

Fast-tracking Graphite Production in Tanzania

Kibaran Resources Limited (ASX: KNL)
Andrew Spinks, Executive Director

Investor Update – July 2014

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Competent Person

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 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.

CORPORATE OVERVIEW – ASX: KNL

An exploration company focused on unlocking the graphite potential of the mineral-rich landscapes of Tanzania.

Share price	A\$0.325 (as at 15/7/14)
Ordinary shares on issue	115.4 million
Performance shares ¹	15 million
Market cap	\$37.4 million
Cash in bank	\$3.4 million (as at 11/7/14)
Options ²	21.5 million

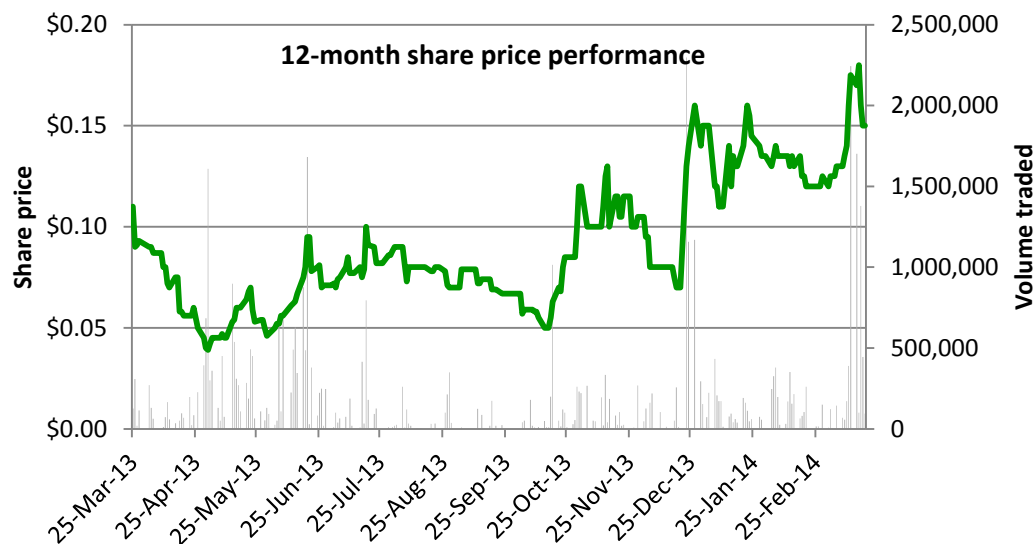
Board of Directors	
Simon O’Loughlin	Non-Exec Chairman
Andrew Spinks	Executive Director
John Park	Non-Exec Director
Grant Pierce	Non-Exec Director
Robert Greenslade	Non-Exec Director

Notes for Table

1. Consists of 15m shares which convert on certain milestones associated with the Kagera nickel project. (expire October 2015)
2. Various strike prices.

Share Structure

Shareholders	780
Directors & Management	20.6%
Top 20	38.6%



EXPERIENCED BOARD AND MANAGEMENT

Simon O'Loughlin, Non-Exec. Chairman

Lawyer and founding member of O'Loughlins Lawyers, with extensive experience in corporate and commercial law. More recently, he has been focusing on the resources sector. Simon also holds accounting qualifications and has comprehensive experience with companies in the small industrial and resources sectors.

Andrew Spinks, Executive Director

Geologist with 25 years experience. Has expertise in exploration, project development and management across a number of commodities. Andrew been associated with operations in Africa for the past 13 years, including co-founding Tanzgraphite Pty Ltd. Andrew is responsible for the Company's strategy, its acquisitions and target generation.

John Park, Non-Exec. Director

Metallurgist with a successful track record in technical, financial and management aspects of the minerals industry. Held Executive and Board positions for many UK, Canadian and Australian listed companies. He was a founder and Exec. Director of TSX-listed SAMAX Gold, and developed and operated the Merelani graphite mine in Tanzania, which was the first new mine since Independence and remains the largest historical production of graphite in East Africa.

Grant Pierce OAM, Non-Exec. Director

Mining engineer with over 25 years' experience. Extensive management experience & knowledge of Tanzanian mining sector. Senior operational management roles in development and operations in mining and exploration operations in Africa including, Perseus Mining Ltd, Resolute Mining Ltd, Barrick Gold Corp. in Tanzania and Africo Resources Ltd.

Robert Greenslade, Non-Exec. Director

Managing Director, Mining and Metals, Corporate Advisory for Standard Chartered Bank. Prior to this, he was a founding Director of Adelaide-based boutique corporate advisor, Gryphon Partners Advisory, which specialises in resource transactions and was acquired by Standard Chartered Bank in 2009.

Robert Hodby, Company Secretary

Over 20 years industry experience in financing and administration of public and listed companies gathered at both operational and corporate levels. Robert provides corporate, management and accounting advice to a number of companies involved in the resource and energy industries.



FOCUSED STRATEGY

Goal:

- To become a major producer of high value, premium quality large flake graphite.
- Establish strategic partnerships to participate in the new industrial revolution through graphite and graphene

Strategy:

- Fast track Epanko Graphite Deposit towards development and production
- Consolidation of Merelani graphite assets and historical mine



KEY INVESTMENT HIGHLIGHTS

- **World-class graphite assets**
 - **MAHENGE**
 - **Flagship Epanko Deposit:** Inferred JORC Resource established, advanced metallurgy, initial Scoping Study released, commenced Environmental and Social Impact Assessment studies
 - **Binding off-take agreement signed** with major European graphite trader for 5 + 5 years of 10,000tpa flake graphite concentrate off-take¹
 - **Significant value upside with near-term release of upcoming resource upgrade and Economic Scoping Study**
 - **MERELANI**
 - Exploration target of between 60Mt and 200Mt grading between 9 and 11%TGC
 - **MoU signed** to consolidate Merelani graphite province which includes the historic graphite mine.
- **Significant Market Opportunity: Growing global graphite demand, plus market shortage of large flake product**
- **Graphite & Graphene 3D Printing:** exposure to high-growth industry via **3D Graphtech Industries**
- **Experienced Board and Management** with local industry experience and technical expertise

WHY GRAPHITE?

Major global growth commodity of the 21st century:

- Long-term, global demand – expected to double within the next eight years
- Driven by growing number of applications in technology, industrial and new energy markets
 - Essential component of modern lithium ion batteries (smart phones, tablets, electric cars etc)
 - Potential application in graphene: "the world's next super material"¹ (computer chips, lasers etc)
 - Unique physical and chemical properties make it difficult to substitute
- Tesla announcement of US\$5b battery 'gigafactory' forecast to increase the **battery market's** demand for graphite up 152%

Outcome: **Opportunities for commercial-scale graphite miners, other than China, to service the significant global demand**

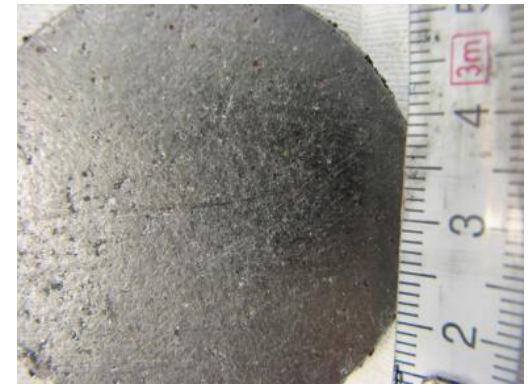
¹Source: Metal Investment News



WHY KIBARAN?

Epanko graphite is premium, world class quality:

- **Ultra High Purity : 99.98% - No limitation of applications**
- **Size matters:** Value is a function of flake size and purity
- Large flake (+180 μ m), 94%-97% C (carbon) varieties command premium market prices
- Future applications demand requires large flake graphite
- **Expanded graphite** is used to produce graphite foils – inert sealing material used in high temperature, high pressure settings, eg. gaskets and computer heat sinks.
- Expanded graphite used in **thermally efficient building products**
- Graphite suitable for **spherical graphite battery market**



Graphite foil produced from Kibaran large flake graphite

Significant supply opportunities expected to be limited to producers of large flake graphite with 'expandable' properties

WHY TANZANIA?

Mineral-rich landscape:

- Significant graphite endowment
- Largest flake sizes in East Africa - high metamorphic gradient
- High-grade graphite occurrences

Mining-friendly country:

- Stable Government committed to mining sector growth and development
- Significant mining support services
- Extensive infrastructure network (road, rail and ports).
- Third largest gold industry in Africa
- Significant commercial mining activity in place
- Access to skilled and educated local workforce



New Road and Bridge Constructions on route to Epanko

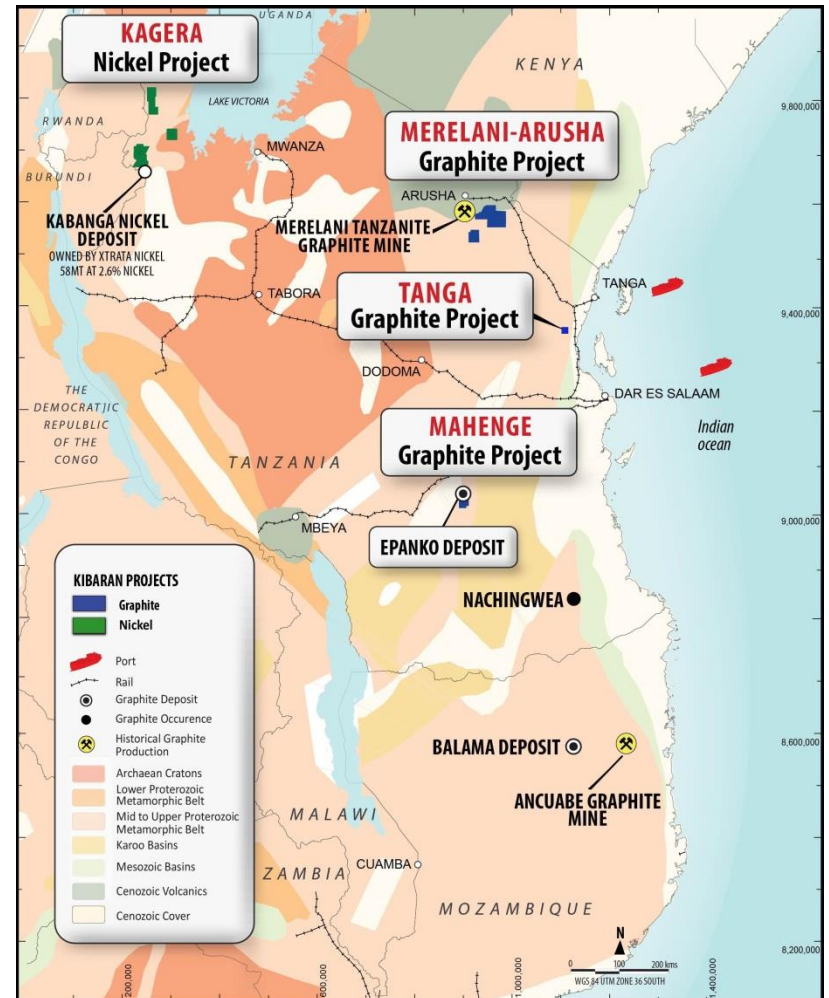
EAST AFRICA

East Africa

- Host's the largest graphite occurrences in the world
- Tanzania has the potential to overtake India (120ktpa) and Brazil (80ktpa) production

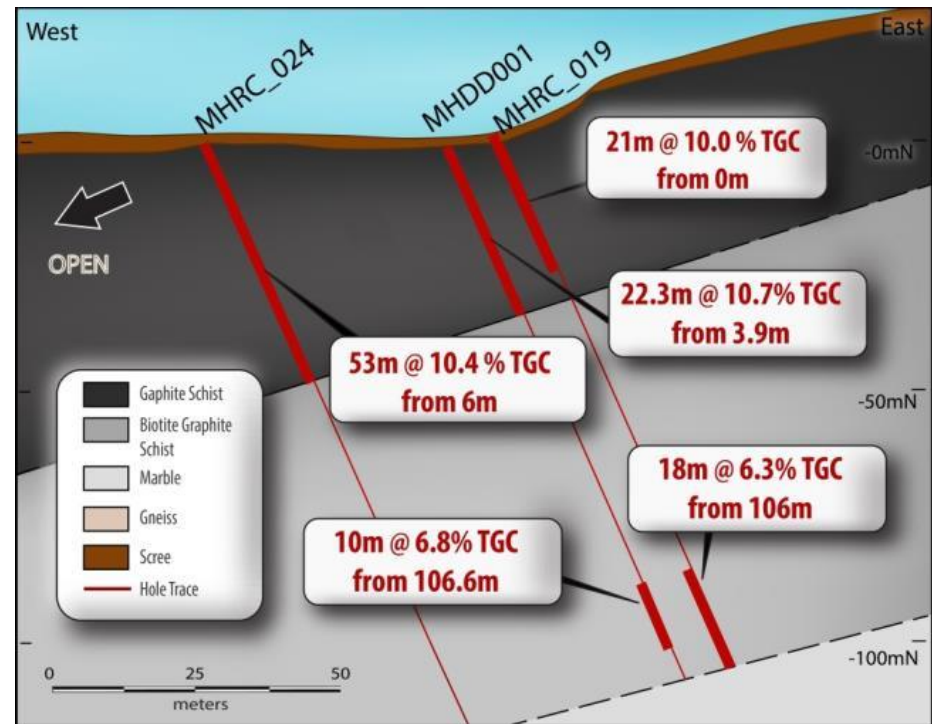
Key graphite projects in Tanzania:

- Mahenge Project – comprises the priority Epanko Deposit
- Merelani-Arusha Project – MoU signed with Richland, existing historical graphite mine, previous 15ktpa production
- Tanga Graphite Project



FLAGSHIP EPANKO DEPOSIT

- JORC Inferred Mineral Resource Estimate: 14.9Mt at 10.5% TGC for 1.56Mt contained graphite
- Mineral resource estimate being upgraded with recent drilling results
- **Highest grade graphite Mineral Resource to be delineated in Tanzania**
- Graphite grade compare favourably to past graphite-producing operations in Tanzania:
 - Tanzania: 8.3% TGC from Merelani Mine
- Resource estimate provided base for Initial Scoping Study; forms a sound technical basis for further studies



*as released 22 May 2013

Robust and thick high-grade zones of oxidised mineralisation assist low operating costs - simple liberation with no fine grinding or acid treatments

BINDING OFF-TAKE AGREEMENT

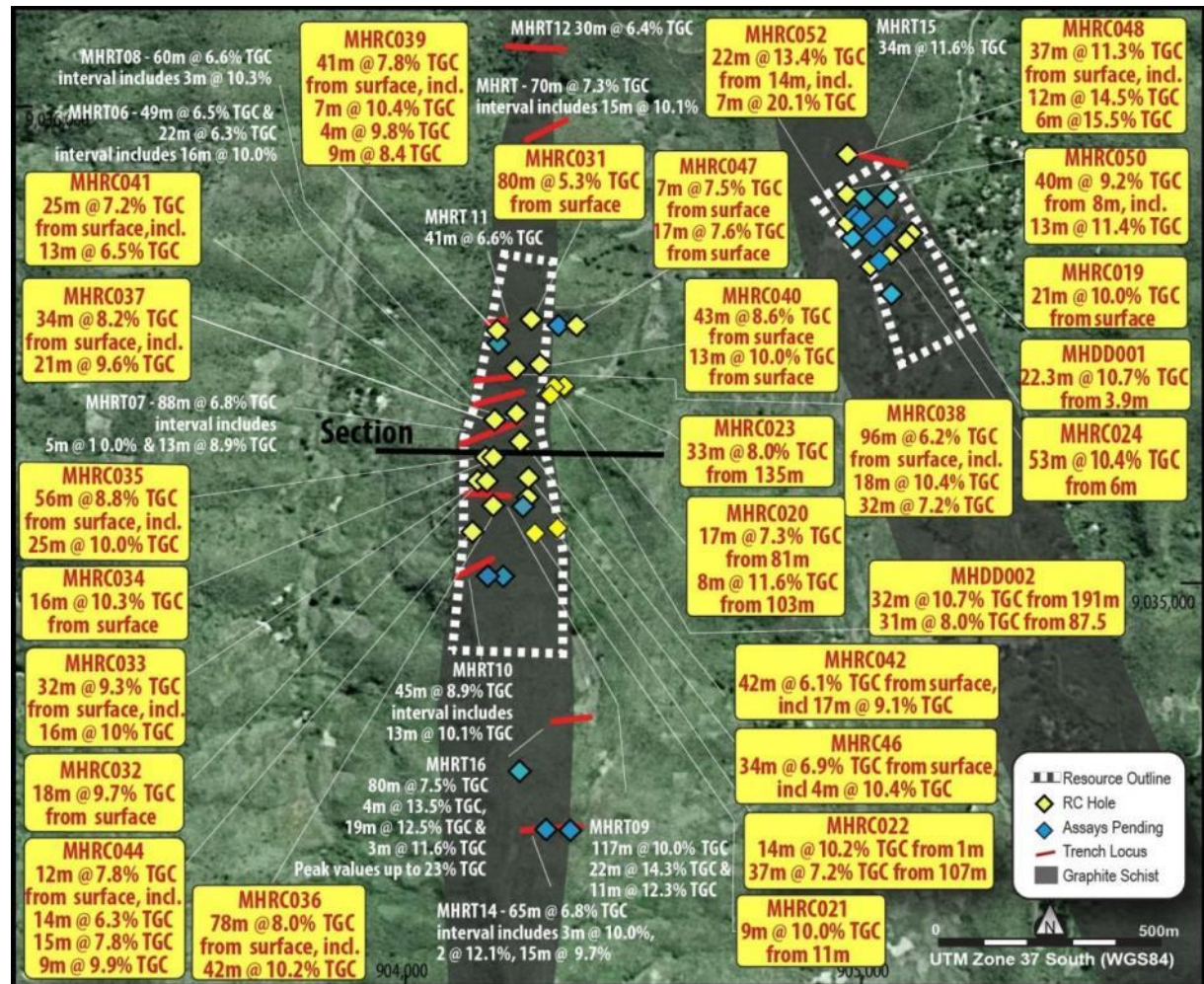
- Kibaran is the first ASX-listed company to sign a binding off-take agreement and partnership for graphite sales
- Agreement with sophisticated **European graphite market trader**
- **Guarantee to purchase 10,000tpa** of flake graphite for a 5+5 year period¹
- European graphite trader has been investigating new sources of large flake graphite for the past two years. Worldwide review of projects identified the Epanko deposit as its preferred new source
- **Kibaran remains the only company globally with a binding offtake agreement outside China**



Validates quality and commercial appeal of Kibaran's large flake graphite, and longevity supports a strong long-term outlook for natural graphite demand

EPANKO RESOURCE UPSIDE

- Extensive RC and diamond drilling has confirmed presence of high-grade graphite mineralisation in both Eastern and Western Zones
- 43 RC holes, 3 diamond drill holes and 11 trenches have been completed to date
- Grade consistent along strike, mineralisation remains open at depth and in all directions
- JORC Resource upgrade underway



EPANKO METALLURGICAL RESULTS

Independent but complementary test work programs completed:

- 1) Test work completed by a leading European manufacturer of carbon-based products
- 2) Independent mineral processing work by a large sophisticated European graphite trader

Results:

- **Ultra High Purity – 99.98%** achieved in a simple one-step purification process
- **Simple Flotation achieved >96% recovery** of graphitic carbon. Concentrate graded 93% fixed carbon
- Flotation test work yielded **large flake** graphite:
 - 73.8% in >106µm (micron) fraction; and
 - 21.6% in >300µm (micron) fraction
- Clean product with no visible natural mineral impurities
- **Suitable for the 'expanded' and 'spherical' battery market**
- Amenable to standard recovery processes
- Marketable and saleable product



Graphite foil produced from Kibaran large flake graphite

Results support recent signing of binding off-take agreement with European graphite trader

SCOPING STUDY FLOW SHEET AND DESIGN

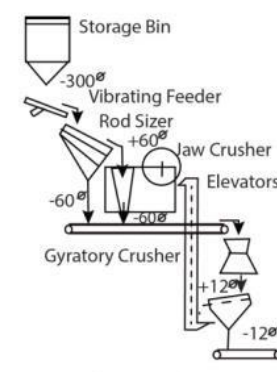
Flowsheet and plant design:

- Simple flow sheet design
- Outstanding test results producing an attractive size fraction

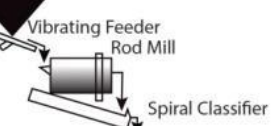
Size (Micron)	Portion of size Fraction (%)	Fixed Carbon (%)
> 500	8.4	97.6
> 300	13.2	95.4
> 180	28.6	93.8
> 106	23.6	93.6
> 75	10.4	91.0
< 75 *	15.8	87.5
Average	100	93.0

Kibaran has the highest large flake distribution and lowest fines fraction among its peers

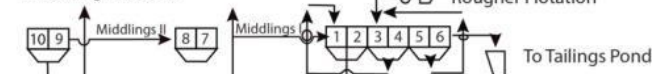
Crushing Plant



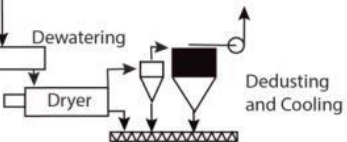
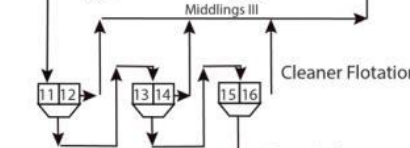
Milling Plant



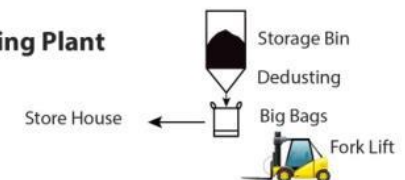
Liberating Flotation



Flotation Plant



Drying and Packing Plant



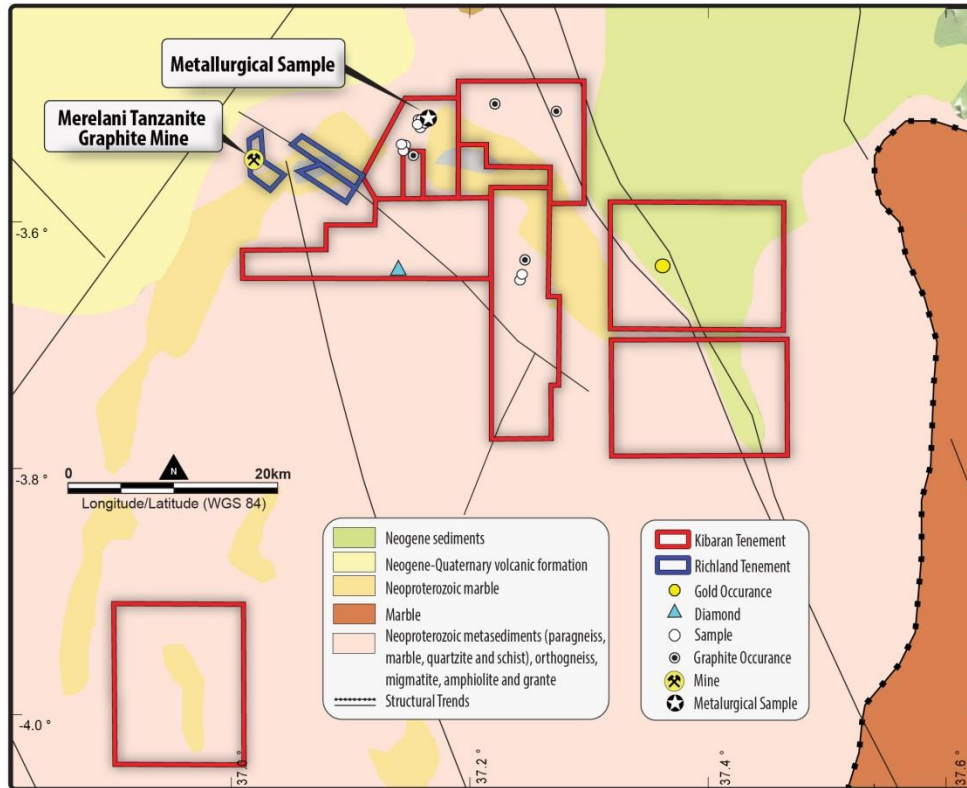
2014 – EPANKO DEVELOPMENT PROGRAM

Program on schedule and major value drivers expected in short term

	2014												2015							
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
Exploration - Development																				
Drill pad preparation	✓	✓																		
Drilling to Upgrade Resource from Inferred to Indicated			✓	✓	✓	✓														
Resource Estimation						✓	✓													
Diamond Drilling - Metallurgical/Geotechnical Engineering																				
Feasibility Study																				
Mine design, optimisation and scheduling																				
Metallurgy and Pilot Plant Testwork																				
Environmental and Social Base Line Studies	✓	✓	✓	✓	✓	✓	✓													
Issue of Environmental Certificate by NEMC																				
Mining Licence Application																				
Feasibility Study																				
Detailed Processing Plant and Infrastructure Engineering																				

* in the event that the Company can upgrade its Resource to an Indicated or Measured Resource and a positive feasibility study is developed, which is uncertain at this point, the Company will advance these items.

MERELANI GRAPHITE PROJECT



- Located in world-class graphite province
- MoU signed to provide access to strategic graphite rights at project. All Parties working towards binding offtake agreement
- Merelani mine had largest historical production (15ktpa) in East Africa
- Associated mine infrastructure and historical resource exists
- **Significant upside:** Graphitic schist has been mapped over 1.5km length and up to 200m widths to the east of Merelani graphite mine
- Previous work returned rock chips assayed 8.1%TGC and metallurgical head grade 17.1% TGC



Tanzanite crystal on graphite matrix
(Merelani Tanzanite Mine)

CURRENT GRAPHITE PRICING

- Pricing of graphite sales is related to flake size and product characteristics (size, purity, ash, moisture, etc)
- Larger flake size = higher price
- Flake distribution is critical to project economics and commercial viability
- Key marketable products are the large +180 micron size fractions
- **Based on metallurgical flotation results, over 50% of Epanko graphite is greater than +180 micron size fraction**

Indicative Graphite Pricing*

FLAKE SIZE	GRADE	PRICE
> 500 microns	96-98% C	US\$2,300/t
> 300 microns	94-96% C	US\$2,000/t
> 180 microns	94-96% C	US\$1,300/t
> 106 microns	94-96% C	US\$950/t
> 75 microns	90%+ C	US\$750/t
< 75 micron	90%+ C	US\$550/t

* Note

- Graphite does not trade on the metal exchanges
- Contracts negotiated directly between suppliers and consumers

Supply crackdown on Chinese graphite producers will also support graphite prices in 2014 – approximately 20% of China's supply on hold

Source: Industrial Minerals, 16 December 2013

CURRENT GRAPHITE INDUSTRY

- Market requires graphite grade of 94-97% C and seeks large flake > 180 micron
- Several types of graphite: Expanded, Spherical and Micronised
- Spherical graphite is immediate key growth sector; key graphite ingredient in batteries
- Battery applications: not necessary to have high graphite grade, rather flake size and conductivity are key properties
- Thermally efficient building products are expected to drive demand for Expanded Graphite, which is forecast to be a larger market than Spherical Graphite
- Single graphite deposits will not control the market, end users seek supply diversity and market traders want exclusivity
- New production unlikely to flood market; if demand increases there is likely to be a massive shortfall of graphite

Graphite has the potential to become a mainstream commodity driven by technological advances and efficiency

ECONOMIC GRAPHITE OCCURENCES

Economic Graphite occurrence's depend on a number factors

- Grade > +5 % TGC and sufficient tonnage to support mine life (~ +2Mt)
- Operate in low cost environments or alternatively have large flake distributions
- Near surface, thick high grade zones of mineralisation assist low operating costs
- Significant weathering- simple liberation with no fine grinding or acid treatments.

Commercial viability is assisted by having the following key attributes.

- Low percentage of fine flake (< 75micron) = low value and likely unsaleable
- High percentage of large flake provides higher basket prices and increased saleability

IMPORTANT

- **Quality (Purity) is more important than tonnes and grade**
- **Grade is not related to flake size. Flake size is determined from metamorphic gradient and mineral crystallisation.**
- **Hence, not all graphite occurrence being explored will become commercially viable to**

mine

FUTURE PRICING

- Stormcrow Research – Highlights the competitive advantage of having a high proportion of Large (>180 micron) and Jumbo (>300 micron) flake distribution; combined with a low proportion of Fine (<75 micron).

FLAKE SIZE			SIZE FRACTION	CURRENT GRAPHITE PRICING		STORMCROW 2020 PRICES	
				PRICE (US\$/t)	VALUE (US\$)	PRICE (US\$/t)	VALUE (US\$)
Name	Microns	Mesh					
Jumbo	> 300	>48	21.6	\$2,300	\$497	6175	\$1,334
Larger	>180	>180	28.6	\$1,300	\$372	1165	\$333
Medium	> 106	>150	23.6	\$950	\$224	517	\$122
Small	> 75	>200	10.4	\$750	\$78	493	\$51
Fine	< 75	<200	15.8	\$550	\$87	359	\$57
Weighted Basket Price (Price x Size Fraction)					\$1,258		\$1,897

- Stormcrow forecast prices provide a 50% increase in basket price value over the current graphite prices

SALEABLE GRAPHITE AND PRICE

Indicative Basket Price - Epanko

FLAKE SIZE	PRICE (US\$)	SIZE FRACTION	VALUE (US\$)
> 500 microns	\$2,300/t	8.4	\$193
> 300 microns	\$2,000/t	13.2	\$264
> 180 microns	\$1,300/t	28.6	\$372
> 106 microns	\$950/t	23.6	\$224
> 75 microns	\$750/t	10.4	\$78
< 75 micron	\$550/t	15.8	\$79
Total basket price			\$1,210
Total basket price excluding <75 micron size fraction			\$1,131

- New production needs to compete with low cost environments
- China, India and Brazil represent 95% of world's production
- Unlikely that new production will be cost competitive for <75 micron size fractions.

EPANKO

- ✓ Ability to sell into current market.
- ✓ Not reliant on future demand to commence production
- ✓ Ability to increase production on new demand

Not all graphite occurrences will produce saleable graphite

PEER COMPARISON - TECHNICAL

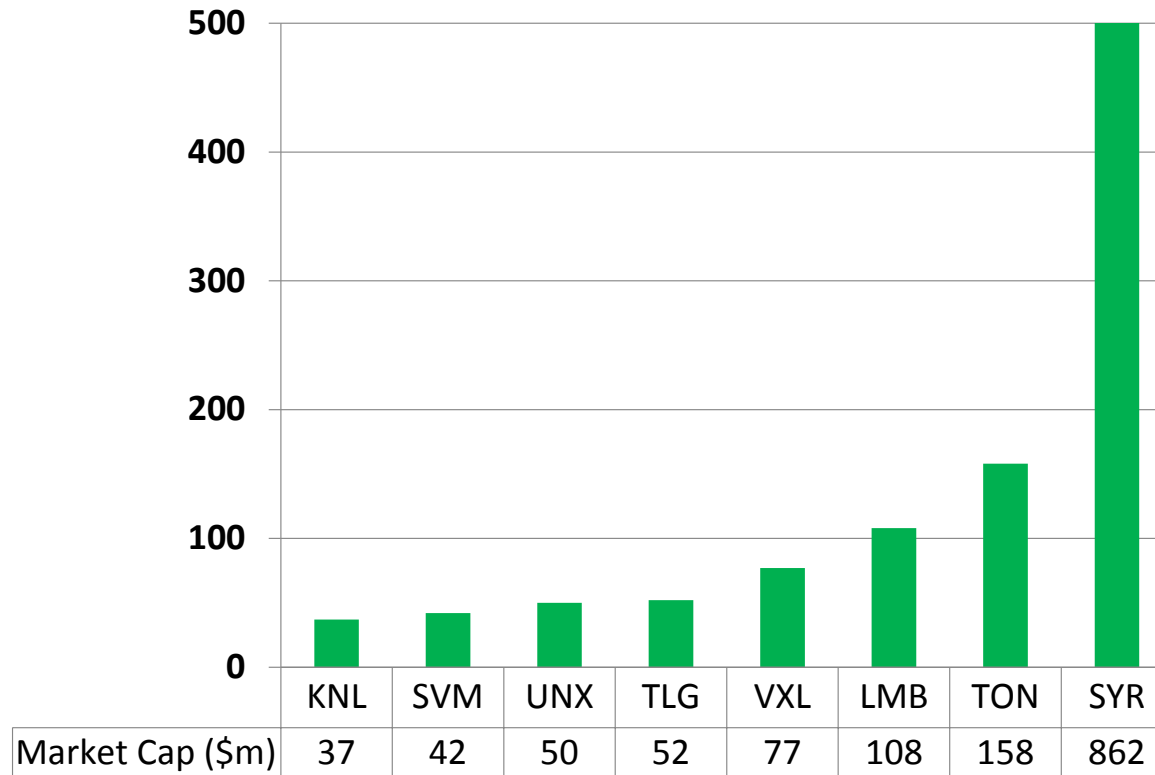
Epanko Deposit has the highest large flake size distribution and the lowest % of fines

Company	Kibaran	Sovereign	Uranex	Talga	Valence	Lambo	Triton	Syrah
Bourse	ASX	ASX	ASX	ASX	ASX	ASX	ASX	ASX
Code	KNL	SVM	UNX	TLG	VXL	LMB	TON	SYR
Market Cap (\$m)	37	42	50	52	77	108	158	862
Graphite type	Flake	Flake		Flake	Flake	Flake	Flake	Flake
Country	Tanzania	Malawi	Tanzania	Sweden	Australia	Australia	Mozambique	Mozambique
Deposit	Epanko	Duwi	Nachu	Nunasvaara	Uley	Mcintosh	Balama and Ancuabe	Balama
Offtake Agreement - Binding	YES	No	No	No	No	YES	No	No
Purity (%)	99.98	99.89	99.4	-	-	98.03	-	99.9
Resource Classification	Inferred*	-	-	Indicated & Inferred	Indicated & Inferred	Indicated & Inferred	Inferred	Measured, Indicated & Inferred
Status (Completed)	Scoping Study	Exploration	Exploration	Exploration	Historic Production	Exploration	Exploration	Scoping Study
Tonnes (Mt)	14.9	-	-	7.6	6.4	7.1	103	1150
Grade (%TGC)	10.5	-	-	24.4	7.1	4.7	5.5	10.2
Flake Sizing Distribution Summary								
Large Flake % (>75 micron)	85%	80%	-	-	60%	-	20%	66%
Fine Flake % (<75 micron)	15%	20%	-	-	40%	-	80%	34%
Reported Sizings - % Passing								
> 300 micron	22%	37%	-	-	N/A	-		
> 180 micron	29%		-	-	N/A	-		
>160 micron			-	-	N/A	-		
>150 micron		27%	-	-	N/A	-	1%	31%
> 106 micron	24%		-	-	N/A	-		
> 75 micron	11%	16%	-	-	60	-	18%	35%
< 75 micron	15%	20%	-	-	40	-	80%	34%

* Kibaran's resource estimate upgrade well underway

PEER COMPARISON - VALUE

Australian listed graphite explorers



Kibaran leads its peer group in both graphite quality and technical aspects, yet has the lowest market capitalisation

POSITIONED FOR GROWTH

Epanko Deposit

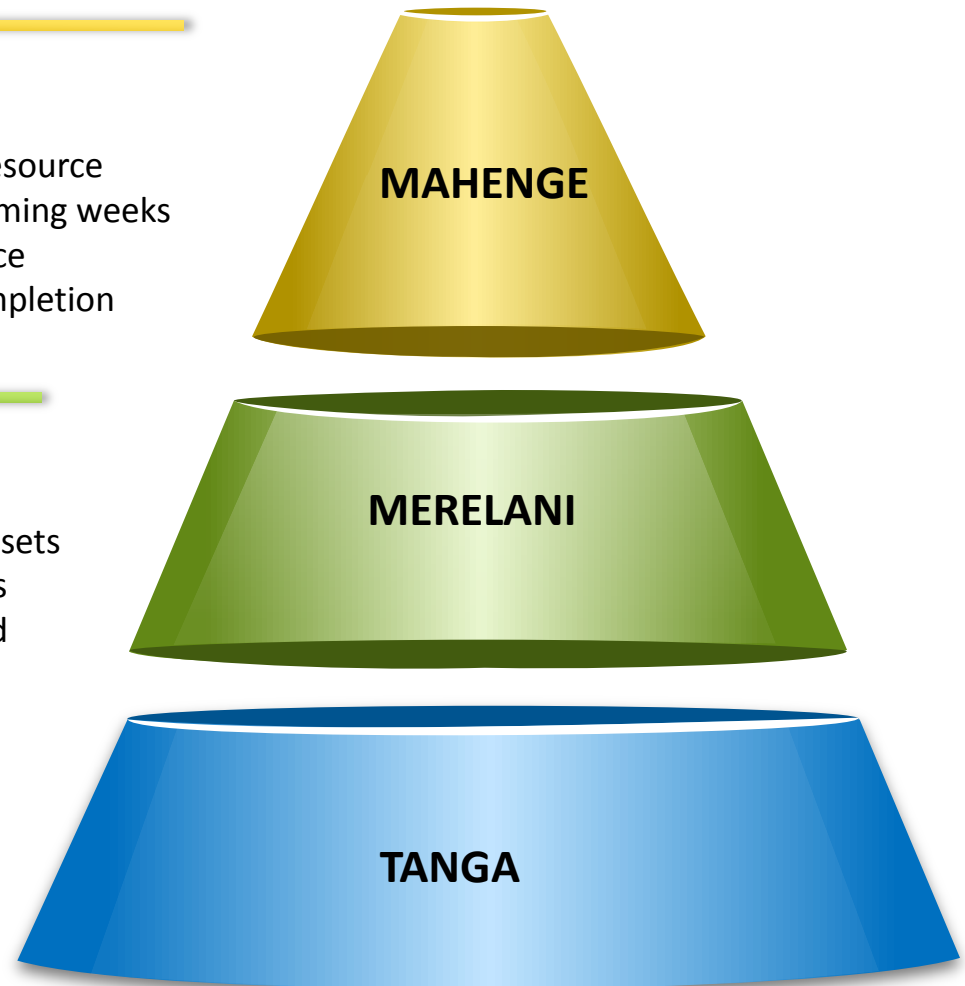
- Upgrade to JORC Inferred Mineral Resource 14.9Mt at 10.5% TGC expected in coming weeks
- Significant upside to increase resource
- Economic Scoping Study nearing completion

Historical Graphite Mine

- Strategic consolidation of graphite assets
- Signed MOU with Richland Resources
- Previously operated 15ktpa plant and historical production

Early Stage Exploration

- Significant exploration potential and infrastructure access



GRAPHITE & GRAPHENE 3D PRINTING

- **Binding strategic alliance** signed with leading Australian 3D printing company - 3D Group
- Investigate application of graphite and graphene in 3D printing
- Established jointly owned **3D Graphtech Industries**
- Goals:
 - Pursue patents
 - Engage in collaborative research partnerships
 - Seek value-add strategic relationships
 - Graphite to be sourced exclusive from Kibaran

DOWNSTREAM EXPOSURE:

- Graphtech provides Kibaran vehicle to participate in 3D printing market
- 3D printing market forecast to grow from US\$3.8 billion to US\$16.2 billion by 2018
- Proven technology with production of car parts, jewellery, dental applications

CONCLUSIONS

- **Epanko has ultra high graphite purity 99.98% C and one of the highest large flake distributions of listed explorers**
- **Only company globally with sales partner and offtake agreement outside of China**
- **Strategically positioned to participate in future applications of graphite and graphene via 3D Graphtec Industries**
- **Future modelled graphite prices provides significant support for commercial viability**
- **Not reliant on future demand increases to commence production**
- **Well-positioned to become a major graphite producer in Tanzania**
 - ✓ Proven management with a history of development, construction and operating experience
 - ✓ Experience in graphite mining, processing and sales
 - ✓ Significant in-country Tanzanian experience
 - ✓ Largest flake distribution amongst peer group
 - ✓ Saleable high grade graphite
- **Development based on current demand with Modular design based on current demand so can be scaled up to meet future demand**

CONTACT DETAILS



Developing high value, premium quality graphite in Tanzania

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