

During the June quarter, Kibaran Resources Limited (ASX: KNL) made significant advances on its Epanko deposit within the Mahenge Graphite Project in south-east Tanzania. Work to date has confirmed that the Epanko graphite is large flake with ‘expanded’ properties – graphite with these key attributes commands a premium price in the graphite market. As such, accelerating Epanko to development is now Kibaran’s first priority.

**Highlights of the quarter include:**

- Delineation of a maiden Inferred JORC Mineral Resource for the Epanko deposit: 14.9Mt at 10.5% TGC, for 1.56Mt of contained graphite. This estimate is the highest grade Mineral Resource Estimate (graphite) delineated in Tanzania to date
- Completion of independent mineral processing test work by a large European graphite trader, with excellent metallurgical results
- Commencement of discussions with the European graphite trader regarding a potential partnership or off-take agreement
- Commissioning of two other metallurgical test work programs, which are underway:
  - Bench-scale metallurgical test work to optimise feasibility study parameters (Mintek Laboratory)
  - Further ‘expanded graphite’ test work by a leading manufacturer of carbon-based products
- Commissioning of a Scoping Study for the Epanko deposit
- Completion of trenching and costean sampling, with high-grade flake graphite encountered. Best result: 117m at 10.0% TGC

**Other projects:**

While graphite exploration in Tanzania remains the Company’s foremost priority, work also continued on the secondary focus Kagera Nickel Project located in western Tanzania. The Company views the Kagera Project as a future growth asset and is committed to unlocking the project’s true nickel-sulphide (NiS) potential and financial value. Work on the independent Nickel Prospectivity Study continued during the quarter:

- Further geological interpretation on the new ‘stand-out’ NiS electromagnetic (EM) target at Ruiza East
- Re-processing and re-interpretation of BHP Billiton’s historical regional airborne EM and aeromagnetic data which Kibaran recently secured the authority to access

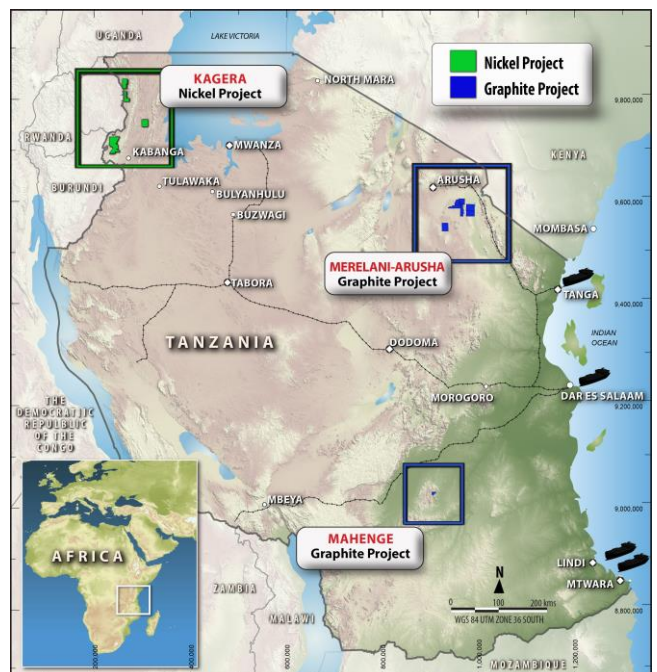


Figure 1: Map showing location of Tanzanian projects

## MAHENGE GRAPHITE PROJECT (100% KNL)

The Mahenge Graphite Project is located 245km south-west of Morogoro in south-east Tanzania. Work during the quarter was focused on the Epanko deposit, with significant progress being made.

### Maiden Inferred JORC Mineral Resource Estimate:

During the quarter, a maiden Inferred JORC-compliant Mineral Resource was estimated for the Epanko deposit of 14.9Mt at 10.5% TGC (Total Graphitic Carbon), for 1,560,000t of contained graphite (see Table 1; as reported on 22 May 2013). This figure outperformed internal expectations and only represents a small footprint (20%) of the known project area.

The Estimate was carried out by independent and internationally recognised mineral industry consultancy group, CSA Global Pty Ltd, and was based on data sets compiled through drilling, trenching and other geological activity. Further, the Mineral Resource Estimate was classified in accordance with the JORC Code (2004; Refer Table 1).

**Table 1: Mineral Resource Estimate**

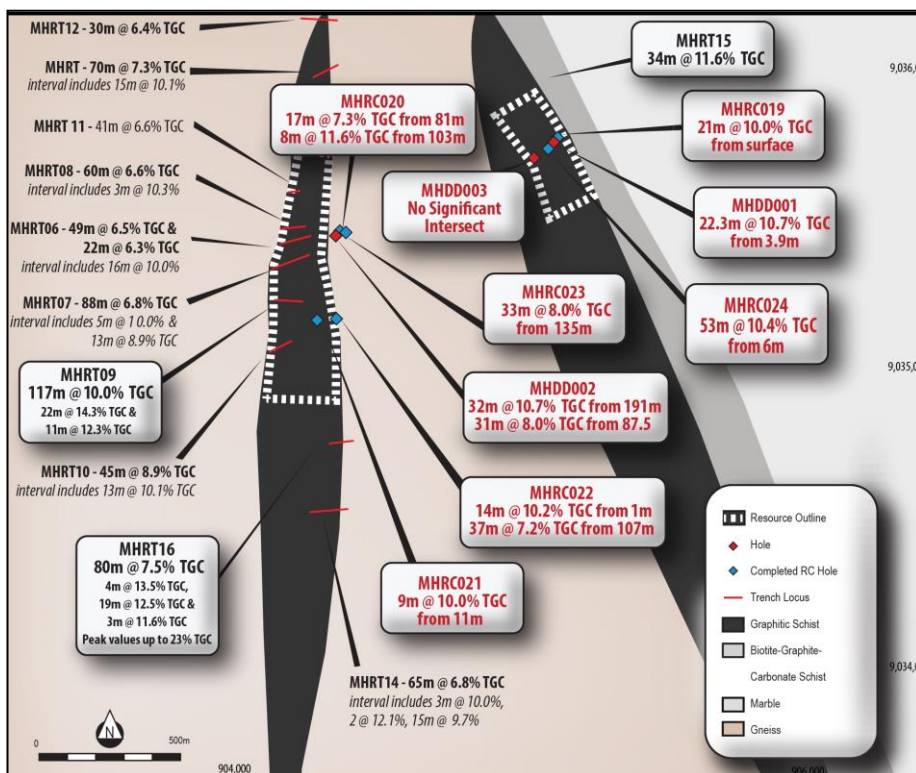
Mineral Resource Classification	Tonnage (Mt)	Grade (%TGC)	Contained Graphite (t)
Inferred	14.9	10.5	1,560,000

**Notes for table 1:**

- 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

Importantly, as the current Resource Estimate reflects only a small portion of the project area and mineralisation remains open in all directions, there is significant potential for achieving further Resource growth. This notion is supported by the trenching activity carried out to date.

Also of note, the Company believes that the Mineral Resource Estimate is the highest grade graphite Resource yet to be delineated in Tanzania and that the grades appears to be either comparable, or better than other past graphite producing operations in the East African region.



**Figure 2: Epanko deposit showing the area of the Mineral Resource estimate footprint.**

### Independent metallurgical test work programs:

During the June quarter, Kibaran commissioned the undertaking of three independent metallurgical test work programs on samples of Epanko graphite mineralisation. The three programs were:

- 1) Bench-scale feasibility test work by Mintek Laboratory in South Africa;
- 2) Graphite ‘expandability’ test work by one of the world’s leading manufacturers of carbon-based products; and
- 3) Mineral processing and design by a European graphite trader (EGT)

The results of program three were received during the quarter – the results of programs one and two remain pending and are expected in the coming month.

### **Highly favourable mineral processing test work results (program three):**

- Flotation achieved greater than 96% recovery of graphitic carbon, with concentrate grading 93% fixed carbon
- Flotation yielded large flake graphite (detailed results in Table 2):
  - 73.8% measured greater than 106 microns ( $\mu\text{m}$ )
  - 21.6% measured in the +300 micron ( $\mu\text{m}$ ) fraction
- The recovered flake graphite is clean, with no visible natural mineral impurities
- The graphite concentrate is amenable to standard metallurgical recovery processes
- The recovered product is considered marketable

The result regarding large flake size is significant as the market value of graphite increases with flake size, and there is also a shortage of this product in the current graphite market.

As well as mineral processing and design, the samples were also tested for ‘expandability’ potential, as the EGT is currently investigating new sources of graphite that are suitable for use in expanded graphite products. Test work found Kibaran’s sample to have expanded capability, making it suitable for further processing into expanded graphite. Expanded graphite is highly valued and highly sought after. It is used to produce graphite foils – an inert sealing material that is used in high temperature or high pressure settings, such as high temperature gaskets, bipolar plates in fuel cells and computer heat sinks. It is also considered valuable in the battery market.

These positive metallurgical test work results have led to discussions with the EGT regarding potential partnership or off-take opportunities.

**Table 2: Flotation results per size fraction**

Size	Portion of size fraction (%)	Fixed Carbon (%)
> 500 $\mu\text{m}$	8.4	97.6
> 300 $\mu\text{m}$	13.2	95.4
> 180 $\mu\text{m}$	28.6	93.8
> 106 $\mu\text{m}$	23.6	93.6
> 75 $\mu\text{m}$	10.4	91.0
< 75 $\mu\text{m}$	15.8	87.5
<b>Average</b>	100	93.0

*Micron ( $\mu\text{m}$ ) and Millimetre (mm). 1mm = 1000 $\mu\text{m}$  and fixed carbon content determined by loss of ignition method (LOI)*

### **Mineral processing test work process:**

The mineral processing test work was carried out on a sample of Epanko mineralisation sourced from Trench MHRT09, which returned 117m at 10.0% TGC (Refer to Figure 1 for location). The sample was crushed to less than 1mm and then flotation tested. The average carbon content was reported to be 13.6% carbon and large flakes of up to 3mm were observed before crushing.

A two-stage liberation process was developed by the EGT to separate the graphite. The process includes rougher flotation, two liberation stages, cleaner flotation, dewatering, drying and screening prior to bagging for export.

### **Scoping Study:**

Towards the end of the quarter, Kibaran commissioned Perth-based group, Intermine Engineering Consultants, to commence a Scoping Study on the Epanko deposit. The purpose of the Study is to assess the viability of a commercial mining operation, based on the initial Inferred JORC-compliant Mineral Resource of 14.9Mt at 10.5% TGC, for 1.56Mt of contained graphite. The Study is still underway, with completion and results expected towards the end of July.

The Study is assessing various throughput tonnages, utilising the inputs obtained from metallurgical test work and what the Company believes are realistic and achievable market pricing estimates for large flake graphite fractions. It is important to note that the purpose of the Study is not to establish the economic viability of the Epanko mining operation with a defined degree of certainty. It is however a key step to moving the project towards pre-feasibility.

### **Off-take and partnership discussions:**

Kibaran is now in discussions with the European graphite trader (EGT) who carried out the mineral processing test work with regards to potential partnership or off-take opportunities. The EGT is in need of new sources of graphite suitable for use in expanded graphite products and their test work has revealed that the Epanko graphite would be a suitable source subject to Kibaran establishing the commercial viability of a graphite operation.

### **Trenching and costean sampling:**

Kibaran made advances on the geological front, with the assay results of nine trenches in the Western Zone returning significant graphitic intersections and confirming the presence of shallow high-grade graphite mineralisation over a strike length of two kilometres. Trench MHRT09 returned the most significant intercept, measuring 117 m at 10.0% Total Graphitic Carbon (TGC). Trench MHRT15 in the Eastern Zone intersected 34m at 11.6% TGC, indicating that the mineralisation extends 500 metres further north than what was previously known.

The better mineralised trench intervals include:

- MHRT09: 117m at 10.0% TGC including 22m at 14.3% TGC and 11m at 12.3% TGC
- MHRT16: 80m at 7.5% TGC including 4m at 13.5%TGC and 19m at 12.5% TGC
- MHRT15: 34m at 11.6% TGC

The trenching results have increased the Company's expectations and are providing meaningful geological information in terms of high-grade distribution at surface. The results have been integrated into the data set being utilised to design and finalise Kibaran's next phase of diamond drilling.

## MERELANI-ARUSHA GRAPHITE PROJECT

The Merelani-Arusha Graphite Project consists of seven tenements and covers 973.4 km<sup>2</sup> in an area 55km south-east of Arusha, Tanzania. Like Mahenge, the project area is located in geological settings favourable for graphite mineralisation. The Company is of the opinion that the Merelani-Arusha region has strong potential for new discoveries of graphite mineralisation.

During the quarter, Kibaran initiated discussions with neighbouring tenement holders with the view of consolidating its tenement position.

## KAGERA NICKEL PROJECT

The Kagera Nickel Project is a secondary focus project for Kibaran. Kagera is located along the western border of Tanzania, covering an area of 864km<sup>2</sup>. The key tenements are located approximately 10km north-east of the world-class Kabanga Nickel deposit, operated by Xstrata Nickel. Kabanga is known as one of the largest undeveloped high-grade nickel sulphide deposits in the world, and is currently in the feasibility study stage.

During the June quarter, Kibaran continued its Nickel Prospectivity Studies. Work included:

- Further geological interpretation on the new stand-out nickel sulphide EM (electromagnetic) target identified at the Ruiza East Nickel Prospect;
- Re-processing and re-interpretation of BHP Billiton's historical regional airborne EM and aeromagnetic data which Kibaran recently secured the authority to access. The data dates back to 1992 and has an estimated replacement value of over \$12million

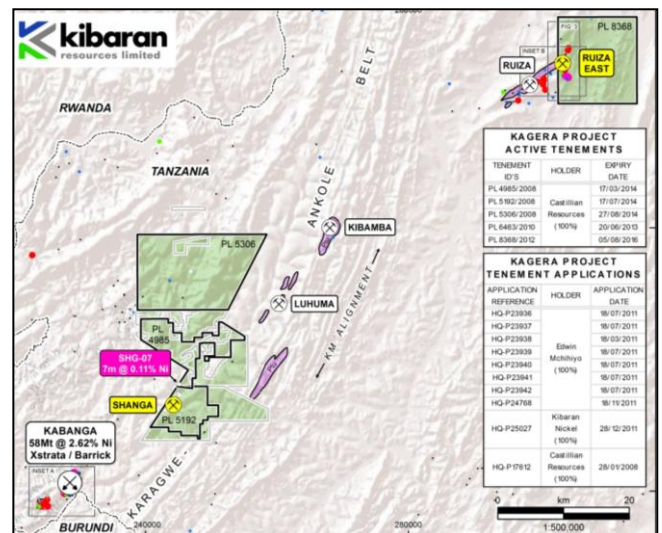


Figure 3 – Kagera Nickel Project prospect map

### Ruiza East Nickel Project

The newly identified Ruiza East Prospect is a stand-out nickel Exploration Target that like Kabanga, can be clearly identified from historical stream sediment data. It is located within the prospecting licence recently granted to Kibaran, immediately east-north-east and along strike from BHP's previously identified Ruiza Prospect and approximately 100km north-east of Kabanga.

Analysis of the exploration data reveals that the Ruiza East Prospect is the location within the KAB that most resembles Kabanga in terms of geological setting, magnetic signature, conductivity response and surface geochemical footprint. Further, the highest nickel grade stream sediment sample collected outside the Kabanga area is located downstream of the Ruiza East conductivity anomaly.

## CORPORATE

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The Company is monitoring its cash reserves and has systematically reduced its monthly corporate expenditure. As at 30 June 2013, the Company had a cash at bank balance of \$1.34 million.

## ABOUT KIBARAN RESOURCES LIMITED

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*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 their 100%-owned Epanko deposit, located within the Mahenge Graphite Project. Epanko currently has an Inferred JORC-compliant Mineral Resource Estimate of 14.9Mt, grading 10.5% TGC, for 1.56Mt of contained graphite. 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 by Xstrata, which is considered to be the largest undeveloped, high grade nickel sulphide deposit in the world.*

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 promulgated by the ASX from time to time. Andrew Spinks is a consultant of Tanzgraphite 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 2004 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.

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## APPENDIX

**Table 1: Trench data**

Trench_ID	N	E	Graphite Mineralisation			
			From (m)	To (m)	Interval (m)	Grade (% TGC)
MHRT09	9035106	904307	0	117	117	10.0
<i>Includes</i>			0	11	11	12.3
<i>Includes</i>			15	37	22	14.3
MHRT08	9035397	904347	35	95	60	6.6
<i>Includes</i>			40	43	3	10.3
MHRT16	9034620	904470	15	95	80	7.5
<i>Includes</i>			37	41	4	13.5
<i>Includes</i>			56	75	19	12.5
<i>Includes</i>			26	29	3	11.6
MHRT07	9035303	904343	0	88	88	6.8
<i>Includes</i>			16	21	5	10.0
<i>Includes</i>			47	60	13	8.9
MHRT06	9035340	904334	0	22	22	6.3
and			49	98	49	6.5
<i>Includes</i>			60	76	16	10.0
MHRT14	9034385	904429	0	65	65	6.8
<i>Includes</i>			14	17	3	10.0
<i>Includes</i>			22	24	2	12.1
<i>Includes</i>			38	53	15	9.7
<i>Includes</i>			60	62	2	12.4
MHRT15	9035840	905150	103	137	34	11.6
MHRT10	9034984	904291	0	45	45	8.9
<i>Includes</i>			32	45	13	10.1
MHRT11	9035504	904334	0	41	41	6.6
MHRT	9035933	904404	0	70	70	7.3
<i>Includes</i>			13	28	15	10.1
MHRT12	9036098	904382	0	30	30	6.4

**Notes to accompany table 1**

All total graphite carbon ("TGC") analysis undertaken by LECO at independent commercial laboratory SGS in Johannesburg, South Africa. Samples were taken along 1metre intervals. Minimum intersection width 2 metres with internal waste of no more than 2 metres. Trench lengths are reported, as true width is unknown. No top cut has been applied and intersection grade rounded to 1 decimal figure. Trench coordinates referenced to local grid WGS84 UTM36S.