

## QUARTERLY REPORT – SEPTEMBER 2018

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”) presents the quarterly activity report for the three months ended 30 September 2018.

Key activities by the Company during the quarter were:

### PROJECT TESTWORK PROGRAM

Metallurgical testwork associated with the commercialisation of the Agbaja iron ore deposits in Kogi State, Nigeria was successfully completed in September 2018. The testwork was conducted by Tenova South Africa and contractor Mintek (*refer ASX Announcement 25 September 2018: Successful Completion of Testwork Program*).

The primary objectives of the testwork were:

- (i) Demonstrate the technical feasibility of producing a cast steel product from Agbaja iron ore;
- (ii) Generate enough process information to commence initial design and development of the process on a commercial scale;
- (iii) Test two sources of domestic coal suitable for use as a reductant in the iron making process;
- (iv) Demonstrate refining of the pig iron to produce a cast steel product suitable for billet steel making; and
- (v) Generate 50 kg of ‘on-spec’ cast steel for marketing purposes.

Approximately 58 tonnes of Agbaja iron ore was delivered to Mintek for testwork. The material was first characterised by the Minerals Processing Division to establish a beneficiation flowsheet. Subsequently, about 10 tonnes of the ore were beneficiated through the established beneficiation flowsheet to prepare feed stock for the pilot smelting testwork.

Approximately 4.2 tonnes of iron ore concentrate were smelted in a 200 kVA DC arc furnace to produce 2 tonnes of pig iron metal. Selected pig iron ingots were collected and prepared for refining test work in a 50 kg capacity 80 kW induction coil furnace.

The smelting testwork processed feed recipe batches with an overall carbon and limestone addition of 22% and 18% of ore feed respectively. The campaign had an overall throughput of 603 kg of ore/day and it was operated at an average power of 200 kW with heat losses averaging 165 kW.

<b>KFE Capital Summary</b> Ordinary Shares: 654,871,213 Share price: \$0.13 Market capitalisation: \$85m	<b>Board of Directors</b> Dr Ian Burston – <i>Non Executive Chairman</i> Mr Martin Wood – <i>Chief Executive Officer</i> Mr Don Carroll – <i>Non Executive Director</i> Mr Michael Tilley – <i>Non Executive Director</i> Mr Michael Arnett – <i>Non Executive Director</i>	<b>Contact</b> Unit 23, 4 Ventnor Avenue, West Perth WA 6005 Tel : +61 8 9200 3456 Email: <a href="mailto:info@kogiiron.com">info@kogiiron.com</a> W: <a href="http://www.kogiiron.com">www.kogiiron.com</a>
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The smelting process had an overall calculated Specific Energy Requirement (“SER”) of 0.96 kWh/kg which was in agreement with a theoretically estimated SER of 0.993 kWh/kg. The smelting campaign achieved an overall iron recovery of approximately 90% (with some results up to 99%) with a corresponding overall FeO concentration of 7% in the slag.

Optimum refining conditions were then established and demonstrated through powder refining, particularly with the method of simultaneous dephosphorization and desulphurization. The testwork aimed to establish optimum refining conditions to demonstrate effective removal of impurities like carbon, phosphorus, sulphur, silicon and manganese by molten state oxidation of the pig iron.

The Mintek test work successfully demonstrates a process route to produce a low phosphorus / low sulphur cast steel product suitable for billet steelmaking with specifications of: Fe >99%, C<0.31%, Si <0.30%, Mn <1.10%, P <0.045%, and S <0.045%. The application of a suitable reagent addition ratio, low reaction temperatures, and a high slag basicity were identified as key process parameters to establish optimum refining condition for removal of impurities.

The pilot smelting testwork successfully demonstrated that it is feasible to process beneficiated Agbaja iron ore into a cast steel product.

**The completion of this extensive and successful testwork program to produce a saleable cast steel product and to develop a flowsheet for the processing of its Agbaja iron ore into cast steel suitable for billet making represents a major step forward for the Company. This flowsheet and testwork are critical parts of the Company’s ongoing engineering and Definitive Feasibility Study.**

In conjunction with the above testwork, chemical and moisture analysis on the two locally sourced (Nigerian) coal samples continued in the quarter and was completed on 19<sup>th</sup> October 2018. The successful outcome of its Torex coal testwork program proves the viability of producing a suitable metalized product using Nigerian domestic coal sources selected by Kogi for the Agbaja Cast Steel Project. Both coal sources used in the testwork program are located within 70Km of the Agbaja project and have the capacity to supply 100% of the project needs (*refer ASX Announcement 19 October 2018: Successful Completion of Torex Coal Testwork Program*).

With the testwork completed work can now recommence on other aspects of the project including an expanded Environmental Study for the processing plant, a comprehensive marketing study and engagement with in-country steel producers targeted as customers for the billet.

#### **METALS BULLETIN RETAINED TO CONDUCT STEEL MARKET STUDY**

During the September 2018 quarter, Kogi retained Metal Bulletin to carry out an independent steel market report which will form part of the Bankable Market Feasibility Study for the Agbaja Cast Steel Project. Metal Bulletin will carry out an independent strategic assessment out to 2030 and will provide a full bankable market feasibility document for the Agbaja Cast Steel Project within the context of local and key global market and price trends for sponge iron (DRI/HBI), ferrous scrap, billets and rebars. Kogi understands from its advisors that this document will be one of the key requirements of project finance lenders and Export Credit Agency providers.

#### **CORPORATE**

The Company held a General Meeting on 2 July 2018 following a Notice Pursuant to Section 249D of The Corporations Act. The majority of shareholders voted to maintain the current board. Long serving in-country Manager and Executive Director, Mr Kevin Joseph resigned in early July and the Company has appointed an acting Country Manager from existing staff in Nigeria.

Mr Michael Arnett was appointed as Non-Executive Director in September 2018.

At the end of the quarter, the Company had cash at bank of \$1,059,000. Expenditure levels for the quarter were less than previously disclosed projections, but higher than in prior quarters due to:

- The payment of outstanding accrued director fees owing to the Nigerian based directors;
- The payment of fees to consultants who have provided services for the testwork activities or for undertaking studies to progress the Agbaja Cast Steel Project Definitive Feasibility Study; and
- costs associated with the completed S249D process.

As at 30 September 2018 the Company had 651,343,370 fully paid ordinary shares on issue. Subsequent to quarter end, this has increased to 654,871,213 fully paid ordinary shares on issue.

### MINERAL TENEMENTS

As at 30 September 2018, the following mineral tenements were held by KCM. All of the mineral tenements are located in the Federal Republic of Nigeria and KCM has a 100% interest in each tenement:

Mining Lease 24606	Exploration Licence 14847
Mining Lease 24607	Exploration Licence 16998
Mining Lease 25376	

For more information, please contact:

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 Email: [info@kogiiron.com](mailto:info@kogiiron.com)

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

Kogi Iron Limited is a Perth-based company with the objective of becoming a producer of cast steel product that can be sold to manufacturers of steel products through the development of its 100% owned Agbaja Cast 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. The Agbaja project, located on the Agbaja plateau approximately 15km northwest of Lokoja city in Kogi State and approximately 200km southwest of Abuja, the capital city of Nigeria, opens the opportunity for domestic production of steel billets. 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). This mineral resource covers approximately 20% of the prospective plateau area within ML24606 and ML24607.

Table 1 – Summary Grade Tonnage for Laterite (Zone A) and Oolitic (Zone B) Horizons (20% Fe lower cut off is applied) Refer ASX announcement 10 December 2013.

Classification	Tonnes (Mt)	Fe (%)
<b>Zone A (Laterite Mineralisation)</b>		
Indicated	147.5	33.2
Inferred	33.9	31.7
Total Indicated + Inferred (Zone A)	181.4	32.9
<b>Zone B (Oolitic Mineralisation)</b>		
Indicated	318.7	45.2
Inferred	86.3	44.7
Total Indicated + Inferred (Zone B)	405.0	45.1
<b>Combined Zone A and Zone B</b>		
Total Indicated	466.2	41.4
Total Inferred	120.1	41.1
Total Indicated + Inferred	586.3	41.3

The Company confirms that it is not aware of any information or data that materially affects the information included in the original market announcements and, in the case of estimated Mineral Resources, which all material assumptions and technical parameters underpinning the estimates in the relevant market announcements 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 announcements.

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

**Name of entity**

KOGI IRON LIMITED

**ABN**

28 001 894 033

**Quarter ended ("current quarter")**

30 SEPTEMBER 2018

<b>Consolidated statement of cash flows</b>	<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(529)	(529)
(b) development	-	-
(c) production	-	-
(d) staff costs	-	-
(e) administration and corporate costs	(775)	(775)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	2	2
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (provide details if material)	-	-
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,302)</b>	<b>(1,302)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	-
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

## Mining exploration entity and oil and gas exploration entity quarterly report

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (3 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	-	-
<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	-
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	-	-
<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	2,361	2,361
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,302)	(1,302)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.5	Effect of movement in exchange rates on cash held	-	-
<b>4.6</b>	<b>Cash and cash equivalents at end of period</b>	<b>1,059</b>	<b>1,059</b>

5. <b>Reconciliation of cash and cash equivalents</b> at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	1,059	2,361
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>1,059</b>	<b>2,361</b>

6. <b>Payments to directors of the entity and their associates</b>	Current quarter \$A'000
6.1 Aggregate amount of payments to these parties included in item 1.2	609
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

Payments of director's remuneration

7. <b>Payments to related entities of the entity and their associates</b>	Current quarter \$A'000
7.1 Aggregate amount of payments to these parties included in item 1.2	-
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

## Mining exploration entity and oil and gas exploration entity quarterly report

**8. Financing facilities available**

Add notes as necessary for an understanding of the position

8.1 Loan facilities

8.2 Credit standby arrangements

8.3 Other (please specify)

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
-	-
-	-
-	-

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9. Estimated cash outflows for next quarter	\$A'000
9.1 Exploration and evaluation	200
9.2 Development	-
9.3 Production	-
9.4 Staff costs	-
9.5 Administration and corporate costs	350
9.6 Other (provide details if material)	-
<b>9.7 Total estimated cash outflows</b>	<b>550*</b>

\* estimated cash flows include discretionary expenditure that will only be committed if the directors are comfortable there are sufficient cash reserves available for these and future costs. The Company is currently evaluating funding alternatives for its ongoing and planned activities.

10. Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1 Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	n/a	n/a	n/a	n/a
10.2 Interests in mining tenements and petroleum tenements acquired or increased	n/a	n/a	n/a	n/a

**Compliance statement**

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.



Sign here: .....  
(Company secretary)

Date: 30 October 2018

Print name: Kevin Hart

**Notes**

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.