**ASX ANNOUNCEMENT** **18 August 2014**

# Updated Epanko Scoping Study

Kibaran Resources Limited (ASX: KNL) is pleased to announce the upgraded Scoping Study ("Study") completed for its Epanko graphite deposit. The Study was based on the recently reported Indicated Mineral Resource of 12.8Mt at 10.0% TGC for 1,281,200 tonnes of contained graphite.

The study assessed the viability of a simple open cut mine and conventional flotation process plant with throughput of 420,000tpa to produce 40,000tpa of high grade graphite flake concentrate grading between 94-97% carbon with no acid treatment stage required.

## STUDY HIGHLIGHTS

- **Indicates Epanko as an economically robust graphite deposit capable of producing premium quality large flake graphite which has no limitations to its industrial use**
- **Net Present Value (NPV) of $213m**
- **Capital payback period of 2.5 years**
- **Extremely low strip ratio (W:O) with first 15 years 1.3 to 1 and LOM of 2.2 to 1**
- **Substantial Mine life of 27 years**

## STUDY CONFIRMED

- **Confidence to advance immediately to a Feasibility Study based on production of 40ktpa**
- **Ability to increase production as market demand increases**

It is important to recognise that the study was based on the treatment of only 50% of the current total mineral resources estimate for the Epanko deposit.

***Table 1 – Key Assumptions and Findings***

| Items | | Base Case |
|---|---|---|
| **Plant throughput** | (tpa) | 420,000 |
| **Plant Recovery** | (%) | 96% |
| **Feed Grade** | (%) | 9.64% |
| **Production Concentrate** | (tpa) | 40,000 |
| **Base Price Assumption** | ($/t) | $1,258 |
| **Cost/t Concentrate** | ($/t) | $489 |
| **Mine life** | (yrs) | 27 |
| **Pre-Production Capital** | ($m) | $56 |
| **Strip ratio** | (W:O) | 2.2:1 |
| **Discount Rate** | (%) | 10 |
| **Net Present Value (NPV)** | **($m)** | **213** |

Intermine Engineering Consultants, completed the Study based on the upgraded Mineral Resource estimated undertaken by CSA Global Pty Ltd and reported in an ASX Announcement on 12 August 2014. Inputs from previous metallurgical test work and achievable market pricing estimates for large flake graphite fractions were used.

The Study assessed the viability of an initial mining operation producing 40,000tpa of high-grade large flake graphite.

*Scoping Study - Parameters Cautionary Statement:*

Kibaran cautions investors in relation to using the financial estimations as a basis for investment decisions in KNL shares. The Study utilised Indicated and Inferred JORC Mineral Resource recently estimated report (Announcement 12 August 2014) and under the JORC (2012) Code, Inferred resources are not adequate to determine or imply economic viability.

Statements implying economic viability require a reasonable basis; otherwise they can be seen as being misleading to shareholders. The Scoping Study utilised assumptions in some areas, hence the results do not definitively confirm the economic viability.

In order to determine the economic viability of the project, the Company needs to establish that the deposit hosts sufficient Indicated Mineral Resources in addition to confirming all the technical and financial aspects of mining, processing, metallurgy, infrastructure, economics, marketing, legal, environmental, social and government. As such, some of the economic assumptions used in the Scoping Study may or may not be realised.

However, the Company intends to use the Scoping Study results to further progress the development of the Epanko Project. This is expected to include a further drilling program to better define the Inferred Mineral Resource, along with additional evaluation work to determine whether inferred resources can be upgraded to Indicated Mineral Resource.

**SCOPING STUDY**

In compiling the Scoping Study, Intermine Engineering utilised and developed:

- Preliminary pit optimisation and Strategic Planning Envelope;
- Broad-level mining and production schedules;
- Metallurgical process flow sheet;
- Assessment of infrastructure requirements including access, power, water, communications, offices, workshops, shift rosters, transportation, product consignment and accommodation;
- Capital expenditure estimates;
- Operating cost estimates; and
- Operating Plan.
- Impacts determined from an extensive Environmental Impact Study indicate no major environmental issues.
- Cost estimates used in the Scoping Study were determined by the Company and its independent consultants.
- Specialist independent input was provided on various aspects by
    - CSA Global Pty Ltd, Brisbane – Perth based consultants on Resource estimation
    - Intermine Engineering, Perth – Perth based consultants on Pit optimisation
    - MTL Consulting – Tanzanian based consultants on Environmental aspects
    - Trinity Promotions – Tanzanian based consultants on Social Community aspects
    - EGT and NGS Naturgraphit GmbH – German based consultants on metallurgical parameters and flow sheet design.

**Project Parameters**

The following details inputs and parameters that the Study was based on.

**Capital cost estimate**

Table 2 provides the capital cost estimates for the proposed infrastructure components of the project. The costs are provided (USD)

***Table 2: Capital cost estimate for processing 420,000 tonnes a year.***

| CAPITAL ESTIMATE | EXPENDITURE |
|---|---|
| Mining | $2,200,000 |
| Process plant | $40,000,000 |
| Infrastructure | $4,300,000 |
| EPCM | $5,500,000 |
| Contingency | $4,000,000 |
| **Total** | **$56,000,000** |

**Operating cost estimate**

***Table 3: Operating cost estimate,***

| ITEM | ESTIMATE |
|---|---|
| Cost per tonne of ore | $45.3 |
| Cost per tonne of concentrate | $489 |

**Mineral Resource**

The Inferred Mineral Resource for Epanko is shown in Table 3.

***Table 3 – Mineral Resource Estimate***

| CLASSIFICATION | TONNAGE (Mt) | GRADE (%TGC) | CONTAINED GRAPHITE (t) |
|---|---|---|---|
| **Indicated** | 12.8 | 10.0 | 1,281,200 |
| **Inferred** | 9.9 | 9.6 | 942,100 |
| **Total** | 22.7 | 9.8 | 2,223,300 |

**Notes for table 3:**

- Tonnage figures contained within Table 1 have been rounded to nearest 1000. % TGC grades are rounded to 1 decimal figure.
- The Mineral Resource is quoted from blocks where the TGC (%) grade is greater than 8%.
- Abbreviations used: Mt = 1,000,000 tonnes

The Mineral Resource estimate represents only a very small footprint (20%) of the known Epanko project area, lending itself to be increased through future exploration.

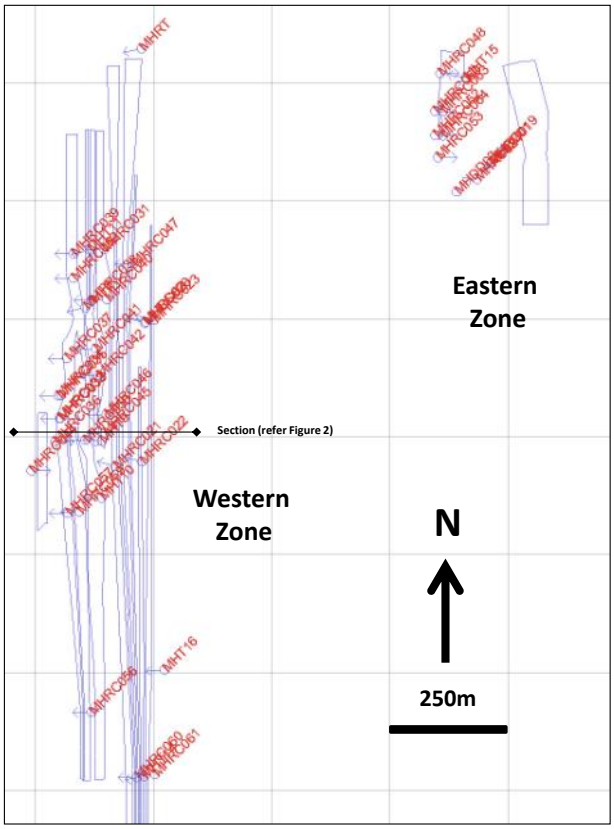


*Figure 1 – Epanko Deposit showing the area of the Mineral Resource estimate footprint.*

**Metallurgy and Process Design**

A process flow sheet was devised by the Company's off-take partner ("EGT") based on the metallurgical testwork carried out. This resulted in a very conventional flotation plant and the capital cost for the plant is based on a two-stage liberation process to separate the graphite. The flowsheet shown in Figure 2 below was developed by EGT and comprises rougher flotation, two liberation stages, cleaner flotation, dewatering, drying and screening prior to bagging for export.

The metallurgical results showed that the flotation concentrate averaged 94% Fixed Carbon and more importantly, that the testwork yielded large flake graphite. Detailed results are presented in Table 5 below.

***Table 5: Flotation results per size fraction***

| SIZE | | PORTION OF SIZE | FIXED CARBON |
|---|---|---|---|
| Classification | Micron | (%) | (%) |
| Jumbo | > 500 µm | 8.4 | 97.6 |
| Extra Large | > 300 µm | 13.2 | 95.4 |
| Large | > 180 µm | 28.6 | 93.8 |
| Medium | > 106 µm | 23.6 | 93.6 |
| Small | > 75 µm | 10.4 | 91.0 |
| | | Average | 94.0 |

***Micron (µm) and Millimetre (mm). 1mm = 1000µm and fixed carbon content determined by loss of ignition method (LOI)***

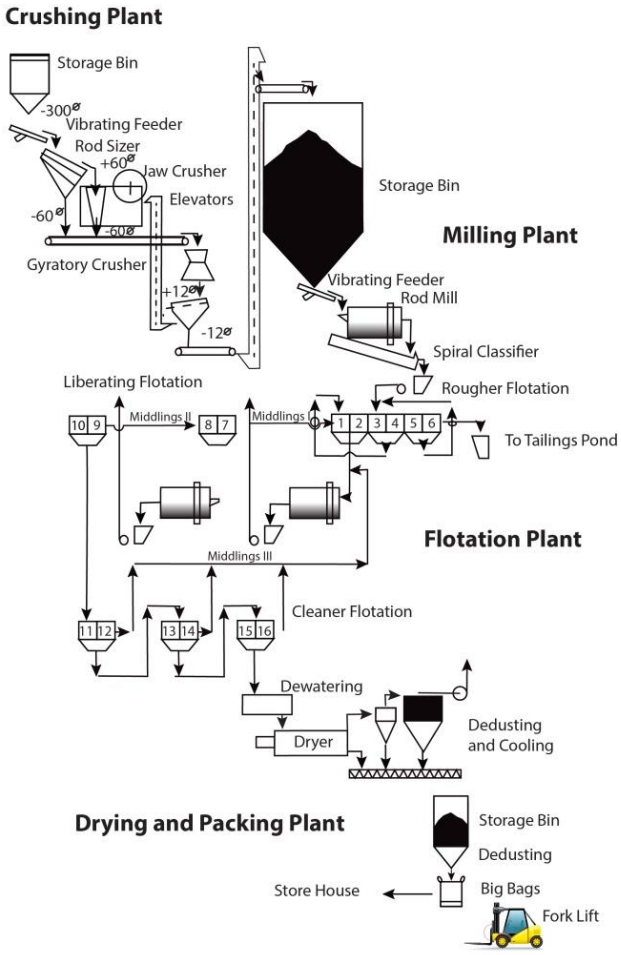


***Figure 2: Proposed Flowsheet***

**Graphite Pricing, Concentrate Value and Marketability**

The portion of very large size flake has a significant advantage, as at present there is a shortage of this product in the graphite market. The basket price for graphite product used in the scoping study is $1,258/t of concentrate which is based on the value of each sizing as detailed in Table 6. The pricing is based the indicative pricing for 94-97% carbon

Mid-term pricing for premium quality large flake graphite is forecast to substantially increase, according to recent forecast price modelling by Toronto-based, independent research firm Stormcrow Capital Ltd. In what is generally considered an opaque market, Stormcrow has forecast pricing for Jumbo flake (+300 micron) to increase to US$6,170 per tonne in 2020 , a near three-fold jump on 2013 prices (refer table 6). This graphite price forecast modelling is also consistent with reports published in Industrial Minerals.

***Table 6: Graphite Pricing and Basket Price used in Study***

| | | | CURRENT GRAPHITE PRICING | | STORMCROW 2020 PRICES | |
|---|---|---|---|---|---|---|
| **FLAKE SIZE** | | **EPANKO SIZE FRACTION** | **PRICE (US$/t)** | **VALUE (US$)** | **PRICE (US$/t)** | **VALUE (US$)** |
| Jumbo | > 300 microns | 21.6 | $2,300 | $497 | 6175 | $1,334 |
| Larger | >180 microns | 28.6 | $1,300 | $372 | 1165 | $333 |
| Medium | > 106 microns | 23.6 | $950 | $224 | 517 | $122 |
| Small | > 75 microns | 10.4 | $750 | $78 | 493 | $51 |
| Fine | < 75 microns | 15.8 | $550 | $87 | 359 | $57 |
| **Weighted Basket Price (Price x Size Fraction)** | | | | **$1,258** | | **$1,897** |

If the future prices by Stormcrow are used the basket price would increase to $1,897 which would add further revenue of $635 million over the life of the mine.

Expanded graphite, from premium natural flake graphite, is used to produce graphite foils, an inert sealing material that is used in high temperature and high pressure applications such as high temperature gaskets, bipolar plates in fuel cells and computer heat sinks. Expanded graphite is also considered highly sought after in the battery market which is considered one of the key drivers for future demand.

The testwork was undertaken at NGS Naturgraphit GmbH ("NGS"), an independent company which specialises in world-wide graphite sales and carbon based products located in Germany is summarised in table 7

***Table 7 - Carbon grades for flotation and chemical purification***

| FLAKE SIZE | | | FLOTATION CONCENTRATE | PURIFICATION GRADE |
|---|---|---|---|---|
| **Name** | **Micron** | **Mesh** | **(%)** | **(%)** |
| Extra Jumbo | >500 micron | >35 | 97.7 | **99.94** |
| Jumbo | >300 microns | >48 | 97.2 | **99.98** |
| Large | >180 microns | >80 | 96.2 | **99.95** |
| Medium | >106 microns | >150 | 95.8 | **99.91** |
| Small | >75 microns | >200 | 93.7 | **99.85** |
| Fine | <75 microns | <200 | 87.4 | **99.72** |

***Notes: Chemical Purification by HF acid. Results calculated by drying at temperatures in the range of 400 °C and from LOI.***

Ultra high purity can be reached easily in a single one step process. Importantly, extremely low impurities are recorded confirming that there is no limitation on the application and uses of Epanko flake graphite.

Having secured a guaranteed offtake for 10,000tpa, discussions are underway with a major industrial group in for a second off-take agreement for Epanko graphite.

**Mining**

Intermine Engineering carried out preliminary pit optimisation, mine scheduling and mining cost estimation based on open pit mining constrained by Whittle pit optimisations. The mining costs were developed from information provided by Intermine. Dilution and ore recovery factors were applied to the mineral inventory, resulting in a mineral resource used for mine planning, design and cash-flow analysis. This mineral resource within the pit shell includes dilution of 5% and a 95% mining recovery.

**Mining Schedule**

Various mining production scenarios were examined. The scenario that was adopted as the base case of the Study was to extract ore at the rate necessary to completely utilise a process plant with 465,000tpa

After some pre-stripping the stripping ratios for the first 10 years of production are less than 1 to 1 (waste to ore). Mining production would be campaigned during the dry season between March to November. Total movement to produce 420,00tpa of feed would be conducted using a 40t excavator and 2-3 articulated trucks over a 5 months a year basis.

Geotechnical work will be undertaken to assist in the final open pit designs however it is considered no final slopes will be encountered in the initial years of mining.

**Pit Outlines**

The main Epanko excavation, occurring in the eastern zone, is a single elongated pit approximately 500m long, up to 200m wide and up to 50m deep. With an overall pit wall angle of 40$^{o}$ it is expected that only a single ramp pass will be required on one of the walls. Excavation on the Western zone occurs over a 750 long strike length. No final wall is expected in the first 5 years of mining.

Total Indicated and Inferred resource contained within the optimisation shells is 10.8Mt at 9.6% TGC with waste containing lower grade mineralisation of 5.80Mt at 6.8% of lower grade (5 to 8% TGC) mineralisation.

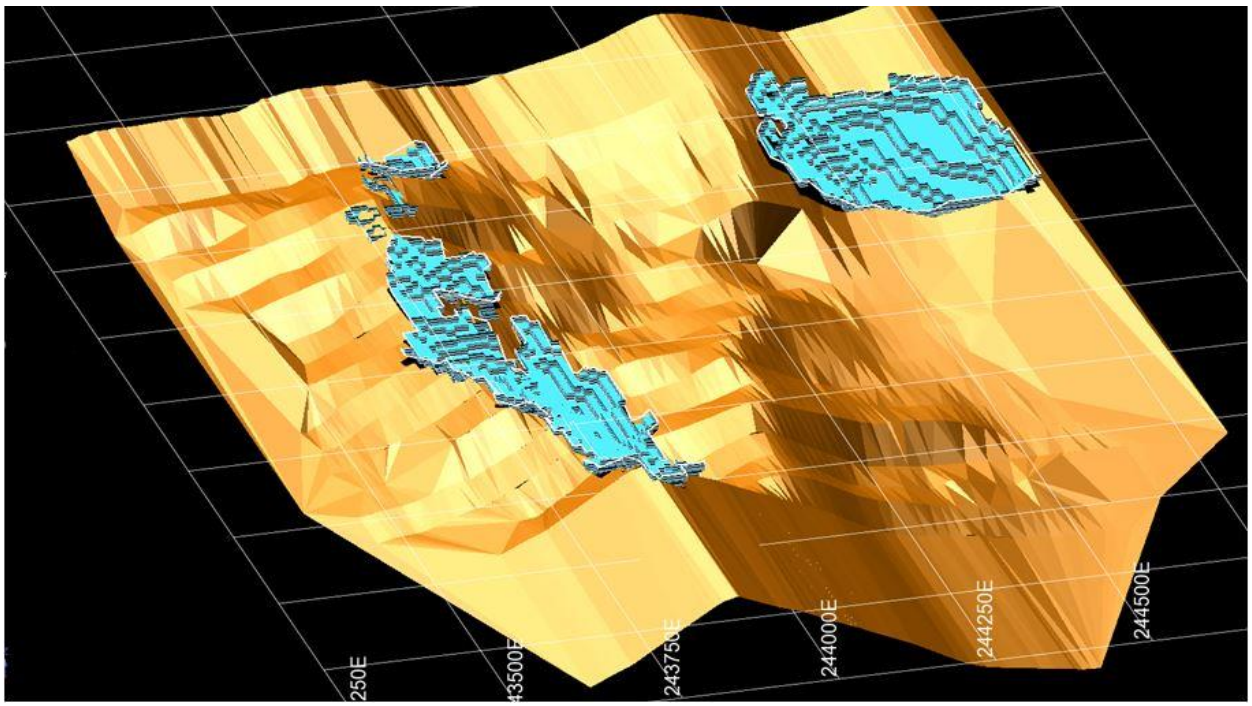


***Figure 4 – Epanko East and Western zone optimised shell and block model***

**Processing and Mine Site Infrastructure**

Anzaplan in conjunction with EGT have developed preliminary designs for the processing plant, based on the metallurgical test work carried out by EGT. Operating and capital cost estimates for the various project options were then prepared to an accuracy based on typical industry practices.

**Transport**

For the purpose of the study the only transport option considered was direct trucking of graphite concentrate to the port of Dar es Salaam. The project is located 120km south of the Ifakara rail siding and future studies may see this as the preferred route. Costs for the transport were developed based on current transport costs in Tanzania.

**PROPOSED FEASIBILITY STUDY**

The results of the scoping study provide the company sufficient confidence and a business case to advance the project to a feasibility study. Kibaran is currently in discussion with several engineering design and construction companies reviewing terms of reference and timing for the feasibility study.

***About Kibaran Resources Limited:***

*Kibaran Resources Limited (ASX: KNL or "Kibaran") is an exploration company with highly prospective graphite and nickel projects located in Tanzania.*

*The Company's primary focus is on its 100%-owned Epanko deposit, located within the Mahenge Graphite Project. Epanko currently has a total Indicated and Inferred Mineral Resource Estimate of 22.7Mt, grading 9.8% TGC, for 2.2Mt of contained graphite, defined in accordance with the JORC Code. This initial estimate only covers 20% of the project area. Metallurgy has found Epanko graphite to be large flake and expandable in nature.*

*Kibaran also has rights to the Merelani-Arusha Graphite Project, located in the north-east of Tanzania. Merelani-Arusha is also considered to be highly prospective for commercial graphite.*

*Graphite is regarded as a critical material for future global industrial growth, destined for industrial and technology applications including nuclear reactors, lithium-ion battery manufacturing and a source of graphene.*


*In addition, the Kagera Nickel Project remains underexplored and is located along strike of the Kabanga nickel deposit, owned be Xstrata, which is considered to be the largest undeveloped, high grade nickel sulphide deposit in the world.*

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The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Andrew Spinks, who is a Member of The Australasian Institute of Mining and Metallurgy included in a list promulgates by the ASX from time to time. Andrew Spinks is a director of Kibaran Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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". Andrew Spinks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr David Williams, who is a Member of The Australasian Institute of Mining and Metallurgy included in a list promulgated by the ASX from time to time. David Williams is employed by CSA Global Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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". David Williams consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.