Kibaran Resources (KNL)

Right Place, Right Time

Recommendation: Speculative ***BUY***

September 2014

Grant Craighead |Research Manager
gcraighead@breakawayinvestmentgroup.com

Mark Gordon |Senior Research Analyst
mgordon@breakawayresearch.com

Company Information

ASX Code	**KNL**
Share Price	A$0.34
Ord Shares	120.31m
Options & Performance Rights	31.60m
Market Cap (FD)	**A$51.65m**
Cash (July 15, 2014)	A$3.40m
Total Debt	A$0.00m
Enterprise Value	**A$48.25m**

Directors & Management

Non-Exec Chairman	John Park
Executive Director	Andrew Spinks
Executive Director - Projects	Grant Pierce OAM
Company Secretary	Robert Hodby

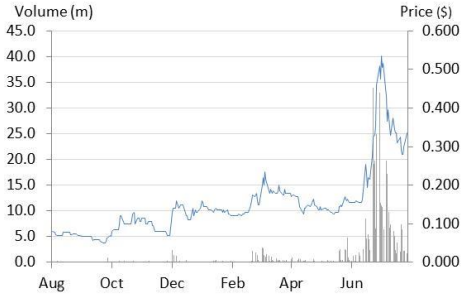
Company Details

Address	338 Hay Street Subiaco WA 6008
Phone	+618 6380 1003
Web	www.kibaranresources.com.au

Top Five Shareholders

Strategic Resource Management Pty Ltd	10.91%
GP Securities Pty Ltd	2.08%
Mrs Jillaine Wills	1.95%
David Hodby Nominees Pty Ltd	1.92%
Idinoc Pty Ltd	1.92%

1 Year Price Chart



Source: IRESS

Key Points

- ***Scoping Study for the Epanko Graphite Deposit in southern Tanzania delivers very robust results, with exceptional upside potential, and a solid basis for fast tracking to development***
- ***Metallurgy indicates potential for a high value, ultra high purity flake graphite product***
- ***Binding offtake agreement with a major European graphite trader reinforces potential and quality of the Epanko project***
- ***Excellent additional potential value at Merelani-Arusha project in northern Tanzania***

The recently completed Scoping Study for the Epanko Graphite Deposit in southern Tanzania has, with an NPV of US$213m, returned excellent results, indicating a long term, robust project with substantial upside through both resource and planned production expansion.

A key to the project is the likely quality of the graphite concentrate – testwork indicates the production of low contaminant, large flake graphite suitable for all applications, including the production of the value added expanded and spherical forms, which should command a premium price. The quality is superior to that of most other ASX-listed graphite hopefuls.

The Company will now move forward to a Feasibility Study, and is looking to fast track a relatively modest initial development with potential for expansion down the track.

The Merelani-Arusha Project in Northern Tanzania is also a potential company-maker in its own right, with significant high grade graphite mineralisation close to a historically operating mine that could become a second producing asset for Kibaran.

Company Overview

Kibaran is an ASX-listed graphite explorer and developer, concentrating efforts in Tanzania. Its key project is the Epanko Graphite Deposit, within the broader Mahenge Project area. Having recently completed a Scoping Study, activities are now concentrated on moving to feasibility and then construction in early 2016.

The second project, Merelani-Arusha, is located adjacent to the previous producing Merelani Graphite Mine, which now concentrates on producing Tanzanite, a rare gem stone. Kibaran are currently in negotiation with the owners of the mine, TanzaniteOne Mining Limited (“TML”) (a wholly owned subsidiary of AIM listed Richland Resources Limited) and Tanzania’s State Mining Corporation (‘STAMICO”) via their STAMICO-TML Joint Venture, with a view to combine the relevant companies’ assets by way of a JV and restarting graphite production.

Investment Thesis

Right Place, Right Time

Right place at the right time

Kibaran Resources Limited (ASX: KNL, "Kibaran" or "the Company") is in the right space at the right time. The Company is focussing activities on quality graphite assets at a time of escalating market interest in the commodity, and considerable potential for demand growth.

East Africa is rapidly emerging as a producing region of high grade/high quality graphite, hosting large deposits of high quality mineralisation.

Growing Demand For Premium Graphite Products

Potential to meet increasing demand for high quality graphite concentrates

The market is seeing the likelihood for significant demand increases for the high value large flake graphite products, which are an integral ingredient in the production of green energy solutions, including Li-ion batteries. Planned growth in battery demand, largely driven by the potential of the electric car market is a key factor in graphite demand growth.

Advanced and Robust Key Project With Considerable Upside Potential

Epanko, the key project, has returned excellent results from a recently upgraded scoping study

A recently updated Scoping Study for its key Epanko deposit, within the Mahenge Project highlights the upside opportunities for Kibaran; with this study including only about 50% of the current JORC-compliant indicated and inferred resource of **22.7Mt @ 9.8% TGC (2.23Mt contained TGC).**

The study indicates a robust project, with scope for resource and production expansion

The study is predicated on a base case 27 year, 420,000tpa low strip ratio mining operation, producing 40,000tpa of high quality concentrate, and returns a robust pre-tax, pre-financing NPV of US$213 million, with an estimated US$56 million capital cost.

The resource, which is open along strike and at depth, is the third largest of any ASX listed company, has one of the higher grades, and produces a premium quality concentrate. Importantly, the resource only covers 20% of prospective stratigraphy within the project, providing considerable room for further upside.

Excellent Metallurgy – Premium Product – Expandable

A key strength of Kibaran is the graphite quality at Epanko

A key strength of Kibaran is the graphite quality at Epanko. Metallurgical testwork indicates flotation concentrates average 94% fixed carbon, with around 50% having flake sizes of large (>180µm) or better. Testwork has also shown that single stage purification will increase the graphite quality to +99.94% fixed carbon, with no impurities.

There is the potential to produce a premium product that can be used in any application

The result of this is that Kibaran will potentially produce a premium product that can be used in any application, and is also suitable for producing expanded and spherical graphite. Spherical graphite is used in the Li-ion battery market, which is seen to be one of the key drivers for future graphite demand.

Offtake Agreement in Place

Kibaran has a binding offtake agreement in place with a major European graphite trader

In December 2013 Kibaran were first off the block with regards to ASX listed companies in announcing a binding off-take and partnership agreement. The agreement is for 10,000 tonnes of concentrate per year over an initial five year period, with an option for a further five years, using a market pricing mechanism – the term of the agreement gives confidence in the outlook for premium products.

Importantly, the agreement is with a major European Graphite Trader ("EGT"), looking

for alternate supply sources to decrease reliance on current sources in which it sees future risk.

The signing followed an intensive due diligence process, and significantly de-risks the Epanko project

The signing of the agreement, which followed a comprehensive due diligence process, gives confidence in the potential of Kibaran, and also provides a foothold into the sophisticated European graphite market. Having an off-take agreement in place is also a vital key to sourcing attractive debt funding for project development, and significantly de-risks the project.

Kibaran is currently negotiating with other potential offtake partners – our view is that Kibaran will need to secure at least 20,000tpa of offtake to proceed to development.

Engineer Appointed

GR Engineering appointed to undertake feasibility

GR Engineering Services Limited ("GRES", ASX: GNG) has been appointed to undertake the Feasibility and Project Evaluation Study for Epanko. This includes exclusivity covering graphite projects in the Southern African Development Community ("SADC").

Second Project Could Be Even Better!

The Merelani-Arusha Project is in a world-class graphite province

The Merelani-Arusha Project, located in northern Tanzania is located near the historical Merelani Tanzanite-Graphite Mine, in a world class graphite province. Kibaran have an exploration target of between 60Mt and 200Mt grading at between 9% and 11% TGC for these tenements in broad zones of graphitic schists.

Kibaran is combining assets with Richlands, which owns the Merelani Tanzanite Mine - a past graphite producer, with the plant still in place.

Negotiations are currently underway with TML and STAMICO via their STAMICO-TML Joint Venture, to consolidate their respective graphite mineral rights through a Joint Venture.

This provides significant potential for value add through a second production stream

TML's package includes infrastructure originally constructed for a 15,000tpa graphite concentrate processing plant (with 6,776 tonnes of 97-98% TGC concentrate being produced from 1995 to 1998 from an 8.3% TGC feed). The plant is currently being partly used for Tanzanite production. Following a consolidation of assets it is anticipated to recommence graphite production in a new plant leveraging on the availability of the existing infrastructure from the combined assets.

This gives Kibaran a second possible production stream, and the potential for significant value add.

Option Value in Nickel

Looking at options to realise value from the Kagera Nickel Project

Kibaran is also investigating opportunities to realise the value of the highly prospective Kagara Nickel Project, located just 10km north of Xstrata Nickel's world class Kabanga deposit in western Tanzania. This is considered prime nickel exploration ground, however is secondary to Kibaran's strategy.

Well-Planned Strategy and Experienced Personnel

Kibaran has a measured and well-planned strategy to fast-track development. Activities have been concentrated on Epanko as the first production asset, with excellent progress being made in the two years since acquisition of the Tanzanian graphite assets.

The Company has a measured and well-planned development strategy, with personnel who have the experience to successfully implement the strategy

The Company has recently announced a Board re-structure, with the Board and Management having extensive experience in the resources sector and operating in Eastern Africa, including John Park, who was part of the team that developed the Merelani Graphite Mine, and Grant Pierce, resident in Tanzania who was involved, amongst others, in the development of Resolute's Golden Pride Gold Mine in Tanzania.

Proven Mining Destination

Tanzania is a stable democracy, and a well-proven mining destination

Tanzania is a proven mining destination, and is currently Africa's 3rd largest gold producer with a well proven regulatory and legal mining framework, with mining tenure largely based on Australian examples.

The country, which has largely enjoyed political stability since independence in 1961, has well developed infrastructure, including ports, rail and road.

Peers

Kibaran is one of a number of ASX-listed graphite companies

Kibaran is one of a number of ASX graphite developers, as presented below. What is evident is a gap in enterprise value from the top five companies to the second group, (which includes Kibaran), despite the relative advancement and grade and quality of Kibaran's Epanko Project.

Kibaran Resources Peer Group

Company	EV (FD) ($Am)[1]	Project	Global JORC Resources	Stage/Quality[2]
Syrah Resources	$815	Balama Graphite-Vanadium Project, Mozambique	1,248Mt @ 10.7% TGC 133Mt	Studies for up to a 220,000tpa operation, testwork indicates a flotation concentrate up to 97% TGC, with 41% medium flake or larger.
Valence Industries	$159	Uley, South Australia	6.47Mt @ 7.1% TGC 0.46Mt	Currently producing from stockpiles, con grade >95%
Triton Minerals	$121	Balama, Mozambique	103Mt @ 5.52% TGC 5.69Mt	Projects immediately to north and south of Syrah Resources. Potential for a +94% con, no sizing data as yet
Lamboo Resources	$106	McIntosh, WA, South Korea	7.71Mt @4.7% TGC 0.36Mt	Scoping at McIntosh, drilling Sth Korea. Medium to coarse flake, testwork to date >90% TGC concentrates, with 28% of con medium flake or larger
Uranex	$94	Nachu, SE Tanzania	Exploration	4-9% TGC, initial work indicates potential to produce a 94% concentrate, with 50% of con medium flake or larger
Talga Resources	$57	Various, Sweden	11.9Mt @ 18.2% TGC 2.16Mt Includes: 7.6Mt @ 24.44% TGC at Nunasvaara	Currently drilling. Has five project areas in northern Sweden, various sizes up to jumbo, no concentrate grade data
Kibaran	$48	Mahenge (Epanko), Arusha-Merelani, Tanzania	22.7Mt @ 9.83% TGC 2.23Mt	Scoping at Epanko in southern Tanzania, MoU for asset consolidation at Merelani in north. Medium to coarse flake, >94% TGC, 74% medium or larger
Sovereign Metals	$36	Central Malawi	Exploration	Exploration on Central Malawi Graphite Project. Preliminary testwork indicates >64% of con medium flake or larger
Bora Bora	$19	Matale, Paragoda, Sri Lanka	Exploration	Exploration around historic vein style workings. Expected grades >95% TGC
Lincoln Minerals	$12	Various, Eyre Peninsula SA	3.23Mt @ 11.2% TGC 0.36Mt	Con grade to 94-97% 3%-24% medium flake or larger
Archer Exploration	$11	Campoona, Eyre Peninsula, SA	8.55Mt @ 9.01% TGC 0.77Mt	Flotation testwork has produced ultrafine to fine flake >94% TGC concentrate
Green Rock Energy	$10	Mahenge, Southern Tanzania	Exploration	Recently acquired exploration tenements adjacent to Kibaran

Source: IRESS, Company reports, values as of close of business, Monday September 1, 2014

1. *Here the enterprise value is the enterprise value of the company as a whole and not of the graphite projects alone.*
2. *Quality data from a number of projects is from preliminary testwork only*

Risks

There are a number of risks involved in an investment in KNL

As in any resources stock there are a number of risks involved, with what we consider key risks discussed below. These largely relate to Epanko, being the focus of activities.

We see timely permitting, and then funding of the Epanko project as key risks

- **Permitting**– We see the key risk now facing Kibaran to be permitting of Epanko, which is a key risk for any resources project. In our view the main consideration here will be in the timeframe, rather than on whether the project will be permitted or not. Permitting timeframes do commonly blow out. The risk is in part mitigated through Tanzania having a proven legal framework for mining projects, and the relatively low sovereign risk in Tanzania

- **Funding** – Financing projects is hard in the current investment environment, however having an offtake agreement in place should make this considerably easier. We however believe that Kibaran will need to secure at least another 10,000tpa of offtake to obtain debt funding to develop Epanko. Scoping study results point towards a robust project, with the NPV being a multiple of initial capex, a positive attribute for attracting debt.

Should Epanko move to development, risks are somewhat mitigated by the well proven, "off the shelf" technology

- **Development** – There are a number of risks involved in taking a project from feasibility through development to operation. These include cost blowouts and plants not performing as designed. Given that graphite flotation is a simple, well understood technology, and generally uses off the shelf technology does help mitigate these risks.

Metallurgical variability needs to be ascertained

- **Metallurgy** – Although results to date have been very positive there is still some risk in metallurgy with regards to variability within the mineralisation. To date samples have been taken from only one location, however metallurgical drilling is now commencing to test variability amongst other factors

The high grade and quality of the Epanko resource helps mitigate market risk

- **Price and Market Risk** – This is a key risk for any resources project, and one which companyies have little or no control over. In the case of Epanko, this is partially mitigated by the grades and potential quality of the concentrate, which should be in demand and achieve a premium price, thus reducing project sensitivity to price changes. Graphite prices have been historically volatile, although current forecasts point to increases in the price of premium products.

Project and Activities Review

Introduction

KNL's portfolio includes three graphite and one nickel project in Tanzania – all 100% owned

Kibaran's Projects include three graphite and one nickel project, all 100% held and located in Tanzania.

Project Location Map

Source: Kibaran

Activities are focussed on the Epanko Deposit with the Mahenge Graphite Project

Field and development activities are currently focussed on Mahenge (in particular the Epanko Deposit), with negotiations for a consolidation of the Merelani-Arusha assets with those of the STAMICO-TML JV ongoing.

Tanga, which only recently been granted, is an early stage exploration play, with the Company looking at realising value from the Kagera Nickel Project.

Mahenge Graphite Project (KNL 100%)

Introduction and Background

The Mahenge Project is readily accessible by tar and formed dirt road

The Mahenge Graphite Project is located approximately 470km SW by road from Dar-es-Salaam in southern Tanzania, and approximately 120km south of the railway at Ifakara. Access is by 340km of tar and then 130km of formed dirt road. Infrastructure improvements are ongoing and evidenced by the current construction of a bridge over the Kilombero River near Ifakara, replacing the current ferry, and the bitumenisation of the road through to Mahenge from Ifakara.

The project comprises one granted Prospecting Licence (PL 8204/2012) totalling 32.12km^2, held by the fully owned subsidiary TanzGraphite (TZ) Ltd.

Historic work in the district included comprehensive studies carried out by G. M. Stockley (of the then Tanganyikan Department of Geological Survey), reported in 1945, that identified the potential for commercial grade graphite at the Ndololo Prospect, located on the nose of the syncline on the Mahenge scarp to the north of Kibaran's tenements.

Strategy

A Scoping Study has recently been completed on the key Epanko Deposit, and the Company is now moving into a Feasibility Study to further investigate an initial 27 year, 420,000tpa ROM, 40,000tpa concentrate production operation in its plan to fast track production at Epanko.

Work for a Feasibility Study is due to commence, following a robust Scoping Study

The Company is aiming at starting construction in late 2015/early 2016, however this is largely dependent on environmental permitting and grant of a Mining Lease (as discussed later).

Following initial operations, there is good potential for future expansion of operations to upwards of 100,000tpa of concentrate.

Off-take Agreement

A key factor has been the signing of a 10,000tpa offtake agreement with a major European group

The signing of the 10,000tpa off-take agreement with EGT significantly de-risks Epanko, and provides independent endorsement of the quality of the project. EGT's attention was drawn to the project during a global search for alternative sources of large flake graphite – EGT considered there to be considerable future threats to their traditional sources.

EGT carried out comprehensive due diligence, including metallurgical testwork before signing the binding agreement in late 2013.

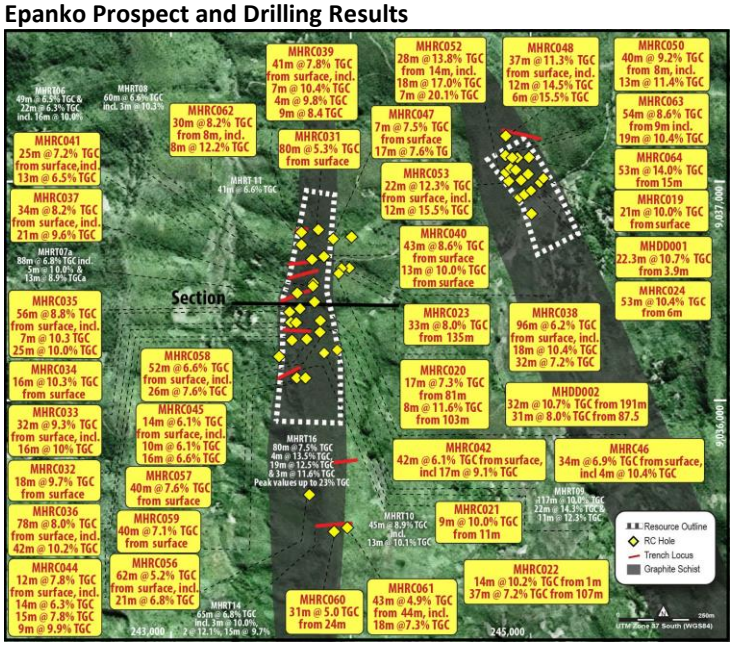
Negotiations are being carried out with other potential off-take partners – additional off-take agreements will be required for an initial 40,000tpa operation.

Geology and Mineralisation

The Mahenge graphitic schist is part of a basement package of Neoproterozoic high grade metamorphics, including mafic and felsic granulite, gneiss and migmatite interlayered with amphibolites, marble, quartzite and mylonite.

Epanko Prospect and Drilling Results

Mineralisation occurs as a number of zones of graphitic schist in a Neoproterozoic basement package



Source: Kibaran Resources

The units in the project area are broadly interpreted as forming a moderately south plunging (20° to 35°) tight to isoclinal fold, with the hinge zone outcropping on the scarp in the vicinity of the previously explored Ndololo Prospect to the north of Kibaran's tenements.

Stockley (1945) noted a sequence of:

- Coarse crystalline limestone (marble)
- Biotite and hornblende gneisses, the latter subordinate
- Graphite-schist – 65 feet (~22m) thick
- Biotite and hornblende gneisses, the former subordinate.

Mineralisation at Epanko is hosted within a quartz-feldspar-carbonite-graphite schist within the overall metamorphic package.

Up to 117m thickness of mineralisation has been identified in trenches at Epanko

The Epanko Deposit, which comprises two zones (Western and Eastern), is interpreted as being located on the western limb of the fold south of the hinge, with work identifying up to 117m thickness of mineralisation in trenches. The Western Zone is interpreted as dipping steeply to the east, with the eastern zone containing two lenses, one shallowly dipping (30° west) and one sub-vertical.

Resources and Reserves

Resources at Epanko are given in the table below, and were estimated by the independent consulting group, CSA Global. The resources used results from 35 RC holes, three diamond holes and eleven trenches cut across the strike of both zones.

Mineralisation was calculated along a strike length of 1,500 for the Western zone and 350m for the Eastern zone.

The current resource of 22.7Mt @ 9.8% TGC has significant room for expansion

Epanko Deposit Resources – 8% TGC Cutoff

JORC Classification	Tonnage (Mt)	Grade (% TGC)	Contained Graphite (Mt)
Indicated	12.8	10	1.28
Inferred	9.9	9.6	0.94
Total	22.7	9.8	2.22

Source: Kibaran Resources

Lowering the cut-off grade from 8% to 5% increases resources to 80Mt @ 7.5% TGC

Using a cut-off grade of 5% TGC, the resource is significantly larger at 80Mt @ 7.5% TGC, for 6.05Mt of contained graphite, indicating substantial amounts of lower grade mineralisation. The resource only covers about 20% of the prospective stratigraphy.

Metallurgy

A key aspect of Epanko are the excellent results from metallurgical testwork to date.

Epanko Flotation Results and Purification Results.

Size Classification	Micron	Flake Distribution %	Concentrate Grade TGC %	Purification Grade %
Jumbo	>500µm	8.4	97.6%	99.94%
Extra Large	>300µm	13.2	95.4%	99.98%
Large	>180µm	28.6	93.8%	99.95%
Medium	>106µm	23.6	93.6%	99.91%
Small	>75µm	10.4	91.0%	99.85%
Fine	<75µm	15.8	87.5%	99.72%
	Total (with fines)	**100%**	**93.0%**	
	Total (without fines)	**84.2%**	**94.0%**	

Source: Kibaran Resources

Epanko has returned excellent metallurgical results to date, indicating the potential to produce a large size, high purity flake product

Initial flotation testwork was commissioned by Kibaran's off-take partner, EGT, as part of their due diligence process for the agreement. This work was carried out by NGS Naturgraphit GmbH ("NGS"). This sample, from trench MHRT09 (117m @ 10% TGC) was crushed to less than 1mm and flotation tested, with results reported on June 5, 2013.

Subsequent flotation and purification (using a single stage HF stage) was carried out by EGT, with results reported on July 7, 2014.

The results of this testwork show:

- Simple well proven rougher and cleaner flotation results in a high 96% recovery of TGC to concentrate
- Flotation concentrate grades at 93% are high and commercially viable
- A high proportion of the concentrate is high value large flake size and greater
- Only a minor proportion (15.8%) is in the potentially unsaleable <75µm fraction
- The graphite is suitable for both "expanded" and "spherical" applications
- A simple single stage purification process results in a premium grade product, with extremely low impurities.

The product should be suitable for any application, be highly marketable, and command high basket prices

The outcome of this is that the Epanko graphite has the potential to be suitable for any application, and with the high proportion of large flake sizes and high purity should produce a premium product and command high basket prices based on its size distribution.

Bench scale flotation testwork is currently being undertaken by Mintek in South Africa, with results not yet being released.

Scoping Study

The recently revised Scoping Study has returned very robust results, including a pre-tax, pre-financing NPV of US$213 million for an initial capex of $56 million

A revised Scoping Study, based on the upgraded indicated mineral resource has recently been completed by Intermine Engineering Consultants on behalf of Kibaran. A summary of inputs and results is shown in the table below.

Epanko Scoping Study Parameters and Results

Item	Base Case	Comments
In-Pit Resource	10.8Mt @ 9.6% TGC	Covers only 50% of existing JORC-compliant resources, and only 20% of prospective stratigraphy in the Epanko prospect area
Plant Throughput	420,000tpa	Campaign mining during dry season
Mining Factors	5% dilution, 95% recovery	Waste/diluting material contains around 6% TGC
Plant Recovery	96%	
Concentrate Production	40,000tpa @ 94% TGC	Potential to expand to at least 100,000tpa
Transport	Trucking to Dar-es-Salaam	The potential to use the railway at Ifakara (120km away) will be investigated in the future
Concentrate Price - LOM	US$1,258/t	Based on current pricing and flake size distribution from test work. Forecast prices significantly increase potential cashflows
Opex/t Ore	$45/t	Our analysis suggests this is reasonable
Opex/t Concentrate	US$489/t	Includes 3% ad valorem Government royalty
Mine Life	27 yrs	
Pre-Production Capital	US$56m	Our analysis suggests this is reasonable
Pre-Production Capital	US$52/t con	Our calculation – initial capital/LOM concentrate production
LOM Strip Ratio	2.2:1	<1:1 in the first 10 years
Discount Rate	10%	
Net Present Value	US$213m	Base case – considerable upside with increased product prices, expanded operation
Operating Cashflow	~$31m per annum	Based on base case production figures
Basis		Pre-tax, pre-financing

Source: Kibaran Resources, Breakaway analysis

Our high level analysis of the Company's figures indicates that they are reasonable

We have carried out a high-level analysis of these figures and in our view they are reasonable and realistic. There is considerable upside given the scope to increase the resource and production rate.

Infrastructure

The area, as mentioned, is readily accessible by road with this now being upgraded. Grid power is available, with a line 3km from the site, however the Company is looking at power options for the proposed operation. It is expected that the current mains power will need to be augmented and/or backed up by diesel generation.

Environmental and Social Impact Assessment

The key constraint in the development timeline is the environmental assessment and grant of a Mining Lease – the Company is progressing the required steps for these approvals

The key constraint in the development timeline is completion of the Environmental and Social Impact Assessment ("ESIA"), followed by Mining Lease application and grant.

Environmental and social baseline studies were commenced in January 2014, with these expected to be completed, and all going well, grant of the environmental certificate by the National Environmental Management Council ("NEMC") in late 2014/early 2015.

The receipt of the certificate is a pre-requisite for the Mining Lease application.

Ongoing Activities

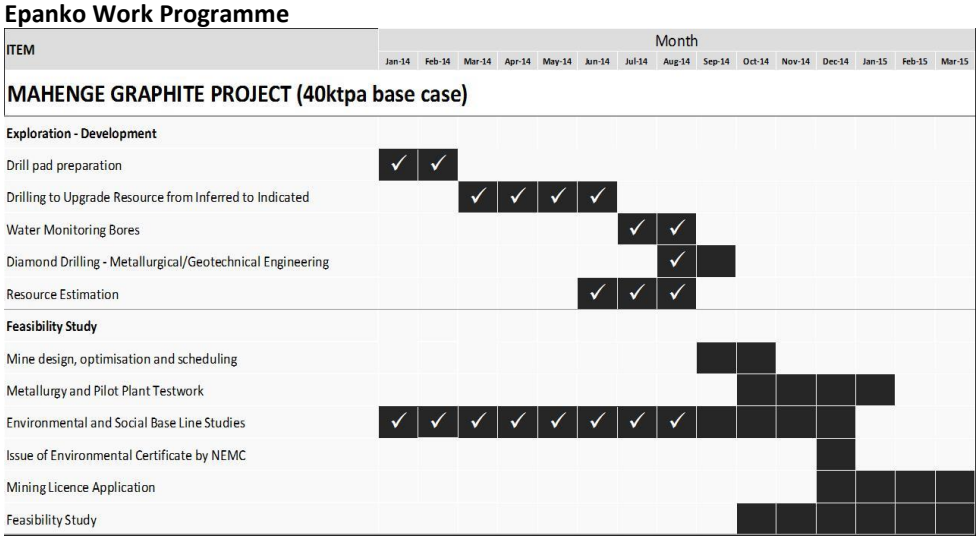
Site activities are now concentrated on commencing the Feasibility Study and continuing the environmental assessment activities

Completed and ongoing activities at Mahenge are shown in the figure. Site activities are now concentrated on commencing the Feasibility Study, and continuing the vital environmental and social baseline studies. In addition diamond drilling is required for further metallurgical testwork (including variability studies) and geotechnical assessment to be used in mine planning.

GRES has been appointed to undertake the Feasibility and Project Evaluation study for Epanko. The agreement includes an exclusivity condition, whereby GRES will, for a period of five years, provide their services in respect of graphite related projects within the SADC exclusively to Kibaran. This will help protect Kibaran's intellectual property in relation to their projects.

In addition GRES will accept up to 50% of their payment in shares (up to a maximum of $250,000), with the share value to be assessed at a 10% discount to market price.

Epanko Work Programme



Source: Kibaran Resources

Merelani Graphite Project (KNL 100%)

Introduction and Background

Merelani, Kibaran's second graphite project, is located in northern Tanzania

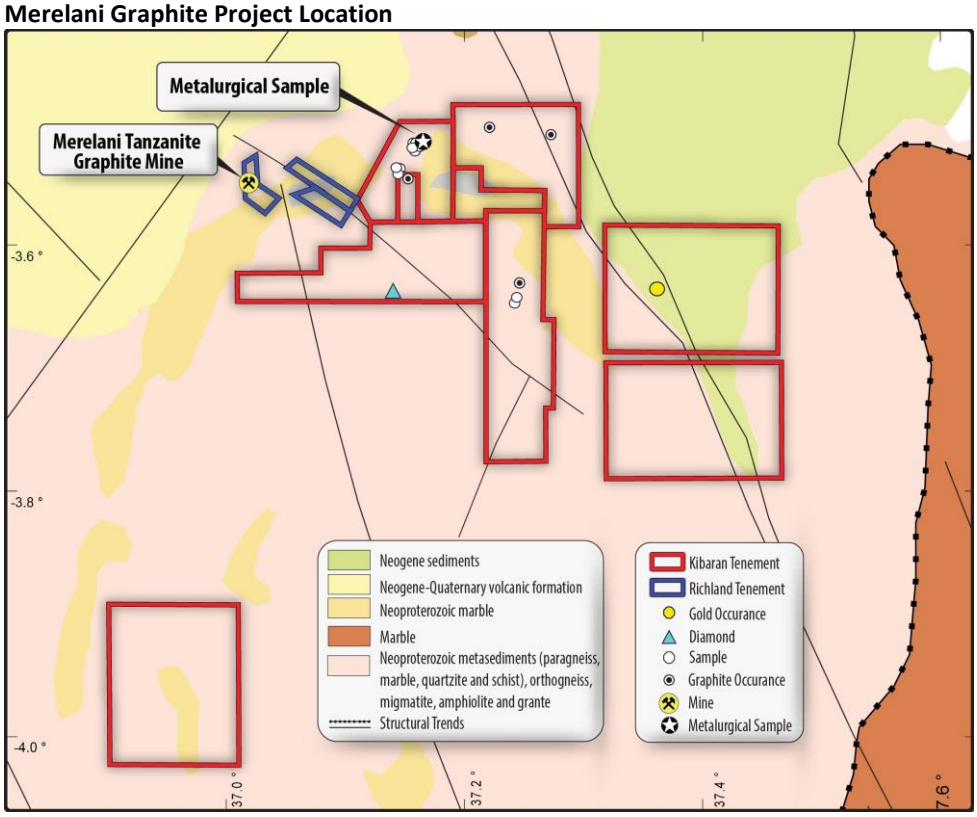
Kibaran's second key project is the Merelani Graphite Project located in northern Tanzania, approximately 55km SE of the regional centre of Arusha. The project, which comprises seven tenements for 973.4km^2, is located immediately to the east of STAMICO-TML Joint Venture's Merelani Tanzanite Mine, operated under a 50:50 profit share arrangement between the two parties.

Kibaran is looking at combining the assets with those of Richland, owner of the historical Merelani Graphite Mine

In February 2014 Kibaran announced that it had signed a non-binding MoU with Richland with a view to forming a joint venture to consolidate the assets. Negotiations to finalise the agreement are ongoing.

Merelani Graphite Project Location

Richlands operations are located immediately to the west of Kibaran's tenements



Source: Kibaran Resources

History

The Merelani Graphite Mine then owned by Graphtan Limited, a subsidiary of London-based private company SAMAX Limited, commenced operations in 1995, producing 6,776 tonnes of graphite concentrate. Operations were planned on a 40 year, 15,000tpa high purity (97-98%) concentrate production, with a feed grade of 8.3% TGC.

Merelani produced 6,776t of graphite concentrate from 1995 to 1998 – the site now produces Tanzanite, a rare gem associated with the graphitic schists

Graphite production ceased in 1997 due to prevailing low prices, with the last stockpiled concentrate being delivered, through an offtake agreement with US based Harbison-Walker Refractories Limited, in 1998.

The operation was then modified to produce Tanzanite (a rare gemstone) only; however the original graphite infrastructure is still in place.

Richland acquired the operations in 2004.

Geology and Mineralisation

Graphite mineralisation is hosted as a number of lenses in Neoproterozoic high grade metamorphics, with the main graphite unit being a quartz-feldspar-kyanite-graphite

schist, in zones up to 200m wide. A strike length of 1.5km has been mapped to date, however geological interpretations indicate the potential of up to 7-7.5km strike of prospective stratigraphy.

Mineralisation comprises a graphitic schist, with the potential for up to 7.5km of strike length within the Company's tenements

The presence of graphite mineralisation within the tenements was confirmed on a site visit by the author to the project (as well as to Mahenge) in 2012, where broad zones of mineralisation were noted.

High Grade Graphitic Schist, Merelani

Source: Mark Gordon

Resources and Reserves

There is an exploration target of between 60 and 200Mt at Merelani

No JORC-compliant resource has been calculated for the project; however an exploration target of between 60Mt and 200Mt grading at between 9% and 12% TGC has been published for these tenements.

MoU and Proposed Joint Venture

Kibaran is currently negotiating a JV with Richland and STAMICO to combine their respective assets, which gives the potential for a second production source for Kibaran

The purpose of the proposed joint venture is to combine the graphite mineral rights and assets of Kibaran and the STAMICO-TML Joint Venture (which includes the infrastructure of the 15,000tpa graphite plant), with a view to recommencing graphite production from Merelani, thus giving Kibaran a second source of graphite in Tanzania and additional scope to expand construction.

Due diligence has included site visits by engineering teams. The presence of John Park on the Board is also key – he was involved in the development and operation of the mine when working as Executive Director at SAMAX and Chairman of Graphtan.

Negotiations are ongoing between Kibaran, TML and STAMICO to finalise the Joint Venture. We note however that there have been two extensions to the time to complete since the MoU was signed in February 2014.

Ongoing Activities

Future activities at Mereleani will largely depend upon the outcome of the current negotiations, however Kibaran is planning to carry out geological mapping and an RC drilling programme to define a maiden resource on its own Merelani tenements.

Tanga Graphite Project (KNL 100%)

The Tanga licence, PL 9537/2014, was granted in early 2014, with the area being identified as being prospective for graphite mineralisation following evaluation of a

The Tanga graphite licence has recently been granted

number of graphite occurrences by Kibaran in 2011. The licence, of 84km^2 is located 120km SW of Tanga Port.

The Licence is still at the early exploration stage, with reconnaissance fieldwork planned to commence in late 2014.

Kagera Nickel Project (KNL 100%)

The Kagera Nickel Project in western Tanzania is highly prospective, however due to the focus on graphite, is a secondary focus

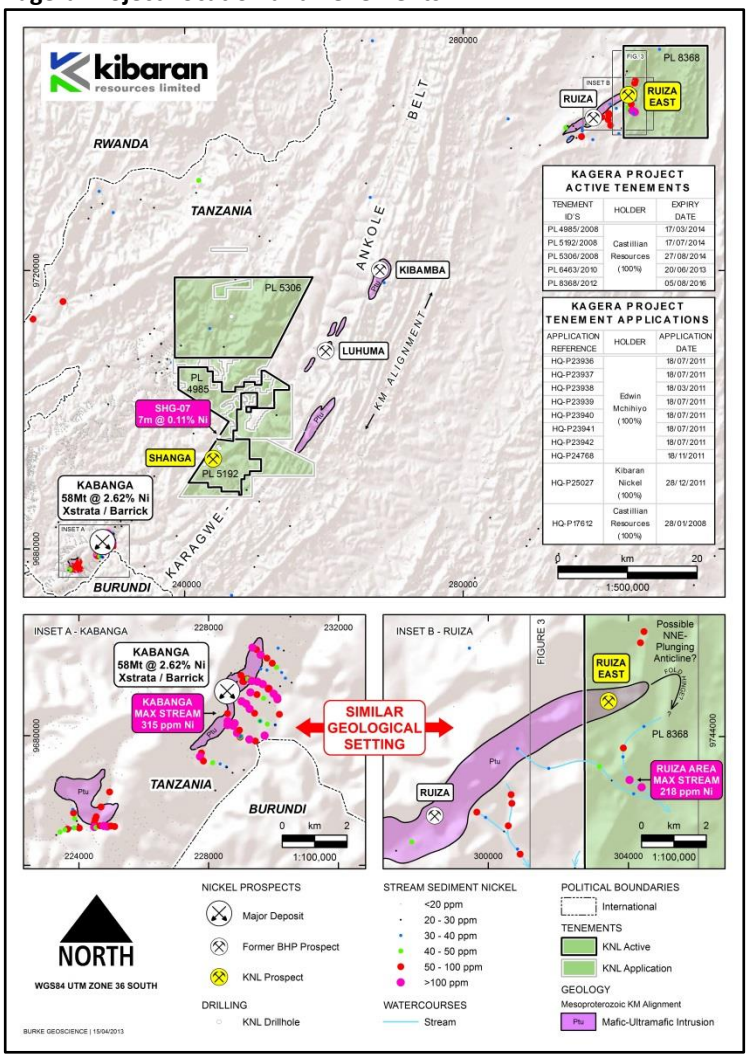
Although being a secondary focus for Kibaran, the Kagera project is in a highly prospective nickel area, located 10km NNE of Xstrata Nickel's world class Kabanga Nickel deposit (68Mt @ 2.62% Ni, and currently in the feasibility stage).

The project is located near Xstrata Nickel's 68Mt Kabanga Nickel deposit – one of the world's largest undeveloped nickel projects

The tenement covers 864km^2, and following a review of exploration data the Company continues to maintain the tenements in good standing and is investigating options for realising the value of these assets.

Kibaran is investigating options for realising value from Kagera

Kagera Project Location and Tenements



Source: Kibaran Resources

3D Printing Research

A 50:50 owned entity has been formed to look at the use of graphite in 3D printing – the entity has signed an initial agreement with the CSIRO

Kibaran has formed a 50:50 owned entity, 3D Graphtech Industries Pty. Ltd. ("Graphtech") with 3D Group Pty. Ltd to fund research and development ("R&D") to investigate the use of graphite and graphene in 3D printing.

Graphtech has entered into an initial 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.

Breakaway's View

Kibaran has made impressive progress on its graphite assets, particularly Epanko

Kibaran has made impressive progress since acquiring its graphite assets in 2012. These have proven to be a timely acquistion – results to date from Epanko indicate a robust and high grade deposit with the potential to produce a premium highly marketable product in a period of growing demand for graphite – this in our view are the key strengths of the project. The planned operation also has significant upside.

We consider the resource as it stands to be more than adequate for planned purpose – with graphite resource size is generally not a major consideration given the relatively small size of the market, and even if the most optimistic demand forecasts come to fruition it is still a relatively small market compared to a number of other mineral commodities.

The potential for a larger resource (which there is at Epanko) will however give the operator the luxury of being able to selectively mine those areas that have the better quality graphite, with quality being the key discriminator of projects, and the key to attracting customers and maximising revenue.

The offtake agreement with EGT is a key step

The signing of the binding off-take agreement is an important step, and a vote of confidence in the Epanko deposit (in particular its quality) – this was done after detailed due diligence by EGT, which included metallurgical testwork. One key aspect of the agreement is that it significantly de-risks any future development of Epanko, including sourcing debt funding on reasonable terms. However we do see the need for additional off-take agreements to be put in place to allow for development to proceed – our view is that at least 50% of planned production should be covered.

The key now is advancing the permitting process

We see the key steps now as advancing the permitting process, including completion of the ESIA and grant of the Mining Lease – our view is that these form the critical path, along with the need for additional offtake agreements, for the potential development of the project, with Epanko being one of the most advanced graphite projects held by ASX-listed companies.

We see considerable upside at Merelani

The Meralani Project provides considerable upside, with the opportunity, should the current negotiations conclude successfully, to become, in the short to medium term, a second producer for Kibaran. Kibaran's tenements have the prospectivity to host a large, high grade resource.

The writer, in a different capacity, visited both projects in 2012, and was impressed by their potential. That view hasn't changed.

We note the large gap in value between Kibaran and the top group of ASX-listed graphite explorers, despite the relative advancement of Kibaran's projects and indicative concentrate quality – in our view this indicates that Kibaran is undervalued.

*We rate Kibaran as a **SPECULATIVE BUY***

Given the above we rate Kibaran as a **SPECULATIVE BUY**. Short term pricing catalysts will be successful completion of the Richland negotiations and the potential signing of new offtake agreements. In the medium to longer term we see material progress on both projects as price movers, including completion of permitting at Epanko.

Graphite and the Market

What is Graphite and What is it Used For?

Graphite, a form of carbon, is an excellent conductor of heat and electricity, and has the highest strength and stiffness of any natural material

Graphite (chemical symbol 'C') was named by Abraham Gottlob Werner in 1789 from ancient Greek "to write/draw". The key properties of graphite include; an excellent conductor of heat and electricity, the highest natural strength and stiffness of any material, maintaining its strength and stability to temperatures in excess of 3,600°C and high resistance to chemical attack. It is also one of the lightest of all reinforcing agents and has high natural lubricating properties.

If you took a very close look at a graphite pencil lead you will see layer upon layer of carbon atoms, multiple two dimensional planes that are loosely bonded to their neighbours. The reason graphite works so well as a writing material, and industrial lubricant, is because the layers of atoms slip easily over one another. The layered structure facilitates easy cleavage along the planes. Each of these single layers of atoms is known as graphene. Separating the individual layers of graphite sets the electrons free and allows carbon to behave differently.

Graphite is generally found in three forms, amorphous, flake and vein. In all cases graphite generally forms platy, hexagonal crystals, giving graphite its flaky appearance.

Amorphous Graphite

Amorphous graphite is the lowest quality material, and occurs generally as microcrystalline (<75µm crystal size) masses. It is commonly formed by the metamorphism of coal or carbon rich rocks, and is the most abundant form of graphite. Graphite commonly occurs as seams, with grades commonly in the range of 30-90% Cg, and purities in the order of 60-90% C.

Flake Graphite

Major graphite forms are amorphous, flake and vein

Flake is the most abundant crystalline form of graphite, and is generally associated with metamorphosed graphitic and carbonaceous sediments. Generally grades are in the range of 1-12% Cg, however higher grades are also found in a number of cases. Graphite purity is commonly determined by flake size, and is generally in the range of 85-98% carbon

Vein Graphite

This style of mineralisation is uncommon, and poorly understood. The best known (and only mined) examples are in Sri Lanka, which are high grade (90% Cg) and high purity (+98% carbon) deposits. Flake size can be variable in this style, as can grade and purity.

Graphite Demand and Production

Graphite pricing is determined by flake size and purity

Traditional demand for graphite is largely tied to the steel industry where it is used as a refractory, including as liners for ladles and crucibles, and as a component in bricks which line furnaces. The second major use in the steel industry is as an additive in steel, where it is used to increase the carbon content. In the automotive industry it is largely used in brake linings, gaskets (for which expanded graphite is an important component) and clutch materials. Graphite also has a numerous other uses in batteries (including automotive), lubricants, fire retardants, and reinforcements in plastics.

Other potential uses currently being researched include the use of graphite and graphene in 3D printing, and a number of other potential uses for graphene.

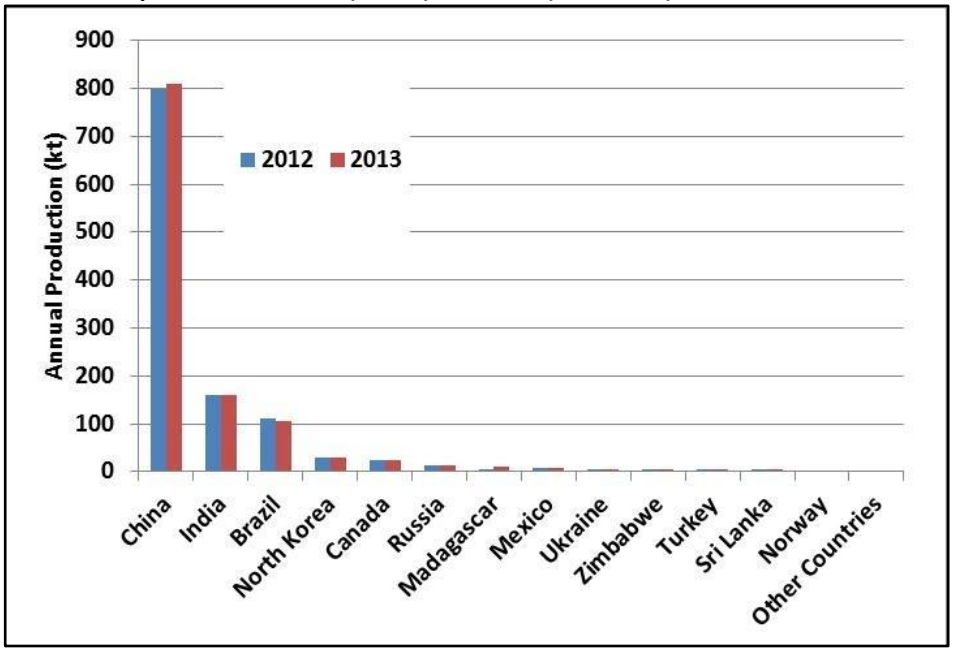
The current market is dominated by refractories, which comprise ~40% of the total market, with metallurgical applications next at ~25%. Batteries currently comprise ~8% of the market.

Traditional demand is driven by the steel industry, where it is used as a refractory, and also as a steel additive

According to the USGS worldwide production of natural graphite (as opposed to synthetic graphite, but which has a similar sized market) was 1.17Mt in 2012, which is a similar scale to the nickel market (~1.3Mtpa). Of this production, flake accounted for 60% and amorphous 40% and some production from vein. China is the dominant world producer (yet is still a net importer), accounting for ~70% of total world output, however, the graphite is primarily amorphous and low grade flake. Concerns about the long term reliability of high quality graphite supply out of China are driving consumers to look for other sources.

World mine production – 2012 (actual) and 2013 (estimated)

China is the dominant world producer, supplying some 70% of world output



Source: USGS

Industrial demand has been growing at around 5%, and significant further growth is expected, driven largely by future demand for lithium-ion batteries

Industrial demand for graphite has been steadily growing at around 5% p.a. and significant further growth in the industry is expected from the incremental demand created by numerous green initiatives including lithium-ion batteries, fuel cells, solar energy, semi-conductors, and nuclear energy. Many of these applications have the potential to consume more graphite than all the current uses combined. Importantly, only flake graphite can be upgraded to 99.9% purity, suitable for making lithium-ion batteries.

Lithium-ion Batteries

The lithium-ion battery market is forecast as being driven by increasing demand for electric vehicles, each of which requires in the order of 40kg on average of spherical graphite.

Many commentators see the lithium-ion battery market, with the growing demand for electric vehicles, as the key graphite demand driver going forward. In a lithium-ion battery, lithium is the cathode and flake graphite is anode, however, 10 - 30 times more graphite is required in these batteries than lithium. Approximately 60% of the battery market is supplied by natural flake and 40% by the more expensive and less conductive synthetic graphite.

Due to production losses, 100kg of high purity flake graphite is required to produce 40kg of spherical graphite

Electric vehicles on average each require in the order of 40kg of spherical graphite ('SPG") for their batteries, with the production of 40kg of SPG requiring 100kg of high grade, high purity (>99.95%) flake graphite due to losses in the production process.

Some commentators have estimated that up to 6 million electric vehicles could be manufactured in 2020. This equates to a ~10% market penetration, and assuming 60% of demand is met by flake would require an estimated extra 360,000tpa of flake graphite, or approximately 60% additional to current supply of ~600,000tpa.

China recently announced that it has mandated that 30% of Government vehicle purchases to be electric, fuel cell or hybrid by 2016, with the ratio to be raised in following years, with provincial governments being required to follow suit. Other measures reportedly being taken by China include waiving a 10% purchase tax for new-energy vehicles, which is due to commence on September 1, 2014 and run until 2017.

Tesla has announced plans to build a battery manufacturing facility in the USA, that will require up to 126,00tpa of flake graphite

Tesla, the US electric vehicle manufacturer has recently announced plans to build a US$5bn battery manufacturing facility in south-western USA with Panasonic, which would be the world's largest single lithium-ion battery production facility. Tesla estimates demand for 126,000tpa of flake graphite (50,000t of SPG) on a best case basis, and 83,000tpa on a conservative basis to supply the plant.

The lithium-ion battery industry is currently growing at a rate of 30 - 40% annually and it is estimated that Lithium-ion batteries are also crucial to the consumer electronics industry for applications as varied as power tools, cell telephones, laptops, tablets and media players.

Graphene

Graphene, a single atom thick layer of graphite, is another potential demand driver, although significant commercial production may be some way off

Another potential demand driver is graphene, although our view is that significant commercial utilisation is some way off. Graphene is a single atom thick layer of graphite, and is the strongest material in nature, at approximately 200 times the strength of structural steel.

Graphene was first formed in the laboratory 10 years ago, and is now a hot topic of research in the scientific community and R & D laboratories. The material has a number of potential applications amongst others:

- Used in electronic applications (e.g. transistors and memory chips), transmitting electrons faster than silica
- Included in composite materials that are potentially ten times tougher than Kevlar
- Used as an anti-corrosion coating which would be the world's thinnest
- Allows plastics to conduct electricity
- Used in low cost display screens that could be flexible

Outlook for Graphite

The British Geological Survey has listed flake graphite as a material most likely to be in short supply globally

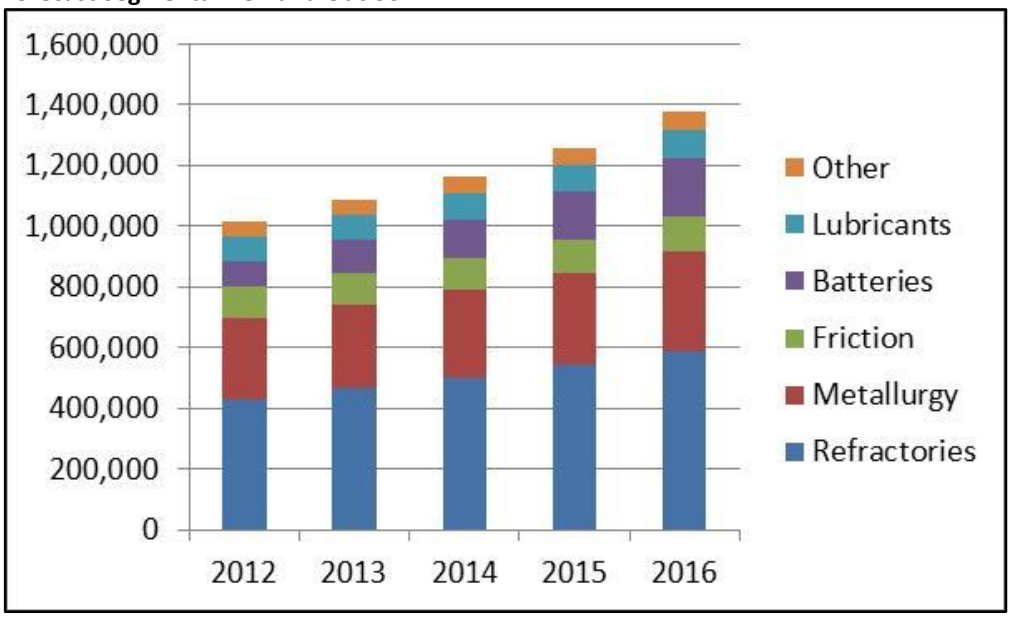
During 2010 the European Commission included flake graphite amongst 14 materials it considered high in both economic importance and supply risk while the British Geological Survey listed flake graphite as one of the materials to most likely be in short supply globally. The US government has also declared flake graphite a critical material.

Concerns come from the dominance of the industry by China; however there is also the view that China is rationalising its domestic industry to lower costs of production. Over the long term this may end up decreasing Chinese supply (which is a net exporter).

There is the potential for graphite demand to grow to 2-2.5mtpa by 2020, up from current levels of 1.2mtpa

Industrial Minerals has forecast the following short term trends in natural graphite end usage. This shows general 6% CAGR growth in all except batteries, with batteries being the largest growth area at 24% CAGR from 2012 to 2016. Extrapolating these figures through to 2020 results in battery demand of ~460,000t, and non-battery demand of ~1,500,000t, for a total demand approaching 2,000,000t.

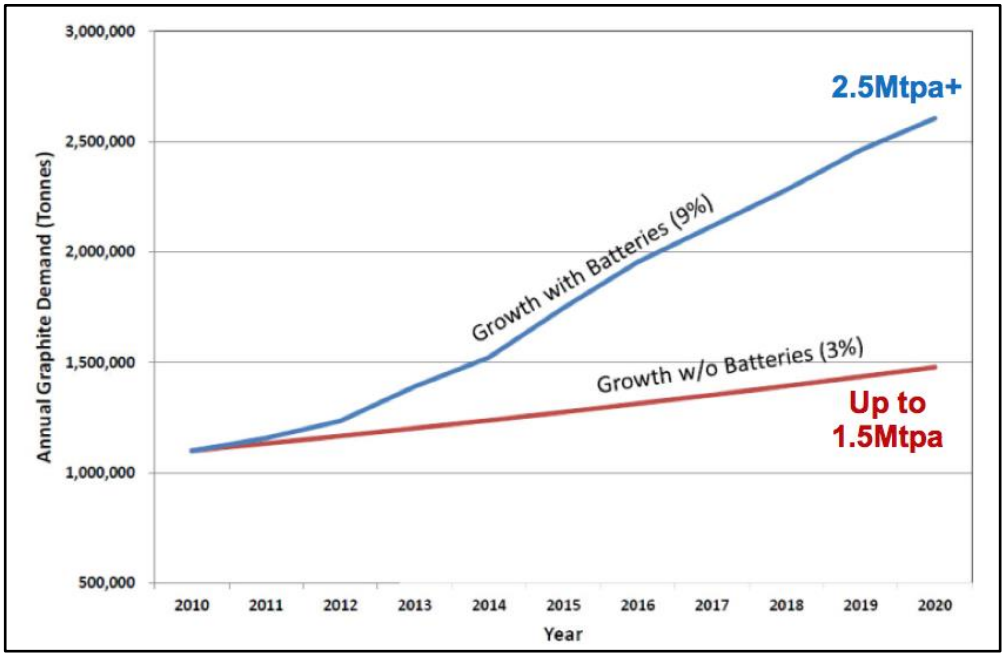
Forecast Segmental Demand Outlook



Source: Shaw Stockbroking Report on Syrah Website

Other forecasts indicate a much more aggressive growth due to the battery market, as shown below – the extrapolated Industrial Minerals forecast falls between the two cases presented below.

Anticipated demand for graphite with and without the battery market



Source: Lamboo Resources

Large flake graphite has been forecast at US$1,800/t from 2017

Graphite Quality and Associated Pricing

Product pricing is dependent upon a number of parameters, including flake size and purity. In general, the larger the flake size and higher the purity the higher the price – this is largely due to the lower cost of treating the concentrate to achieve desired specifications for end uses. The most common quality parameters that prices are quoted on are large flake (>177 µm) and high purity (94-97% carbon). Specifications higher than these will command premium prices.

A comparison of flake size, purity and indicative current and forecast pricing is shown below.

Graphite Specifications and Indicative Pricing

Graphite Product	Carbon Content (%)	Mesh Size	Graphite Size	Current Price (US$/t)	Forecast 2020 Price (US$/t)
Jumbo Flake	99-99.9%	+48	>300µm	$2,300	$6,175
Large Flake	94-97%	+80-48	177 - 300µm	$1,300	$1,165
Medium Flake	94-97%	+150-80	106 - 177µm	$950	$517
Small Flake	94-97%	+200-150	74 - 106µm	$750	$493
Fine Flake	80-85%	-200	<74µm	$550	$359
Synthetic	99.95%			$7,000 - $20,000	

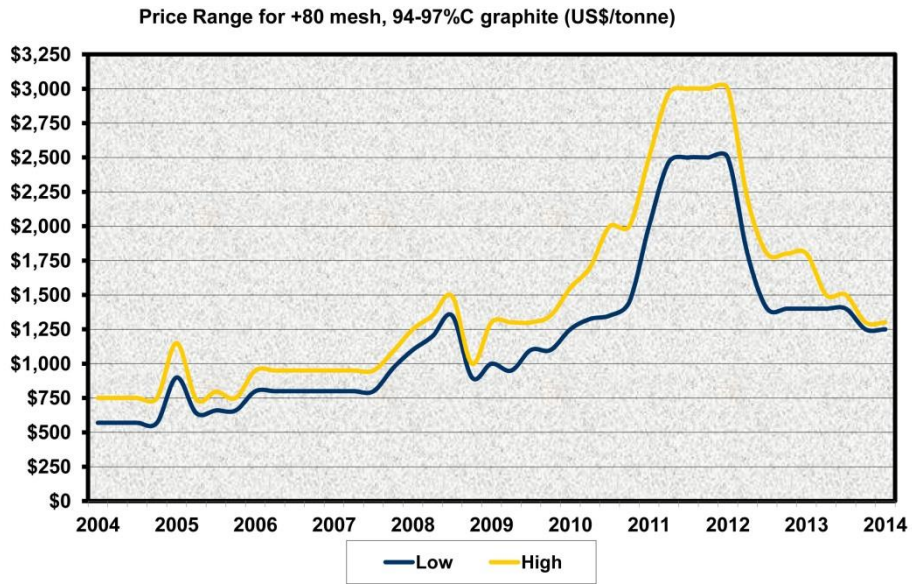
Source: Various, inc. Stormcrow Capital

The forecast prices above are from Stormcrow Capital Ltd., an independent Toronto based research firm. Industrial Minerals have forecast large flake (+177µm) prices of around $1,800/t and medium flake (150-177µm) prices of around $1,200/tonne from 2017.

It needs to be noted that graphite is not transparently traded – prices are set between customers and suppliers.

The chart below shows a ten year price chart for the commonly quoted large flake/high purity graphite and illustrates a generally upward price trend over this period due to increasing demand. The emergence of electric vehicles and the potential boom in lithium–ion battery demand into the foreseeable future is likely to continue to buoy the graphite price.

Historical Graphite Price Chart = +180µm Flake



Source: Northern Graphite

Directors and Management

Non-Executive Chairman

John Park

John Park graduated as a metallurgist and has a long record of success in technical, financial and management aspects of the minerals industry. He has held executive and board positions for a number of UK, Canadian and Australian listed and unlisted companies, both start-up and established, including Selection Trust, BP Minerals, Cluff Resources and Longview Capital Partners.

He was a Founder and Executive Director of the highly successful TSX listed SAMAX Gold, since acquired by Anglogold-Ashanti, which along with several major gold discoveries including Golden Pride and the eastern extensions to Geita, now in operation in the Lake Victoria Goldfields, developed and operated the Merelani Graphite Mine in Tanzania in the late 1990s. As chairman of Graphtan Limited, SAMAX's operating subsidiary which held the Mining Licence at Merelani, John was directly involved in, and ultimately responsible for, the design, construction, financing, marketing and operational management of what was then Tanzania's first new mining project since Independence in 1961.

Executive Director

Andrew Spinks

Andrew Spinks is a geologist with over 20 years professional experience in nickel, coal, iron ore and diamonds in Australia and Africa. Andrew has performed in diverse roles from grass roots exploration through to senior management in exploration, project development and mining. He is a co-founder of Tanzgraphite Pty Ltd and was responsible for the strategy, target generation and acquisitions of that company.

Executive Director - Projects

Grant Pierce OAM

Grant Pierce is a mining engineer with over 25 years of experience in both open-pit and underground mining operations. He has extensive management experience and knowledge of the Tanzanian mining industry, having held a number of senior operational management roles with mining/exploration companies operating in Africa. These include, Perseus Mining Ltd, Resolute Mining Ltd, Barrick Gold Corporation in Tanzania and Africo Resources Ltd. Most recently Grant was Country Manager for Montero Mining and Exploration Ltd.'s Tanzanian operations. He was awarded an Order of Australia Medal in 2003.

Company Secretary

Robert Hodby

Robert Hodby holds a Bachelor of Commerce from Murdoch University and is a member of CPA Australia and Chartered Secretaries Australia. Robert provides corporate, management and accounting advice to a number of companies involved in the resource and energy industries. Robert is also the Company Secretary of Torrens Energy Limited and NeuroDiscovery Limited.

Analyst Verification

We, Grant Craighead and Mark Gordon, as the Research Analysts, hereby certify that the views expressed in this research accurately reflect our personal views about the subject securities or issuers and no part of analyst compensation is directly or indirectly related to the inclusion of specific recommendations or views in this research.

Disclosure

Breakaway Investment Group (AFSL 290093) may receive corporate advisory fees, consultancy fees and commissions on sale and purchase of the shares of Kibaran Resources and may hold direct and indirect shares in the company. It has also received a commission on the preparation of this research note.

Disclaimer

Any observations, conclusions, deductions, or estimates of figures that have been made by Breakaway Research and the Breakaway Investment Group in this report should not be relied upon for investment purposes and the reader should make his or her own investigations. This publication has been issued on the basis that it is only for the information and exclusive use of the particular person to whom it is provided. Any recommendations contained herein are based on a consideration of the securities alone. In preparing such general advice no account was taken of the investment objectives, financial situation and particular needs of a particular person. Before making an investment decision on the basis of this advice, investors and prospective investors need to consider, with or without the assistance of a securities adviser, whether the advice is appropriate in light of the particular investment needs, objectives and financial circumstances of the investor or the prospective investor. Although the information contained in this publication has been obtained from sources considered and believed to be both reliable and accurate, no responsibility is accepted for any opinion expressed or for any error or omission that may have occurred therein.

Breakaway Investment Group
AFSL 290093 ABN 84127962387
T+61293928010
F+61292792727
PO Box H116 Australia Square
Sydney, NSW 2001
Suite 505, 35 Lime Street,
Sydney, NSW 2000