Kibaran Resources Limited: Maiden Mineral Resource Estimate for Merelani East

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Kibaran Resources
ASX ANNOUNCEMENT
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Maiden Mineral Resource Estimate for Merelani East

- Mineral Resource estimate of 17.2Mt at 6.5% TGC for 1,120,000 tonnes of contained graphite

- Located within the world class Merelani Graphite Province with a recognised sales history

- Exceptional metallurgical results which are directly comparable to neighbouring Block C deposit

- Mineral Resource estimate covers only 15% of Kibaran's 100% owned tenement position and mineralisation remains open in all directions

- Strong results highlight stand-alone project potential and support Kibaran's strategy of establishing a second production centre

- Exclusivity for neighbouring Block C deposit renewed

Kibaran Resources Limited (ASX: KNL), ('Kibaran' or the 'Company') is pleased to announce its maiden JORC-compliant Mineral Resource for the Merelani East deposit in Tanzania. The Mineral Resource estimate totals 17.2 million tonnes (Mt) grading 6.5% total graphitic carbon (TGC) for 1,120,000 tonnes of contained graphite in the Inferred category.

The resource estimate was carried out by CSA Global Pty Ltd ('CSA Global'), an independent and internationally recognised mineral industry consultancy group and was based on data sets compiled from drilling, trenching and other geological activity undertaken in late 2014 (refer announcement dated 4 February 2015). The Mineral Resource estimate has been classified in accordance with the JORC (2012) Code (Table 1).

JORC Classification	Tonnage (Mt)	Grade (%TGC)	Contained Graphite (t)
Inferred	17.2	6.5	1,120,000
Total	17.2	6.5	1,120,000

Table 1 Mineral Resource Estimate for Merelani East deposit, > 5% TGC

Notes for Table 1:
Tonnage figures contained within Table 1 have been rounded to nearest 10,000. % TGC grades are rounded to 1 decimal figure.
Abbreviations used: Mt = 1,000,000 tonnes.

The Merelani East deposit is comparable in terms of grade, flake size and concentrate purity to the neighbouring Merelani Block C deposit (Table 2). The Company is continuing to work with the new owners of

Tanzanite One Mining Limited and has extended an exclusive dealing period on this ground for a further 3 months.

The metallurgical characteristics of Kibaran's Merelani East and Block C deposits are very attractive but importantly directly comparable. The Merelani East deposit, however, has the potential to host a significantly larger Mineral Resource than Block C and without the complications of gemstone associated mineralisation. This is supported by recent exploration trench results doubling the strike length of the graphite mineralisation at Merelani East to a total strike length in excess of 4 km while the mineralization remains open in all directions.

As the Company continues to fast track its flagship Epanko Graphite Project to production, the results emerging from Merelani East demonstrate that it is now a significant asset within Kibaran's portfolio of graphite properties in Tanzania.

A key advantage of the Merelani East deposit is that occurs within a brownfields graphite province that has past production, proven processing flow sheet design and a recognised graphite sales history. This is generating considerable interest from traders and end users in the graphite industry and provides confidence that the Company's Merelani Arusha Graphite project will support a second graphite operation after the development of Epanko.

The historical Merelani Block C Mineral Resource estimate for the main source of graphite mined, known as the Kyanite zone was 6.2Mt at 6.5% carbon. This historical estimate was reported by SAMAX Limited in 1993 and published in Explor. Mining Geology. Vol 3, No 4, pp. 371-382, 1994.

Table 2 Graphite flake distribution comparison based flotation results (refer announcement 23/2/2015)

Flake Size Portion of size fraction retained (%)

Name	**Microns**	**Mesh**	**Merelani East Deposit**	**Block C Deposit***
Jumbo	> 300	>48	**32.7**	**44.1**
Larger	>180	>80	**26.9**	**31.3**
Medium	>150	>100	**19.7**	**6.9**
	> 106	>150		**17.7**
Small	> 75	>200	**7.1**	
Fine	< 75	<200	**13.6**	**-**

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

**Based on Bench Scale Flotation results and metallurgical technical data referenced from the Africa 1995 IMM Conference in Windhoek titled Merelani Graphite Project - Tanzania co-authored by Mr J.G. Park, Mr A.C. Northfield and Mr D.S. Dodd, Minerals Engineering, Vol. 7, No's 2/3, pp 371-387, 1994 Printed in Great Britain.*

The Metallurgical results support Kibaran's future expansion strategy of producing a premium quality graphite product from a separate source to the Epanko Graphite Project and meet the longer-term requirements of the broader graphite market which is seeking supplier diversity.

The company has now initiated further test work, including ash melting point and purity on Merelani East graphite samples.

CLAUSE 49, JORC CODE CONSIDERATION

In accordance with Clause 49 of the JORC Code (2012), the product specifications and general product

marketability were considered to support the Mineral Resource estimate for Industrial Minerals. Independent test work programs have determined that (refer announcement 23 February 2015):

- The Merelani East project contains a large flake distribution with very high-grade carbon concentrates recovered from simple flotation. 32.7% of concentrate is Jumbo flake (+300 micron) at 98.1 % TGC. Overall recovery is 97.1% at 96.2% TGC.

- Commercial viability is assisted by having a low percentage of fine flake (< 75 micron) which has low value and is likely unsaleable and a high percentage of large flake which provides higher basket prices and increased saleability.

Recent test work has confirmed the graphite mineralisation is suitable for the 'expanded' and 'spherical' battery market and in fact has no limitations on its uses (refer announcement 23 February 2015). The very high-grade graphite concentrate grade provides access to even higher value niche markets, graphene production and use in 3D printing. The ability to sell the product is supported by the company's existing sales agreement (refer announcement 23 December 2013).

MINERAL RESOURCE ESTIMATE

Mineral Resource modelling was based on information compiled by Kibaran's geologists and included geological and drilling data derived from twenty two reverse circulation (RC) drill holes, two diamond drill holes and seven trenches cut across the strike of two zones of mineralisation, namely the Northern Zone and Southern Zone. The deposit comprises three target areas of mineralisation. All areas have been mapped at surface from natural outcrop. Trenching has demonstrated strike continuity of mineralisation outside the resource limits.

The mineralisation has a combined strike length of 4,100 m. The down-dip extent of the Northern Zone is 100 m below the deepest mineralisation intercept. The Northern Zone was extrapolated along strike beyond the last two lines of drilling by a distance of 100 m to the north and south, or as supported by observed mineralised outcrop.

The mineralisation exhibits shallowly dipping stratigraphy in the Northern Zone, with a more vertical dip in the Southern Zone. The graphitic mineralisation is open at depth in both zones. 3D modelling of the Merelani graphite mineralisation was undertaken by CSA Global and block grades were estimated using the Inverse Distance Squared method. A density value of 2.5 t/m3 was applied to the Mineral Resource, based upon documented density measurements from the Block C deposit. Drill samples were assayed by a reputable independent assay laboratory in South Africa.

It is important to note that a substantial amount of graphite mineralisation exists within the model at lower TGC cut-off grades than was used to report the Mineral Resource estimate.

MERELANI BLOCK C - EXTENSION OF EXCLUSIVITY

The exclusivity agreement for Merelani Block C graphite rights has been extended by the Company for a period of 3 months.

As previously announced the Company and both AIM listed Richland Resources Limited wholly owned subsidiary Tanzanite One Mining Limited ("TML") and Tanzania's State Mining Corporation ('STAMICO") via their STAMICO-TML Joint Venture ("the Joint Venture") entered a Memorandum of Understanding, with the intent of finalising an agreement to consolidate the Joint Venture's graphite assets at Merelani with Kibaran's 100% owned contiguous licences.

When Kibaran initially approached Richland Resources Limited regarding the concept of entering into an

agreement for the graphite rights of Merelani Block C, the primary attraction was the potential for Merelani Block C to return to graphite production in a shorter timeframe than other graphite projects, including Epanko.

However, due to Richland Resources Limited recent selling of Tanzanite One Mining Limited to privately owned Sky Associates Limited, the negotiations to finalise an agreement have been delayed and consequently certain of the benefits of access to a brownfields site, including the time to production, have been eroded.

Subject to continued negotiations and further assessment of the potential of the Merelani East deposit, the company will determine the optimal development strategy to establishing a second production centre for Kibaran.

ABOUT KIBARAN RESOURCES LIMITED

Kibaran Resources Ltd. (ASX: KNL or "Kibaran") is a graphite focused resource company with world class graphite projects located in Tanzania. Kibaran is also a 50% shareholder in 3D Graphtech Industries.

The Company's primary focus is to develop its 100%-owned Epanko Graphite Project, located within the Mahenge Graphite Province. Epanko is currently undergoing a Bankable Feasibility Study and 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. Metallurgical testwork has found Epanko graphite to be large flake, expandable, ultra-high purity and premium quality from a global perspective.

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 raw material of graphene.

The Company is positioning itself to participate in the emerging 3D printing market using graphite inks via 3D Graphtech Industries PL, jointly owned with 333D Pty Ltd (formerly 3D Group) which is transacting as OZ Brewing (ASX:OZB).

In addition, Kibaran has the Kagera Nickel Project which remains underexplored and is located along strike of the Kabanga nickel deposit, owned by the Glencore - Barrick Gold Joint Venture, which is considered to be the largest undeveloped, high grade nickel sulphide deposit in the world. Kibaran is currently seeking a partner to progress exploration of its highly prospective nickel properties.

The information in this report that relates to Exploration Results is based on information compiled by Mr Andrew Spinks, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. Andrew Spinks is employed by Kibaran Resources Ltd.. Mr Spinks 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 Mineral Resources is based on information compiled by Mr David Williams, a Competent Person, who is a Member of The Australasian Institute of Mining and Metallurgy. David Williams is employed by CSA Global Pty Ltd, an independent consulting company. Mr Williams 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.

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