

## **QUARTERLY ACTIVITY REPORT**

September 2014

### Highlights of the quarter include:

- Outstanding graphite intersections from completed drill programme at Epanko Deposit
- Metallurgical test work yields ultra-high purity graphite grade
- Epanko Mineral Resource estimate upgraded to Indicated category
- Epanko Scoping Study updated; results indicate economically robust graphite deposit
- Engineering firm engaged for Feasibility Study
- ESIA submitted and testwork diamond drill program completed
- Board restructured to fast track Epanko development
- Successful equity raising through oversubscribed \$3.1m share placement
- Subsidiary 3D Graphtech enters into research agreement with CSIRO

During the September quarter, Kibaran Resources Limited (ASX: KNL) made substantial progress at its flagship Epanko graphite deposit, located within the Mahenge Project in Tanzania. Several key milestones were met during the reporting period that have provided Kibaran a sound platform to fast track the development of Epanko and become a major producer of natural flake graphite.

Work completed and initiated during the reporting period has furthered Kibaran's long-held view that Tanzania is host to the one of the world's largest deposits of large flake graphite.

Subsequent to the reporting period, the Feasibility Study has commenced with completion scheduled for the June quarter of 2015.

Kibaran remains the only listed company with a binding offtake agreement.

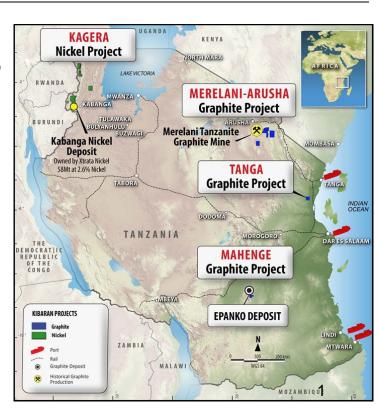
# **MAHENGE GRAPHITE PROJECT** (100% KNL)

The Mahenge Graphite Project is located 245km south-west of Morogoro in south-east Tanzania. Work during the quarter was focused on the flagship Epanko deposit.

### **Reverse Circulation Drilling**

During the quarter results were received from the Reverse Circulation (RC) drill programme, with all drill holes intersecting high-grade, premium large flake graphite mineralisation.

Most of the drilled holes encountered graphite mineralisation from surface to the end of hole. Assays returned graphite grades as high as 20.1% Total Graphitic Carbon (TGC). The drill programme doubled the strike length of Epanko graphite mineralisation to more than one kilometre, providing significant upside potential for a further resource upgrade.





#### Standout RC drill results include:

- 30m at 8.2% TGC from 8m (MHRC062), including 8m at 12.2% TGC
- 54m at 8.6% TGC from 9m (MHRC063), including
  19m at 10.4% TGC
- 53m at 14.0% TGC from 15m (MHRC064), including;

### The results above support previous intersections that included:

- 78m at 8.0% TGC from surface (MHRC036), including;
  42m at 10.2% TGC
- 39m at 11.3% TGC from 2m (MHRC048), including;
  12m at 14.5% TGC
- 40m at 9.2% TGC from 8m (MHRC050), including;
  13m at 11.4% TGC
- 28m at 13.8% TGC from 14m (MHRC052), including;
  18m at 17.0% TGC
  7m at 20.1% TGC
- 22m at 12.3% TGC from 12m (MHRC053), including
  12m at 15.5% TGC

[Full results are outlined in Table 2]

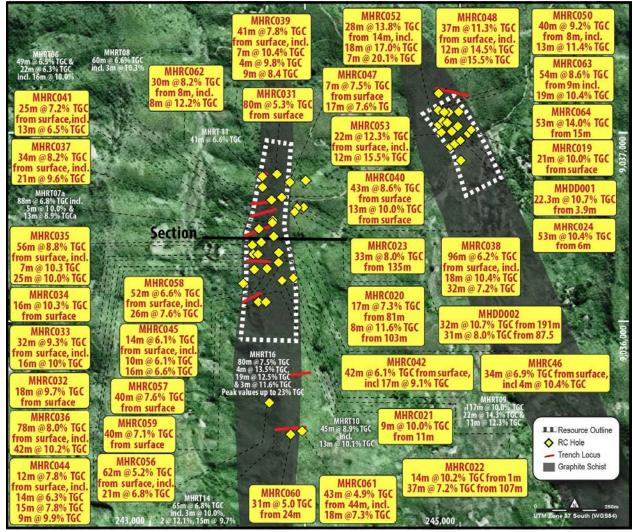


Figure 1 – Location plan of the Epanko deposit with latest drill results

<sup>&</sup>lt;sup>1</sup> This information was prepared and first disclosed under the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported."



### **Metallurgical Testwork**

During the quarter, metallurgical testwork was undertaken in Germany on graphite samples taken from Epanko. Results returned extremely high purity graphite levels that are considered amenable to a number of high value-add applications. Highlights included:

- Ultra-high purity carbon grade with levels exceeding 99.9% carbon with large flake size
- Extremely low impurities were recorded
- Results were achieved using a simple one-step purification process post flotation
- Large graphite flake size and high purity levels provide entry to a multitude of markets with no limitation to applications
- Epanko graphite proven suitable for the production of spherical graphite used in the highgrowth lithium-ion battery market

## JORC Mineral Resource upgraded to Indicated category

The JORC Mineral Resource for the Epanko Deposit was upgraded during the quarter. A total Indicated and Inferred Mineral Resource of 22.7 million tonnes (Mt), grading 9.8 % Total Graphitic Carbon (TGC), for 2,223,300 tonnes of contained graphite was delineated, and outperformed all internal expectations.

Work on the Mineral Resource estimate update was carried out by CSA Global Pty Ltd. The Mineral Resource estimate has been classified in accordance with the JORC (2012) Code (see below).

Table 1 - Mineral Resource Estimate at 8% cut-off

Mineral Resource 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 1:

- Tonnage figures contained within Table 1 have been rounded to nearest 10,000. % 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,

### **Updated Epanko Scoping Study**

Following the upgrade of the Epanko Mineral Resource estimate, the Company announced updated the Scoping Study.

The study (ASX announcement on 18/08/2014) 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 include:

- Strong indication Epanko is an economically robust graphite deposit capable of producing premium quality large flake graphite with no application limitations
- Net Present Value (NPV) of A\$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
- Confidence to advance immediately to feasibility study based on production of 470ktpa
- Flexibility and capabilities to increase graphite production as market demand increases



### **Engineering firm appointed for Feasibility Study**

GR Engineering Services Limited ("GRES") was appointed as lead manager for the feasibility and project evaluation study for the Epanko deposit.

The scope of work includes study management, engineering and procurement activities to produce estimates of all related project capital and operating costs assess the economic viability of Epanko. Subsequent to the reporting period, Kibaran and GRES have appointed consultants in the specialised areas of tailing storage facility design, geotechnical investigation, surface water management, power supply and water supply (refer ASX announcement 13/10/2014).

### Under the agreement:

- GRES will provide services to Kibaran exclusively in terms of graphite related projects within the Southern African Development Community (SADC) group of countries. The exclusivity period is five years and subject to the terms of the agreement.
- GRES will undertake the Epanko feasibility study and works on any subsequent graphite projects operated by Kibaran including Merelani-Arusha and Tanga both located in Tanzania.
- GRES will receive Kibaran shares as part payment of services for the Epanko feasibility study

### ESIA and testwork drill programme completed

The Environmental and Social Impact Assessment (ESIA) for Epanko was completed and officially lodged with the National Environmental Management Council (NEMC) of Tanzania during the reporting period. Under Tanzanian legislation, NEMC have up to 90 days to review the ESIA and recommend to the Ministry of Environment that an Environmental Certificate be issued for the project. Kibaran anticipates it will receive the certificate for Epanko prior to calendar year-end.

The ESIA work was carried out by MTL Consulting Limited (MTL), which has agreed to work on Kibaran's Tanzanian graphite projects on an exclusive basis. Under the exclusive agreement, MTL will not provide consulting services to any graphite projects that are not owned by Kibaran and which are located within a 100km radius of Kibaran-owned projects. The arrangement is for a period of two years.

In addition, a diamond drill programme was completed at Epanko during the quarter with the purpose of obtaining larger samples for metallurgical testwork for the feasibility study.

Drilling was carried out by Kuchimba Drilling, which has entered into an exclusive arrangement with Kibaran.



# **MERELANI-ARUSHA GRAPHITE PROJECT** (100% KNL)

The Merelani-Arusha Graphite Project consists of seven tenements and covers 973.4 km<sup>2</sup> in an area 55km southeast of Arusha, Tanzania. Like Mahenge, the project area is located in geological settings favourable for graphite mineralisation.

During the quarter the Company continued its negotiations to finalise a binding agreement with the STAMICO-TML Joint Venture, a joint venture between AIM listed Richland Resources Limited's wholly owned subsidiary TanzaniteOne Mining Limited ("TML") and Tanzania's State Mining Corporation ('STAMICO"), to consolidate graphite assets at Merelani (refer previous announcement).

# **TANGA GRAPHITE PROJECT (100% KNL)**

The Tanga licence covers 84km2 and provides Kibaran with a third graphite province to underpin the Company's strategy of becoming a significant and long-term supplier of premium quality graphite from Tanzania. There was no notable activity undertaken on the Tanga project during the quarter.

# **KAGERA NICKEL PROJECT (100% KNL)**

The Kagera Nickel Project is a secondary focus 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 quarter, Kibaran disposed of a tenement within the Kagara Nickel Project area, rationalising its holding whilst maintaining the overall Nickel project in good standing. The Company is continuing to review its nickel project and is pursuing a number of opportunities to realise the value of these assets.

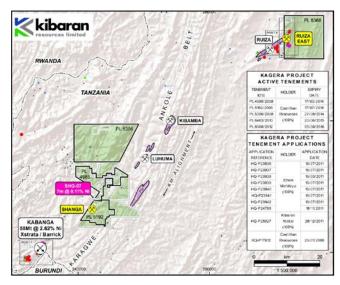


Figure 2: Kagera Nickel Project prospect map



## **CORPORATE**

### **Board Restructure**

A restructure was undertaken in order to prepare the Company for the next phase of its growth and to fast track development of its graphite projects in Tanzania.

In order to ensure the composition, size and balance of expertise to best fit Kibaran's new growth phase, Non-Executive Chairman Simon O'Loughlin and Non-Executive Director Robert Greenslade resigned from the Board during the quarter.

Non-Executive Director John Park subsequently was appointed to the role of Non-Executive Chairman and Non-Executive Director Grant Pierce assumed an executive role as Executive Director – Projects.

## **Capital Raising**

A placement of 23.1 million fully paid ordinary shares at A\$0.135 to sophisticated investors raised A\$3.1 million in capital for the Company.

4,901,112 options were exercised during the quarter. The options exercised were from four different classes and resulted in the injection of \$760,222 into the Company.

### 3D Graphtech Industries & CSIRO enter into Initial Research Agreement

3D Graphtech Industries Pty Ltd ('Graphtech'), a 50% owned subsidiary of Kibaran, entered into an agreement with the Commonwealth Scientific and Industrial Research Organisation ('CSIRO') to investigate research opportunities in the application of graphite and graphene inks in 3D printing and fused filament fabrication.

Graphtech is a research and development company, owned equally by Kibaran and 3D Group Pty Ltd (refer to ASX announcement 10/07/2014), that is responsible for pursuing patents and collaborative partnerships for graphite and graphene and its application in 3D printing.



## **SCHEDULE OF TENEMENTS**

Mining Tenements Held, Acquired or Disposed of by Kibaran Resource Limited as at 30 September 2014.

Pursuant to ASX Listing Rule 5.3.3 Kibaran Resources Limited (ASX: KNL) (the "Company") reports as follows in relation to mining tenements held at the end of each quarter and acquired or disposed of during the quarter and their location.

### As at 30 September 2014

Ministry ID	Holder	Ownership	Project, Location
PL 4985/2008	Castillian Resources (Tanzania) Ltd	100%	Kagera, Tanzania
PL 5192/2008	Castillian Resources (Tanzania) Ltd	100%	Kagera, Tanzania
PL5306/2011	Castillian Resources (Tanzania) Ltd	100%	Kagera, Tanzania
PL8368/2012	Castillian Resources (Tanzania) Ltd	100%	Kagera, Tanzania
PL 4985/2008	Kibaran Nickel Tanzania Ltd	100%	Kagera, Tanzania
PL 5192/2008	Kibaran Nickel Tanzania Ltd	100%	Kagera, Tanzania
PL 5306/2008	Kibaran Nickel Tanzania Ltd	100%	Kagera, Tanzania
PL 8204/2012	TanzGraphite (TZ) Ltd	100%	Mahenge, Tanzania
PL 7907/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 7913/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 7914/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 7915/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 7917/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 7906/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 7918/2012	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL 10090/2014	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL10091/2014	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania
PL10092/2014	TanzGraphite (TZ) Ltd	100%	Merelani-Arusha, Tanzania

## Number disposed during the quarter

One (1) -

PL 6463/2010 Castillian Resources (Tanzania) Ltd, Kagera Project

## Number acquired during the quarter

Three (3)-

PL 10090/2014 TanzGraphite (TZ) Ltd, Merelani-Arusha, Tanzania PL 10091/2014 TanzGraphite (TZ) Ltd, Merelani-Arusha, Tanzania PL 10092/2014 TanzGraphite (TZ) Ltd, Merelani-Arusha, Tanzania



**Table 2: Epanko RC Intersection Table** 

rabic 2. Lpank						Graphite Mineralisation				
						From To Interval Grade				
Hole_ID	N	E	Dip	Azi	Depth (m)	(m)	(m)	(m)	(%TGC)	
MHRC031	904328	9035506	-60	270	80	0	80	80	5.3	
MHRC032	904222	9035151	-60	270	50	0	18	18	9.7	
MHRC033	904225	9035150	-70	90	50	0	32	32	9.3	
Includes	304223	3033130	70	30	30	14	30	16	10.3	
MHRC034	904227	9035197	-60	270	41	0	16	16	10.3	
MHRC035	904232	9035198	-90	90	65	0	56	56	8.8	
Includes	30 1232	3033130	30	30	03	6	13	7	10.3	
Includes						18	43	25	10.0	
MHRC036	904220	9035100	-60	90	78	0	78	78	8.0	
Includes	30.1220	3000100		30	, 0	0	42	42	10.2	
MHRC037	904245	9035274	-60	270	47	0	34	34	8.2	
Includes						0	21	21	9.6	
MHRC038	904293	9035401	-60	270	92	0	96	96	6.2	
Includes						0	18	18	10.4	
Includes						49	82	32	7.2	
MHRC039	904258	9035498	-60	270	53	3	41	41	7.8	
Includes						4	11	7	10.4	
Includes						23	27	4	9.8	
Includes						32	41	9	8.4	
MHRC040	904329	9035403	-60	270	65	3	46	43	8.6	
Includes						4	17	13	10.0	
MHRC041	904301	9035298	-60	270	60	6	31	25	7.2	
and						49	62	13	6.5	
MHRC042	904307	9035239	-60	270	60	0	42	42	6.1	
Includes						4	21	17	9.1	
MHRC043	904380	9035500	-60	270	29	No Significant Assay (Holes Collapsed at 29m)				
MHRC044	904203	9035038	-60	90	65	2	14	12	7.8	
						23	37	14	6.3	
						43	58	15	7.8	
Includes						43	52	9	9.9	
MHRC045	904319	9035116	-60	270	104	4	18	14	6.1	
						27	37	10	6.1	
						67	83	16	6.6	
MHRC046	904324	9035156	-60	270	60	0	34	34	6.9	
Includes						1	5	4	10.4	
MHRC047	904430	9035500	-60	270	41	4	11	7	7.5	
						24	41	17	7.6	
MHRC048	905041	9035866	-60	90	60	2	39	37	11.3	
Includes						8	20	12	14.5	
Includes						33	39	6	15.5	
MHRC050	905033	9035788	-60	90	60	8	48	40	9.2	
Includes						8	21	13	11.4	
MHRC052	905032	9035735	-60	90	57	14	42	28	13.8	
Includes						23	41	18	17.0	
Including						29	36	7	20.1	
MHRC053	905038	9035689	-60	90	50	12	34	22	12.3	
	33333	333303	0.5	33		12	24	12	15.5	
Includes	00.10.1	00000								
MHRC056	904282	9034524	-60	270	60	0	62	62	5.2	
Includes						0	21	21	6.8	
MHRC057	904240	9034946	-60	270	50	0	40	40	7.6	



MHRC058	904283	9035101	-60	270	50	0	52	52	6.6
Includes						12	38	26	7.6
MHRC059	904265	9034952	-60	270	50	0	40	40	7.1
MHRC060	904360	9034380	-60	270	60	24	55	31	5.0
MHRC061	904410	9034380	-60	270	120	44	87	43	4.9
and						106	124	18	7.3
MHRC062	904260	9035451	-60	270	50	8	38	30	8.2
Includes						8	16	8	12.2
MHRC063	905044	9035789	-90	270	71	9	63	54	8.6
Includes						9	28	19	10.4
MHRC064	905044	9035738	-90	270	65	15	68	53	14.0

### Notes for Table 1

All total graphite carbon ("TGC") analysis undertaken by LECO at independent commercial laboratory SGS in Johannesburg, South Africa. RC Samples collected over 1 metre intervals using an industry standard 3 tier riffle splitter. Minimum intersection width 2 metres with internal waste of no more than 2 metres. Downhole lengths are reported, as true width is unknown. Azimuths are referenced to local grid. No top cut has been applied and intersection grade rounded to 1 decimal figure. Drill hole coordinates referenced to local grid WGS84 UTM36S.



## ABOUT KIBARAN RESOURCES LIMITED

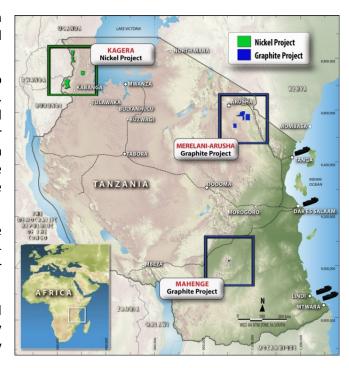
#### **About Kibaran Resources Limited:**

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 an Indicated and Inferred Mineral Resource Estimate of 22.7Mt, grading 9.8% TGC, for 2.223Mt 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.

The information in this report that relates to Exploration Results, Exploration Targets, 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 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 and 2012 Editions 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.

#### For further information, please contact:

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