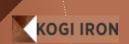
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#### **FEASIBILITY STUDY UPDATE**

Australian based iron ore and steel development company, Kogi Iron Limited (ASX: KFE) (Kogi, Kogi Iron, or the Company) and its 100% owned Nigerian operating company, KCM Mining Limited (KCM), is pleased to provide the following update on the Agbaja project feasibility study.

#### **Dear Shareholders**

This announcement is concerned with providing an update on a significant milestone achieved over the last two months and also to define what will be targeted for completion in the remainder of this calendar year.

At the Annual General Meeting of Shareholders on 15 December 2020 we outlined a pathway focused on undertaking a program of feasibility studies once the company raised the required capital to fund these critical studies.

While our previous announcements have been concerned with the Company's strategic intent, the required funding, or indeed the fund raising itself, refreshingly, this announcement is reporting on the completion of key works that have been undertaken to assess economic feasibility and to take the project forward.

### **Operating Cost Review**

The funding approved by shareholders in June 2021 has provided the ability to commission and complete a number of key studies outlined in this update and includes the operating cost (OPEX) and process reviews.

The Company planned to initially complete the baseline project economics gateway before committing substantial funds to the remaining feasibility studies.

The outputs of these reviews have now been evaluated and this announcement shares with you some key findings that represent an important and positive milestone for the company and the project.

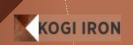
The Company has received particularly positive findings with respect to project economics at an operating cost level, a result enhanced by the work done that now confirms improved energy consumption costs for an improved and simplified steel production process.

This is significant in two respects:

- As a result of the document review, and studies undertaken by the Company's consultants, the Company can now make reasonable estimates that indicate the production cost of steel billets to be materially lower than previous estimates provided to the Company (the previous work was undertaken by Farnborough Engineering Consultants Ltd - referred to in the ASX September 2019 Quarterly Report, lodged 13 October 2019); and
- The Agbaja project, once commissioned, is most likely to deliver a steel importation replacement program for Nigeria. In the course of the operations review, market intelligence in Nigeria and other sources have cited imported steel costing in excess of US\$1000 per tonne to import. The operating cost review confirms this project is very competitive to replace steel importation.

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The existing steel market in Nigeria is not sophisticated and steel pricing is not officially reported, however the Company refers to the report previously prepared by Fastmarkets MB, and announced to the ASX on 16 January 2019, which forecast a long-term average billet price over the period from 2019 to 2030 of US\$476 per tonne with a range of US\$428 per tonne to US\$513 per tonne ex-works Lokoja, Nigeria. Based on these revenue forecasts, the updated operating cost review, and the current price of importing steel into Nigeria gives the Company confidence in the economics of the Agbaja Project and progressing with further investment in detailed feasibility studies and more test work.

The Company expects to be in a position to release the detail of the operating cost estimates to the ASX upon completion of all material elements of the feasibility study, in particular a review of energy input pricing, updating capital cost estimates and the commissioning of an updated market study with respect to the steel sale price.

#### Where to from here?

As a result of the positive findings from the OPEX and operations reviews, the Company is looking to expedite the next stage of the feasibility studies program.

In parallel with this, and with the encouragement received from the OPEX study results, the Company will also commission a "scoping study".

### **Scoping Study**

The scoping study will consider:

- The operating costs findings;
- Capital expenditure estimates and production capacity, now easier to estimate given the standard plant design;
- Estimated steel pricing; and
- Estimated discounted cashflows.

One outcome from this process is likely to be a range of net present value "NPV" valuations for the project.

It is the Company's resolve to complete the scoping study at the earliest opportunity and ideally by end of the year with the aim of sharing the findings from the scoping study, if completed, on or before the Annual General Meeting of shareholders which is expected to be scheduled in or around mid-December 2021. As reported over an extended time, the Agbaja project is reasonably well advanced. The purpose of the scoping study is really to compliment the feasibility study and to assist with the communication of its intrinsic value for shareholders and other parties.

With the important preliminary studies completed, the Company now has the confidence and key information required to commit to the expenditure for the next phase of the feasibility studies and to apply increased resources in order to achieve the next planned outcomes at the earliest possibility.

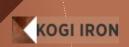
More information and details are provided in the following pages.

Yours sincerely

Craig Hart Chairperson Kogi Iron Limited

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#### FEASIBILITY UPDATE - KEY HIGHLIGHTS

- A major milestone in the feasibility study was achieved with the recent completion of the operating cost review which supports a positive project economics and endorses proceeding to the next phases of the feasibility study.
- Operating cost (OPEX) review report supports an operating cost estimate per tonne which is significantly less than previous independent studies completed, primarily due to testing and modelling now supporting lower energy and unit consumption rates.
- Specialist engineering consultants confirm the simplified design of the production process and validates the process design flow chart.
- A scoping study, which will further quantify project economic parameters is now being commissioned as one of the next immediate steps in the feasibility study to assess the project valuation.
- The next phase of engineering test work will commence to study, in detail the method of ore preparation, DRI production, smelting and converting and casting processes to produce steel billets.
- With the previous secured funding, approved by shareholders at a general meeting held on 11
  June 2021, the Company is funded sufficiently to commit to the cost of these next key phases
  of the feasibility study.

## **Agbaja Project Update**

The OPEX and operational reviews recently completed reveals positive project economics, better than previously projected production energy consumption and a simplified production process, all leading to better than previously estimated operating costs, satisfying the Company's first decision point and allowing the commencement of the next phase of the feasibility study.

Phase 1 of the Agbaja Project feasibility study has included:

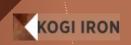
- operating cost review;
- validation of the process flow chart;
- operating cost model; and
- estimation of operating costs.

## **Project Operating Cost Review**

The operating cost review ("Opex") was completed by Tenova South Africa Pty Ltd ("Tenova") and used key contractors Uvan Hagfors Teknolgi ("UHT") and FL Smidth ("FLS"), all global leaders in iron ore processing technology. The work completed by Tenova, UHT and FLS supports the proposed project flow design diagram and its ability to process the unique characteristics of Agbaja iron ore into commercial quality steel. The amount of upfront work now completed on feasibility study phase 1 has resulted in an improved understanding, not only of the inherent plant design parameters but also key operating cost inputs. There have been numerous line items now included in the operating cost models that have improved from the previous operating cost estimates, including significantly lower power consumption, as a result of the recent design work. This is a very important outcome for the Project, given electricity costs will represent a substantial part of the total costs to produce steel billets.

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The OPEX analysis model has been developed to facilitate and evaluate different cost ranges and operational scenarios enabling sensitivity analyses. The improved operating cost estimate significantly strengthens the financial modelling for the project and supports further investment in the feasibility study. The operational review has now led to the recommendation for the next phase of engineering and material test work. The following tests are recommended and larger scale test work to be undertaken to confirm Direct Reduction Iron process design parameters, smelting and large-scale converter test work (this is discussed in more detail below).

The results from the OPEX review combined with the historical works, supported by the now completed document review process and the supplemental test work will form the foundation of the overall feasibility study work to come. The project engineering work will now continue, to the point that capital and operating cost estimate, supported by extensive engineering work, can be completed to evaluate the overall economics and valuation of the project.

## **Process Design Review**

The Channel Iron Deposit ore to be mined at the Agbaja project allows for a simplified beneficiation circuit to produce a concentrate feed for pre-reduction, smelting and refining to produce billet steel. However, the ore contains high levels of phosphorous (P), which needs to be lowered to meet the requirements for the steel billet production.

The updated design process review completed by Tenova, UHT and FLS and flow chart review confirm that:

- the previous pilot scale study can be replicated at a commercial scale;
- the proposed Kogi process flowsheet is consistent with industry existing benchmarks; and
- application of the process flowsheet adequately deals with the unique characteristics of the Agbaja ore including the removal of Phosphorus (P) via the converting stage

The Company is pleased with this outcome and in summary this confirms that is a simplified production process that does not require any unique production processes. It is anticipated that the next phases of the feasibility studies will now not any significant bespoke project design elements and the capital costs will now be in line with standard steel production.

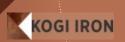
## **Scoping Study**

As a result of the positive OPEX study results and recommendations, the Company is now commissioning a scoping study to assess at a high level the project economics and valuation. Tenova have been requested to provide a scope, quotation, and timeframe for the completion of a scoping study.

The recent work completed on operating costs, combined with review of capital expenditure estimates CAPEX work required and a review of the current steel prices, will provide the basis for this scoping study to produce useful project valuation metrics. This work will be a desk top review likely to provide broad estimates of +or -30%. It is expected this work will be completed by the end of the year.

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## Phase 2 - Feasibility Study

As previously announced the Company is adopting a phased approach to developing the feasibility study. The scope of each phase of work is subject to results of each preceding phase. In the present case, phase 2 is predicated on the findings of the operational and OPEX review. The details for each of the following test areas will be specifically designed and scoped in the following weeks. The operational review has identified less ore benefaction process in favour of the simplified scrubbing function. Accordingly, the test work will now focus on the four following areas and will utilise the bulk sample material already stored in South Africa.

The following sets out the next stages of work to be completed and the conceptual framework for the proposed feasibility study. Full completion of phase 2 is expected to take between 6-12 months to complete. The exact timing will be known once the next round of scoping and contract awarding have been finalised.

#### **Kogi Test Work Framework**

Now that the OPEX and operational reviews have been completed, the Company can now utilise those findings to define the scope and commission the next phase of the feasibility study, test work. Other work for the feasibility study will also take place during this time however this the test work is one item on the critical path. The test work comprises the following key elements:

ROM Ore dressing	DRI production	Smelting	Converting & billets
1	2	3	4

### Ore preparation

This process will utilise the bulk sample currently stored at Johannesburg and will involve its preparation for DRI testing to take place, most likely in the FLS facilities in the USA. This process will ensure the sample has representative Fe composition. Studies to date have indicated the scrubbing process offers significant benefits regarding operating cost and for screening out fines.

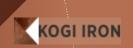
### **DRI** production

DRI production is the area of greatest sensitivity and requiring additional test work in the process flowsheet. Albeit the process is well established, the Kogi iron ore is of course unique. The key risks are associated with yield and operability. Testing will consider the:

- 1) integrity of goethite i.e. will it fall apart as the chemically bound water is released or create favourable porosity for metallization?
- 2) Requirement of a two-stage kiln process and consideration of high chemical water content of goethite.

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- 3) Fines generation (degree of) within reason, the fines should not be a problem for the furnace, but fines may cause issues in the kiln.
- 4) degree of metallisation.
- 5) grade of the bulk sample i.e., relative to the design grade. Kiln capacity will be designed to facilitate lower grade processing.

### **Smelting**

The study aims to adequately demonstrate and confirm concepts (open arc, open bath) considering the tougher conditions due to ore being processed without prereduction

A desktop study is likely to be conducted to evaluate various scenarios with respect to energy requirement and recovery sensitivities.

EAF (Electric Arc Smelting) of iron ore is a well-established process step and no value will be gained through another pilot study. This represents a cost and time saving in the feasibility process.

### Converting and casting

It is proposed to conduct tests on synthetic metal. Converting is an established process step and the feed material can be simulated by adding P to molten iron. This step represents a low risk for the overall project. Once again this represents a cost and time saving for the feasibility study.

Authorised for release by the Board

For further information, please contact:

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Email: info@kogiiron.com

### **About Kogi Iron (ASX: KFE)**

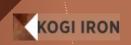
Kogi Iron Limited is a company with the objective of becoming a producer of cast steel billet product that can be sold to fabricators of finished steel products through the development of its 100% owned Agbaja Iron and Steel project located in Kogi State, Republic of Nigeria, West Africa ("Agbaja" or "Agbaja Project").

Nigeria has substantial domestic demand for steel products, which is currently met largely through imports of scrap steel raw materials. The Agbaja project, located on the Agbaja plateau approximately 15km northwest of Lokoja city in Kogi State and 200km southwest of Abuja, the capital city of Nigeria, opens the opportunity for domestic production of steel.

The Company holds a land position which covers a large part of the Agbaja Plateau. The Agbaja Plateau hosts an extensive, shallow, flat-lying channel iron deposit with an 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) — Refer ASX announcement 10 December 2013. This mineral resource covers approximately 20% of the prospective plateau area within ML24606 and ML24607

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#### **Competent Persons' Statement**

The information in this announcement that relate to Mineral Resources for the Agbaja Project is based on information compiled by David Slater, Principal Resource Geologist of Coffey Mining who is a Chartered Professional Member of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Slater has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'. Previously announced information is cross referenced to the original announcements. In these cases, the Company is not aware of any new information or data that materially affects the information presented and that the technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.