

ASX ANNOUNCEMENT 3 February 2014

#### **Kibaran at Mining Indaba**

Kibaran Resources (ASX: KNL) is pleased to make available its latest presentation

Kibaran is exhibiting at the 20<sup>th</sup> Annual Investing in Africa Mining INDABA in Cape Town South Africa.

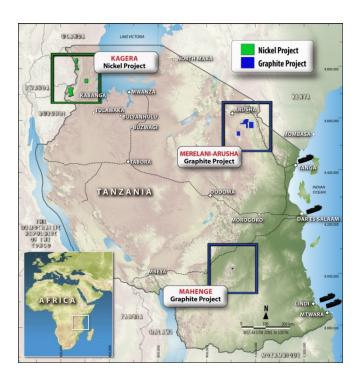
#### **About Kibaran Resources Limited:**

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 Inferred Mineral Resource Estimate of 14.9Mt, grading 10.5% TGC, for 1.56Mt 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.

#### For further information, please contact:

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# Growth through graphite in Tanzania

Kibaran Resources Limited (ASX: KNL)

Andrew Spinks, Executive Director

Indaba, Cape Town – February 2014

# **DISCLAIMER**

#### **Securities Disclaimer**

This presentation is for informational purposes only and does not constitute an offer or sell, or solicitation to purchase, any securities. Such Offer can be made only through proper subscription documentation and only to investors meeting strict suitability requirements. Any failure to comply with these restrictions may constitute a violation of applicable securities laws.

#### **Forward Looking Statements**

Various statements in this presentation constitute statements relating to intentions, future acts and events. Such statements are generally classified as "forward looking statements" and involve known and unknown risks, uncertainties and other important factors that could cause those future acts, events and circumstances to differ materially from what is presented or implicitly portrayed herein. The company gives no assurances that the anticipated results, performance or achievements expressed or implied in these forward looking statements will be achieved.

#### **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 promulgates 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 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Andrew Spinks consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



# FOCUSED STRATEGY: GROWTH THROUGH GRAPHITE

#### Goal:

To become a major producer of premium, large flake graphite

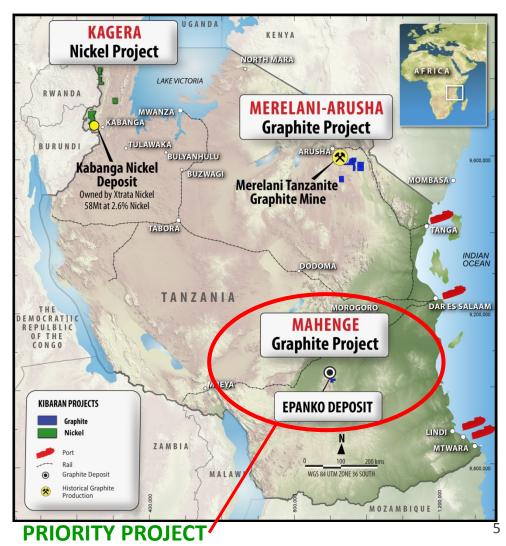
### Strategy:

Progress the Epanko Graphite Deposit towards development and production – significant exploration underway





High-grade graphitic schist



# KEY INVESTMENT HIGHLIGHTS

- > Focused strategy: To become the first graphite producer in East Africa
- ➤ Landmark binding off-take agreement signed with major European graphite trader for a 5 + 5 years of 10,000tpa flake graphite concentrate off-take <sup>1</sup>
- Flagship project: 100%-owned Epanko Graphite Deposit
- Advanced stage project: Inferred JORC Resource, advanced metallurgy, Scoping Study, commenced Environmental and Social Impact Assessment
- > Flagship Epanko project possesses high-value graphite attributes:
  - Grade: High, with Inferred JORC Resource: 14.9Mt at 10.5% TGC (total graphitic carbon) for 1.56Mt contained graphite
  - Flake size: 73.8% in large fraction (>106μm) and 21.6% in very large fraction (>300μm)
  - Favourable size distribution with low percentage of fines
  - Valuable properties: 'expanded' potential graphite considered suitable for 'expanded' graphite market
- Market opportunity: Growing global graphite demand, plus market shortage of large flake product
- Significant upside: Strong potential for Resource growth as current estimate covers only 20% of Epanko area. Plus, interests in a second highly prospective graphite project and ideally-located advanced nickel play with standout EM target
- Experienced Board and management with local industry experience and technical expertise



# CORPORATE OVERVIEW – ASX: KNL

Kibaran Resources Ltd (ASX: KNL) is an exploration company focused on unlocking the graphite potential of the mineral-rich landscapes of Tanzania, East Africa.

Share price	\$0.14 (as at 28/1/14)
Ordinary shares on issue <sup>1</sup>	92 million
Performance shares <sup>2</sup>	15 million
Market cap	\$12.9 million
Cash in bank <sup>1</sup>	\$1.7 million
Options <sup>13</sup>	17.5 million

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

#### **Notes for Table**

- 1 Assumes completion of February 2013 placement
- 2 Consists of 15m shares which convert on certain milestones associated with the Kagera nickel project.
- 3 Various strike prices.





# BINDING OFF-TAKE AGREEMENT SIGNED

- ➤ Kibaran is the first ASX-listed company to sign a binding off-take agreement for graphite sales
- First company globally to sign a binding agreement for graphite sales in the sophisticated European graphite market
- ➤ 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 a potential new source
- Kibaran is seeking further offtake and/or sales agreements



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



### WHY KIBARAN?

### Natural graphite is a highly valuable commodity:

- > Size matters: Value is a function of flake size and purity
- Large flake (+180μm), 94%C (carbon) varieties command premium market prices
- Current market shortage of large flake graphite product
- Large flake graphite with expansion capacity can be processed into highly sought after 'expanded' 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
- Also considered valuable in battery market



Graphite foil produced from Kibaran flake graphite

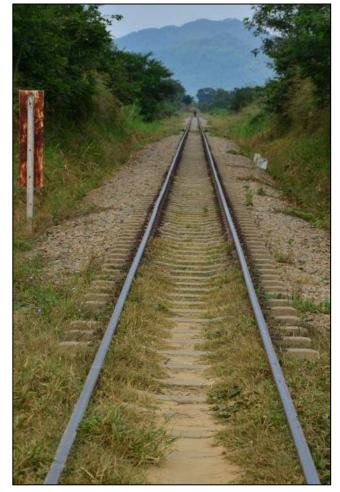
Outcome: Significant supply opportunities for producers of large flake graphite with 'expandable' properties



# WHY TANZANIA?

### Mining-friendly country:

- Stable and supportive Government committed to mining industry growth and development
- Mining contributes to 2.3% of current GDP; expected to increase to 10% by 2025
- Access to skilled and educated local workforce and mining support services
- Mineral-rich landscape: favourable geology for large flake, high-grade graphite
- Extensive and well-established infrastructure network (road, rail and ports). KNL projects accessible by road and the Tanzania Railway Corporation



Siding at Ifakara – built and used for Zambia copper mines



# WHY GRAPHITE?

### Graphite is a 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<sup>1</sup>" (computer chips, lasers etc)
  - Unique physical and chemical properties make it difficult to substitute
- China produces 75% of global graphite supply, but is now heavily restricting exports to protect domestic supplies

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

<sup>1</sup>Source: Metal Investment News

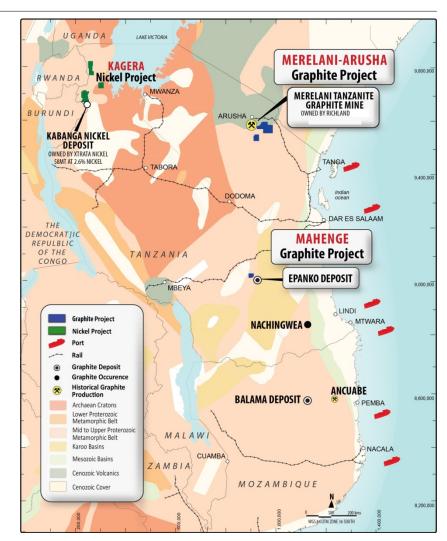




# PROJECT PORTFOLIO (KNL 100%)

# Three prospective projects in Tanzania, East Africa:

- Mahenge Graphite Project comprises the priority Epanko Graphite Deposit
- Merelani-Arusha Graphite Project
- Kagera Nickel Project





# EPANKO GRAPHITE DEPOSIT

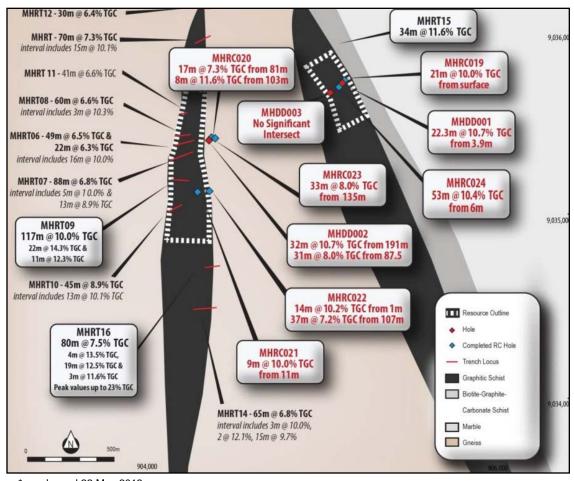
- Key target within the Mahenge Graphite Project
- Located 245km south-west of Morogoro
- Comprises two zones of graphite mineralisation Eastern Zone and Western Zone
- Historical exploration activity identified course flake graphite of excellent grade
- Binding off-take agreement signed for Epanko graphite sales





# **EPANKO EXPLORATION**

- Extensive RC and diamond drilling activity has confirmed the presence of high-grade graphite mineralisation in both Eastern and Western Zones
- 6 RC holes, 3 diamond drill holes and 11 trenches have been completed to date
- Grade consistent along strike

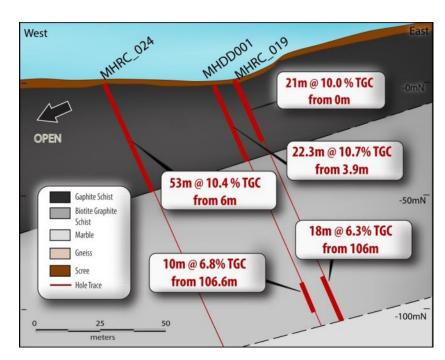


\*as released 22 May 2013



# MAIDEN JORC MINERAL RESOURCE

- ➤ Inferred JORC Mineral Resource Estimate: 14.9Mt at 10.5% TGC for 1.56Mt contained graphite
- Estimated by CSA Global Pty Ltd an independent and internationally recognised mineral industry consultancy group
- Highest grade graphite Resource to be delineated in Tanzania
- ➤ Either comparable or better grade than other past graphite-producing operations in East Africa:
  - Tanzania: 8.3% TGC from Merelani Tanzania Mine
  - Mozambique: 9.5% TGC from Ancuabe Mine
- Resource estimate provided base for Scoping Study; forms a sound technical basis for further studies in the event that it can be upgraded to a higher category resource



\*as released 22 May 2013



# POTENTIAL RESOURCE EXPANSION

### Potential for Resource growth is well supported by recent trenching:

- All trenches intersected shallow, high-grade flake graphite mineralisation
- > 11 trenches completed: 10 in the Western Zone and 1 in the Eastern Zone
- Best trench interval measured 117m at 10.0% TGC
- Mineralisation remains open in all directions





Looking west from Hole MHRC019 in the Eastern Zone. Shows the Western Zone mineralisation and interpreted contact position (hanging wall) of the graphite mineralisation

# EPANKO METALLURGICAL RESULTS

#### Independent, but complementary, test work programs completed on Epanko samples:

- 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 have been received for program 2:

- Flotation achieved >96% recovery of graphitic carbon. Concentrate graded 93% fixed carbon
- Flotation test work yielded <u>large flake</u> 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' graphite market
  - Amenable to standard recovery processes
  - **Marketable** product

Results supported recent signing of binding offtake 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

Among listed peers, Kibaran has the highest large flake distribution and the lowest fines fraction



<sup>\*</sup> Fine fractions (<75micron) are likely to be in oversupply and likely to be unsaleable

### **Crushing Plant** Storage Bin Vibrating Feeder Rod Sizer Jaw Crusher Storage Bin Elevators Milling Plant **Gyratory Crushe** Vibrating Feeder Spiral Classifier Liberating Flotation Rougher Flotation To Tailings Pond **Flotation Plant** Cleaner Flotation Dedusting and Cooling **Drying and Packing Plant** Storage Bin Dedusting Store House

# **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.
- 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\$1,800-\$2,200/t			
> 300 microns	94-96% C	US\$1,600-\$1,900/t			
> 180 microns	94-96% C	US\$1,000-\$1,200/t			
> 106 microns	94-96% C	US\$800-\$900/t			
> 75 microns	90%+ C	US\$600-\$750/t			
> 75 micron	90%+ C	US\$450-\$550/t			

<sup>\*</sup> 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 coming year – approximately 20% of China's supply on hold



Source: Industrial Minerals, 16 December 2013

# PEER COMPARISON

# Epanko deposit has the highest large flake size distribution and the lowest % of fines, yet Kibaran has the lowest market capitalisation

Company	Kibaran	Energizer	Flinders	Archer	Focus	Syrah	Valence	Mason	Lincoln	Stratmin	Zenyetta
Bourse	ASX	TSX.V	TSX.V	ASX	TSX.V	ASX	ASX	TSX.V	ASX	AIM	TSX.V
Code	KNL	EGZ	FDR	AXE	FMS	SYR	VXL	LLG	LML	STGR	ZEN
Market Cap (\$m)	12	39	21	15	59	422	42	44	17	20	106
Country	Tanzania	Madagascar	Sweden	Australia	Canada	Mozambique	Australia	Canada	Australia	Madagascar	Sri Lanka
Deposit	Epanko	Molo	Woxna	Campoona	Lac Knife	Balama	Uley	Lac Gueret	Eyre	Lohorano	Albany
Offtake Agreement	YES	-	-	-	YES	-	-	-	-	-	-
Resource Classification	Inferred	Indicated & Inferred	Measured & Indicated	Measured, Indicated & Inferred	Indicated & Inferred	Inferred	Indicated & Inferred	Measured & Indicated	Indicated & Inferred	Indicated & Inferred	Indicated & Inferred
Status (Completed)	Scoping Study	Scoping Study	Feasibility	Exploration	Scoping Study	Scoping	Historic Production	PEA	Scoping Study	Exploration	Scoping Study
Tonnes (Mt)	14.9	123	2.6	2.5	7.9	1150	6.4	50	2.2	5.7	45.2
Grade (%TGC)	10.5	6.3	10.5	12.3	15	10.2	7.1	15.6	15.1	4.1	3.1
Flake Sizing Distribution - Summ	ary										
Large Flake % (>75 micron)	85%	69%	68%	N/A	67%	66%	60%	43%	21%	N/A	N/A
Reported Sizing's - % Passing											
> 180 micron	50%	-	-	-	36%	-	N/A	29%	-	-	-
>160 micron	-	-	40%	-	-	-	N/A		-	-	-
>150 micron	-	33%	-	-	-	31%	N/A		3%	70%	-
> 106 micron	24%	-	-	-	18%	-	N/A	14%	7%	-	-
> 75 micron	11%	36%	28%	-	13%	35%	60		11%	-	-
< 75 micron	15%	31%	32%	-	33%	34%	40		79%	-	-

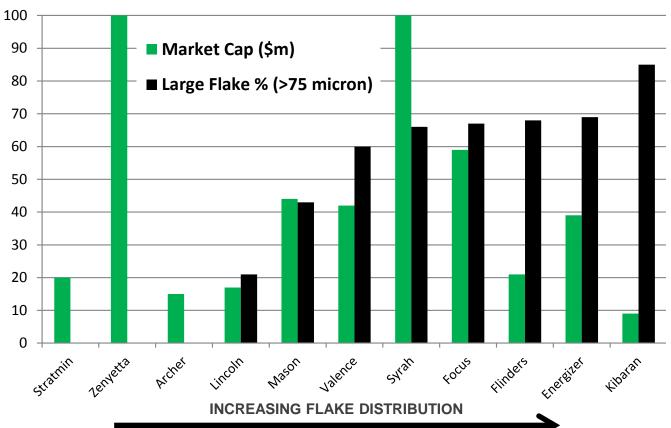


Source: Company websites and announcements

# FLAKE SIZE DISTRIBUTION

### **Epanko Deposit vs Others:**

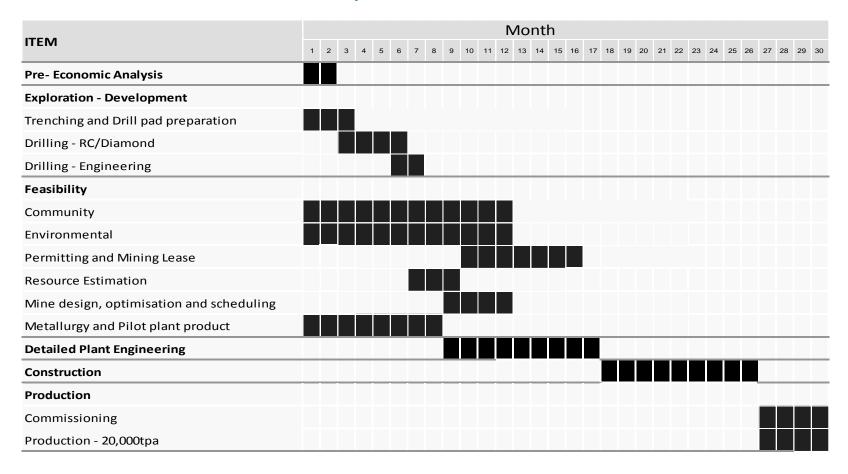
One of the largest size distributions, significant mineral resource + binding off-take agreement





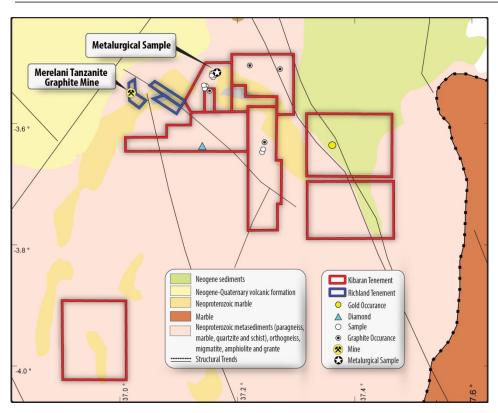
# 2014 – PROPOSED EPANKO PROGRAM

### **Environmental and Social Impact Assessment commenced**



<sup>\*</sup> 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-ARUSHA GRAPHITE PROJECT



- Potential new province
- Area of 973.4 km²
- Large flake graphite
- Same geological setting as Merelani
   Tanzanite Mine (unique)
- Graphitic schist mapped over 1.5km length and up to 200m widths
- Area currently being mined for gemstones
- RC drilling planned
- Rock chips assayed 8.1%TGC
- Metallurgical head grade 17.1% TGC



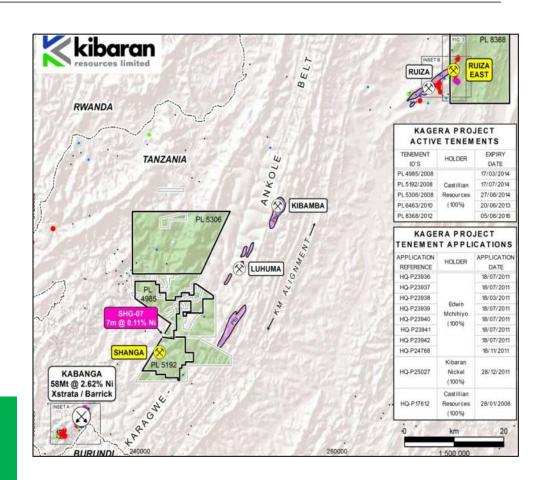


Tanzanite crystal on graphite matrix (Merelani Tanzanite Mine)

# KAGERA NICKEL PROJECT

- Secondary focus project
- Covers an area of 864km² along the western border of Tanzania
- Located distally along strike of Kabanga Nickel Deposit
  - Operated by Xstrata Nickel & Barrick Gold
  - Kabanga is the world's largest undeveloped high-grade nickel sulphide (NiS) occurrence
- ➤ Located within the Karagwe-Ankole Belt (KAB) — hosts similar geological and geophysical characteristics to other nickeliferous Proterozoic orogenic belts around the world

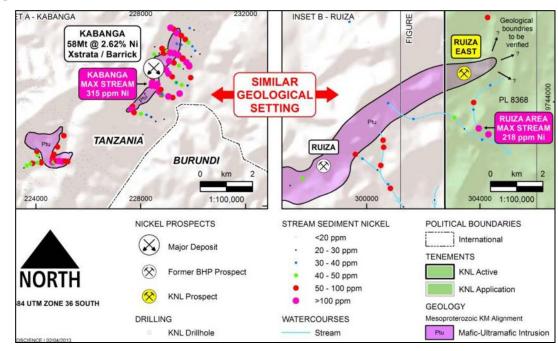
Kagera Nickel Project provides
Kibaran with optionality for growth
and portfolio diversity





# KAGERA NICKEL PROJECT

- > Currently undergoing an independent Nickel Prospectivity Study
- > Compilation, re-processing and re-interpretation of historical exploration data
- Confirmed geographical relationship with the Kabanga Nickel Deposit
- ➤ Identified standout NiS exploration target at Ruiza East prospect geological and geophysical similarities to Kabanga
- ➤ Study will now also include analysis of historical (1992) regional airborne EM and aeromagnetic data from BHP Billiton agreement secured authorising access
- Estimated replacement cost of combined data over \$12 million
- Potential for exploration drilling following completion of study





# EXPERIENCED BOARD AND MANAGEMENT

### Led by an experienced Board of Directors with significant in-country experience

#### 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, Exec. Director**

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

#### 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.

#### **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 with resource companies operating in Africa include, Perseus Mining Ltd, Resolute Mining Ltd, Barrick Gold Corp. in Tanzania, Africo Resources Ltd.

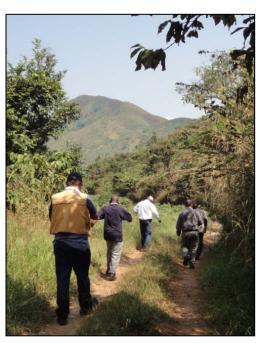
#### John Park, Non-Exec. Director

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 in the late 1990s, which was the first commercial mine in Tanzania.

#### **Robert Hodby, Company Secretary**

Robert Hodby holds a Bachelor 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.

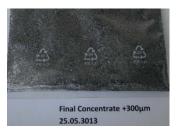




## CONCLUSIONS

- ➤ Landmark binding off-take agreement signed with major European graphite trader for a 5 + 5 years of 10,000tpa flake graphite concentrate off-take <sup>1</sup>
- Advanced-stage project: Inferred JORC Resource, advanced metallurgy, Scoping Study completed, commencement of Environmental and Social Impact Assessment
- Flagship Epanko project possesses high-value graphite attributes:
  - Grade: High, with significant Inferred JORC Mineral Resource: 14.9Mt at 10.5% TGC, for 1.56Mt contained graphite
  - Flake size: 73.8% in large fraction (>106μm) and 21.6% in very large fraction (>300μm)
  - One of the largest size distributions among peers, with low percentage of fines
  - Valuable properties: 'expanded' potential graphite considered suitable for 'expanded' graphite market
- ➤ **Well-positioned** to become a major graphite producer in Tanzania, subject to upgrading of Resources and positive feasibility











-Kibaran graphite concentrate from the Epanko Graphite Deposit



<sup>&</sup>lt;sup>1</sup> This is a non-binding contracted term, not a production target as production may not occur. Production may only occur on upgrade of resources and a positive feasibility study which is uncertain at the stage

# HISTORICAL USE

Graphite pencil made from 90% C and minus 75 micron.

- Pencils made from low-value graphite material
- Intended for local domestic use in Tanzania (community relations)

#### **DEVELOPING TANZANIAN GRAPHITE**

kibaran

Pencils are an important historical use of graphite; however, it is new-age future graphite uses that are driving Kibaran to become a major graphite producer in Tanzania.



# **CONTACT DETAILS**



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