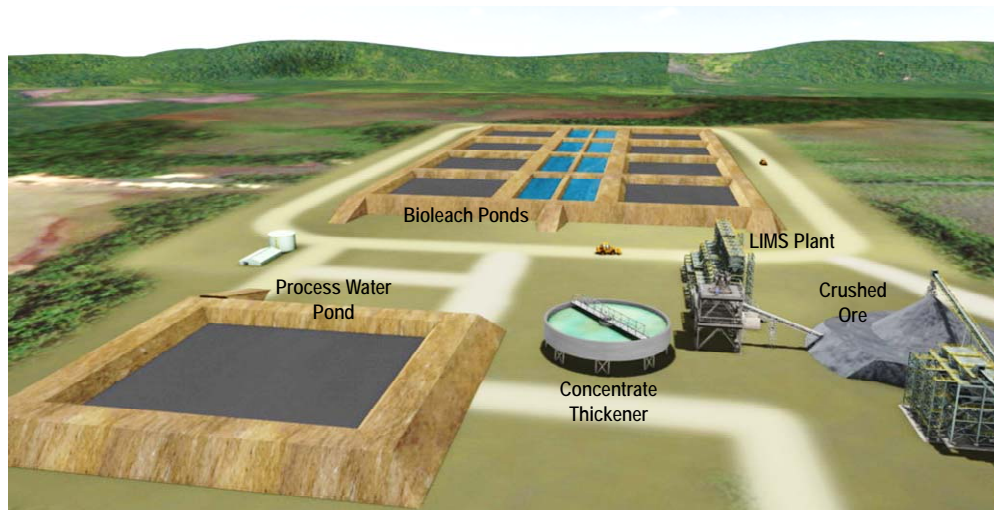


Typical LIMS units used in iron ore industry



The RMS concentrate will be upgraded by the CMS to a final Fe grade of 56%, with the non-magnetics reporting to tailings. The CMS is expected produce 5.0 Mtpa of concentrate to undergo microbial treatment to reduce the phosphorous content to 0.25% in open swimming pool style vats. Once the phosphorus levels have reached the targeted level, the slurry will be pumped out of the vats and thickened for pumping and transport to the Banda barge loading facility.

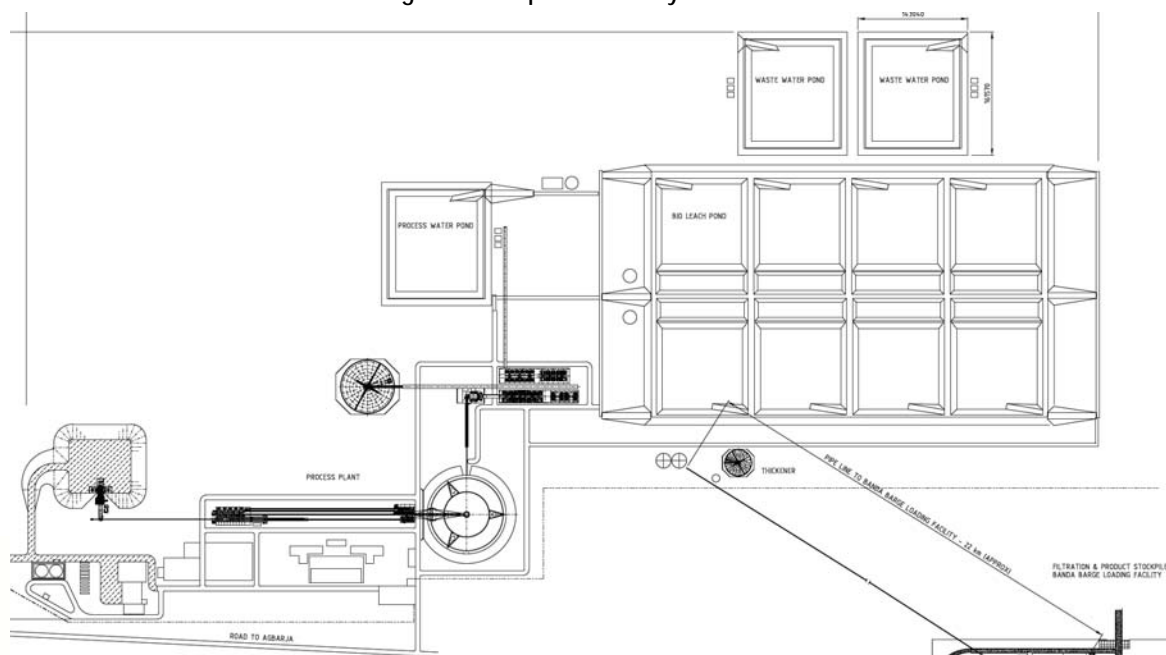
The slurry concentrate received at the Banda barge loading facility will be vacuum filtered and washed with water before being conveyed to the concentrate product load-out station at a maximum moisture content of less than 10% before being loaded onto river barges for transport. Recovered water will be returned back to the processing plant by pipeline with additional process water sourced from the Niger River.



Proposed Bioleach Circuit at Agbaja

It is envisaged that power for the plant will be provided by a dedicated natural gas power station, and power for the Banda barge loading facility and process water return pipeline will be provided by a diesel power plant.

Figure 2 – Proposed site Layout



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Estimated PFS Processing Costs

As part of the PFS, the Company has estimated processing costs based on equipment power loads, employee salaries, consumables, maintenance, sample analysis, reagents, grinding media, and various other operating expenditures. The total estimate indicates that iron ore concentrate will cost in the region of US\$16/t to process at Agbaja.

Kogi's Managing Director, Iggy Tan said "the proposed Agbaja processing plant uses a very simple beneficiation process for magnetite ore which will keep operating costs low. Magnetite deposits are typically found in banded ironstone formations (BIFs) whereas Agbaja is one of only three known channel iron deposits (CID) to host potentially commercial magnetite. Typical, BIF magnetite deposits require large amounts of energy intensive grinding (around 14 kWhr/t feed) to liberate the iron however the relative softness of the Agbaja CID material requires only moderate grinding (8.5 kWhr/t feed) and simple magnetic separation to liberate the iron. Consequently, mining and processing costs for Agbaja are expected to be very competitive when compared with other magnetite projects".

– end –

For more information, please contact:

Corporate

Iggy Tan
Managing Director
Kogi Iron Limited
Tel (office): +61 8 9200 3456
Email: info@kogiiron.com

Media Contact

Michael Vaughan
Cannings Purple
Tel (office): +61 8 6314 6300
Email: mvaughan@canningspurple.com.au

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About Kogi Iron (ASX: KFE)

Kogi Iron Limited is a Perth-based company with the objective of becoming an African iron ore producer through the development of its 100% owned Agbaja iron ore project located in Kogi State, Republic of Nigeria, West Africa ("Agbaja" or "Agbaja Project"). The Company is conducting a Preliminary Feasibility Study on a potential iron ore operation at the Agbaja Plateau initially utilising barging transport of its iron ore product along the Niger River to the Gulf of Guinea and world export markets. The Company will continue to advance access and usage agreements for an existing under-utilised heavy haulage railway that runs from near the Agbaja Project to Port Warri. This existing railway remains an important part of a longer term transport solution for an expanded production profile.



In recent years Nigeria has sought to diversify its economy, which is dominated by hydrocarbons, into minerals and related industries. Nigeria is the largest country by population in Africa with a GDP growth rate of 7.2% in 2013. The country has very transparent and consistent mining regulations and very favourable fiscal terms for foreign investment in mining.

The Company holds a land position of approximately 400km² covering 16 tenements, with the main focus being EL12124 which covers a large part of the Agbaja Plateau. The Agbaja Plateau hosts an extensive, shallow, flat-lying channel iron deposit with Indicated and Inferred Mineral Resource of 586 million tonnes with an in-situ iron grade of 41.3% reported in accordance with the JORC Code (2012). This mineral resource covers approximately 20% of the prospective plateau area within EL12124.

Forward-looking Statements

This announcement contains forward-looking statements which are identified by words such as 'anticipates', 'forecasts', 'may', 'will', 'could', 'believes', 'estimates', 'targets', 'expects', 'plan' or 'intends' and other similar words that involve risks and uncertainties. Indications of, and guidelines or outlook on, future earnings, distributions or financial position or performance and targets, estimates and assumptions in respect of production, prices, operating costs, results, capital expenditures, reserves and resources are also forward looking statements. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions and estimates regarding future events and actions that, while considered reasonable as at the date of this announcement and are expected to take place, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of our Company, the Directors and management. We cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this announcement will actually occur and readers are cautioned not to place undue reliance on these forward-looking statements. These forward looking statements are subject to various risk factors that could cause actual events or results to differ materially from the events or results estimated, expressed or anticipated in these statements.

Competent Person's Statements

The information in this announcement that relates to the Mineral Resource for the Agbaja Project is extracted from the report entitled "Mineral Resources at Agbaja Increase 20% to 586MT Includes an Indicated Resource of 466MT" created on 10 December 2013 and is available to view of the Kogi Iron web site www.kogiron.com. The Company confirms that it is not aware of any new information or data that materially affect the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

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