



**BlackEarth**  
Minerals NL

Investor  
Presentation  
September 2018

ASX:BEM

ACN: 610 168 191

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Cautionary Statement: The Exploration Targets reported herein are not JORC compliant Mineral Resources. The potential quantity and grade of the Exploration Targets are conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of a Mineral Resource.

## COMPETENT PERSON'S STATEMENT

The information in this report that relates to reporting of Exploration Results is based on and fairly represents information and supporting documentation prepared by Peter Langworthy, a member of the Australasian Institute of Mining and Metallurgy, who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration. He is qualified as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and consent to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this report that relates to the Exploration Target for the Maniry Graphite Project is extracted from the report entitled "Exploration Target Update" dated 14 August 2018 and is available to view on the Company's website ([www.blackearthminerals.com.au](http://www.blackearthminerals.com.au)). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this report that relates to the Maiden Resource Estimation for Razafy at the Maniry Graphite Project is extracted from the report entitled "Update – Maiden Resource Estimation for Razafy at the Maniry Graphite Project" dated 14 August 2018 and is available to view on the Company's website ([www.blackearthminerals.com.au](http://www.blackearthminerals.com.au)). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

# Company Snapshot

**BlackEarth Minerals NL (ASX:BEM) is a mineral exploration company led by a team of mining experts that have identified growing trends in graphite demand, and targeted assets around the world rich in these specific type of high-value graphite.**

CAPITAL STRUCTURE	
ASX Code	BEM
Fully Paid Shares	61m
Share Price (17/9/18)	\$0.12
Market Cap (@ \$0.12)	\$4.08M
Cash (30 June 2018)	\$3.097m

BOARD OF DIRECTORS	
Phil Hearse	Non-Executive Chairman
Tom Revy	Managing Director
George Bauk	Non-Executive Director
Barry Woodhouse	Company Secretary and CFO
Tracy Harris	Financial Controller
Annick Manfrino	Manager - Geology



# Investment Highlights

- The Company's Maniry project is based in Madagascar, a country with over 120 years of high quality / low cost graphite production.
- Graphite is a highly important commodity used in the production of Electric Vehicles as it is used in the anodes of Lithium batteries. In addition to this, large flake graphite is used in fire retardant building materials.
- The project has an Indicated & Inferred Resource\* of 11Mt at 7.1% TGC and drilling confirms consistent, thick, outcropping, high grade graphite horizons.
- The Maniry project has huge potential with an Exploration Target\* of 260-380Mt at 6-8%TGC and 34 large-scale zones of outcropping graphite schist. **Cautionary Statement:** The Exploration Targets reported herein are not JORC compliant Mineral Resources. The potential quantity and grade of the Exploration Targets are conceptual in nature, there has been insufficient exploration to determine a Mineral Resource and there is no certainty that further exploration work will result in the determination of a Mineral Resource
- May provide maximum leverage to the development / value curve, as BEM enters the study / development phase, taking advantage of the proximity to the large Molo Graphite Project (TSX: NEXT).
- A highly experienced board of directors and management team with a proven track record in African project development and extensive technical capabilities in graphite.
- The Company's value should benefit from positive news-flow over the near to medium term.

# Board of Directors and Management



## **Phil Hearse – Non-Executive Chairman**

- One of Australia's most respected mining professionals with 40 years' experience in diverse and challenging projects around the world.
- His extensive career ranges from operational and technical support roles at Broken Hill, Bougainville Copper, Queensland Nickel and Gove Alumina to senior executive and managerial positions. Mr Hearse founded and managed Normet Pty Ltd, one of Australia's major metallurgical and risk companies for 18 years.
- He also held the key role of Director Advisory with GRD Minproc Ltd (now Amec Foster Wheeler) from 2001 to 2005.



## **Tom Revy – Managing Director**

- Over 30 years' experience within the resources industry, Mr Revy is considered a corporate and project development specialist with an international network
- Has held senior operational and corporate positions within reputable organisations, including GRD Minproc, WorleyParsons, Ferrum Crescent and Empire Resources, Mr Revy is now, as Managing Director of BlackEarth NL overseeing its development and ASX listing.



## **George Bauk – Non-Executive Director**

- Mr Bauk has more than 25 years' mining industry experience, with expertise in critical metals, strategic management and business planning capital raising.
- Mr Bauk has held senior operational and corporate positions with WMC Resources, Arafura Resources and Indigo Resources (formerly Western Metals). Since 2010, he has also been managing director and CEO of Northern Minerals Limited, overseeing that company's heavy rare-earth project in northern Australia, Mr Bauk is also chairman of Lithium Australia NL.



## **Barry Woodhouse - CFO and Company Secretary**

- A CPA and Fellow of Governance Institute of Australia, has almost 30 years' experience in the junior mineral exploration, mineral production, mining services and manufacturing sectors, including involvement with a private lithium explorer in Namibia.
- His roles in private and public companies within Australian and in foreign jurisdictions have included those of CFO, company secretary, director and chairman.



## **Tracy Harris - Financial Controller**

- A qualified accountant with more than 20 years' of professional, operational and business experience in the junior mineral exploration, innovative technology, manufacturing and hospitality sectors.
- Has worked in both South Africa and Australia her roles have included those of financial manager, general manager and financial director.



## **Annick Manfrino - Manager - Geology**

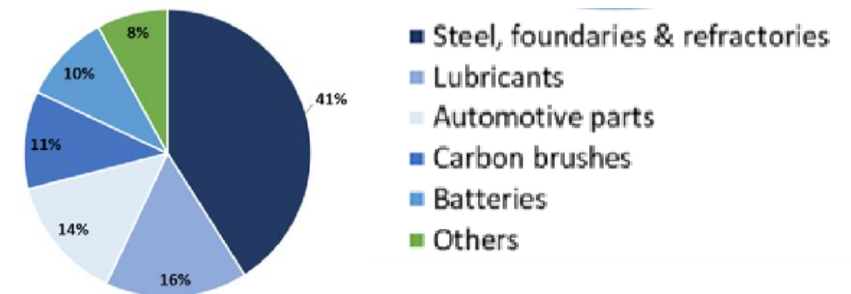
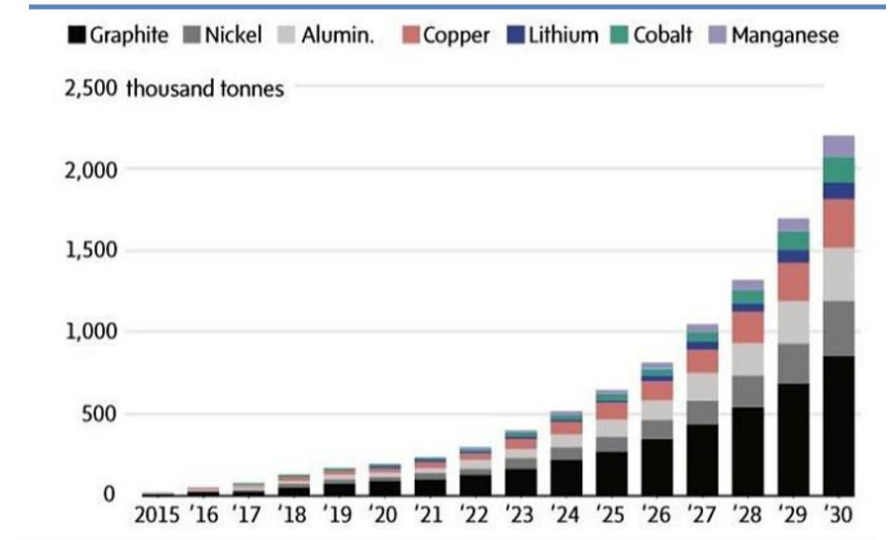
- Has a background in resource estimation and geostatistics and graduated as an engineer from the French National School of Geology (ENSG).
- Over a 30 year career, Annick has been involved in a large number of technical reviews and resource estimations on major projects worldwide across a broad spectrum of commodities for companies such as Vale SA, Eramet, Ivanhoe Mines and Fortescue Metals Group. Since 2007.
- She has applied her broad inter-disciplinary knowledge of the mining industry to niche studies, be it in resource estimation or geometallurgical data analysis. She has also been a "Qualified Person" (QP) signatory for the resource components of several international mining projects studies.

**A highly experienced board of directors and management team with a proven track record in African project development and extensive technical capabilities in graphite.**



# Why Graphite?

- From pencils to high end batteries, the physical and chemical properties of graphite have lent themselves to a very broad spectrum of uses across various industries.
- While China has been a dominant producer, quality and environmental concerns will see them as a net importer of natural graphite, particularly large quality flake material.
- Increasing production costs for synthetic graphite should result in greater substitution for natural graphite where possible.
- Graphite has been listed as a critical commodity in terms of both economic and security reasons by the European Union and United States.
- Traditional markets such as the steel industry together with the battery and emerging technologies markets (expandable graphite) are strengthening and are seen as positive drivers for graphite prices on the short to medium term.



Source: SP Angel Report

# Creating an Electric Future

- Bloomberg NEF estimates EVs would account for 28% of global new car sales by 2030, and 55% by 2040
- Electric buses are expected to dominate their market even more decisively, reaching 84% global share by 2030
- The world's major car manufacturers (Renault, Volvo, GM etc) have committed to go all electric & hybrid by ~2023
- Graphite is a highly important commodity used in the production of Electric Vehicles as it is used in the anodes of Lithium batteries
- It is estimated, that by 2027, graphite use in batteries globally will be 8 times the current level.



Sources: Bloomberg NEF, Benchmark Intelligence

# Graphite for Safer Buildings



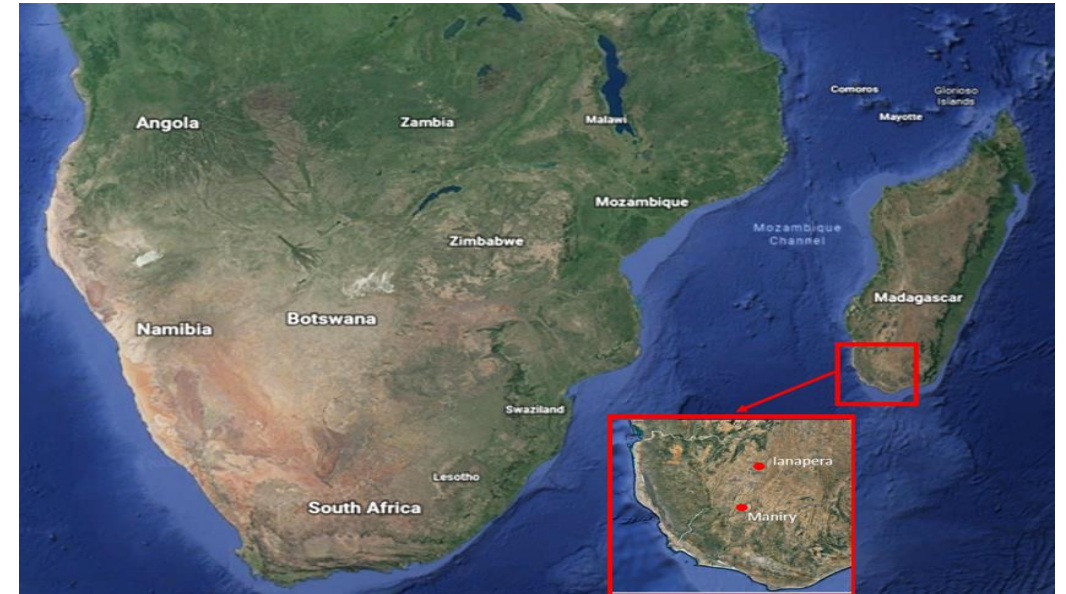
- Large flake graphite is a key component that is used in the “expandable graphite” market
- Expandable graphite is added to next generation fire retardant building materials with approximately 5% expandable graphite included
- China alone forecasted to have future demand for 40Mtpa of fire retardant building materials
- Requires 2 million tonnes of high quality large-flake graphite each year
- Total graphite market currently <1Mtpa

Source: Graphite Guide: Why the first resistance and not electric cars may drive these stocks, Angela East, April 16, 2018  
Stockhead.



# Why Madagascar

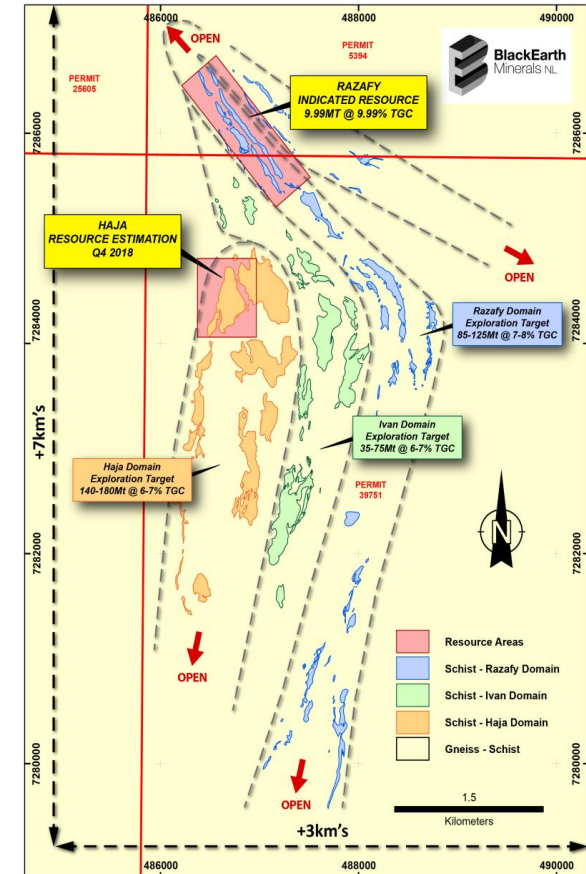
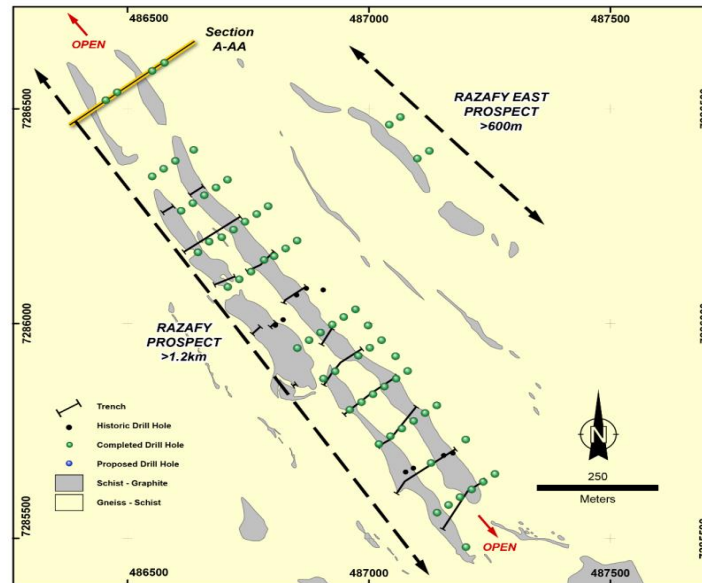
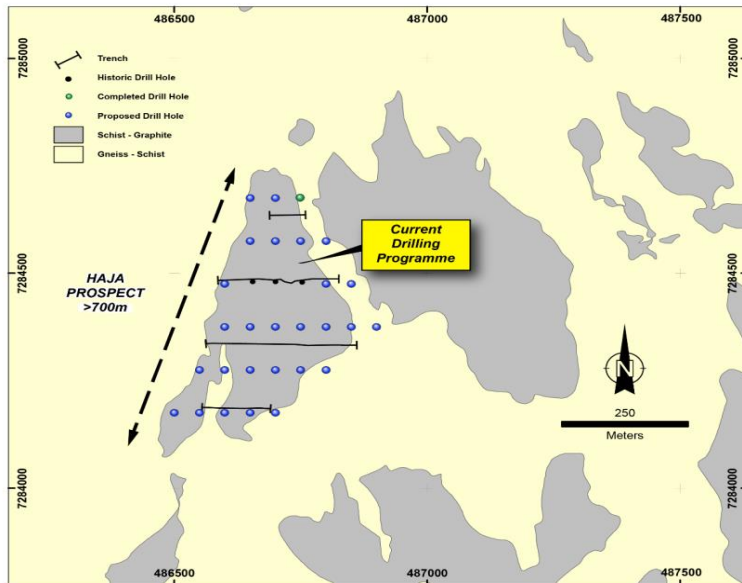
- Fundamental to the BlackEarth vision is to identify the right commodity in the right jurisdiction.
- Whilst graphite resources are available all over the world, BlackEarth's targeted commodity of large-flake graphite narrowed the regions the Team explored.
- Assessing global graphite projects across a spectrum of strict criteria, assets in Madagascar were identified as the right commodity in the right jurisdiction.
- Although graphite is common across mainland Africa, political stability, a rich history and reputation for mining high-grade / high-value graphite with access to suitable ports, highlights Madagascar as a highly rated jurisdiction for mining.
- Narrowing in on assets in Madagascar, the BlackEarth Team acquired the exploration rights for Capricorn Metals' two Madagascar-based graphite assets which were at an "advanced evaluation stage" and capable of timely development to meet BlackEarth's development vision.
- Mineralogical testing has confirmed the potential for highly prospective graphite systems at Maniry which has led the Board to prioritise the Maniry Graphite Project.
- World leading mining companies are currently active in the Madagascar graphite industry.



**Madagascar has over 120 years of history in producing high quality / low cost graphite**

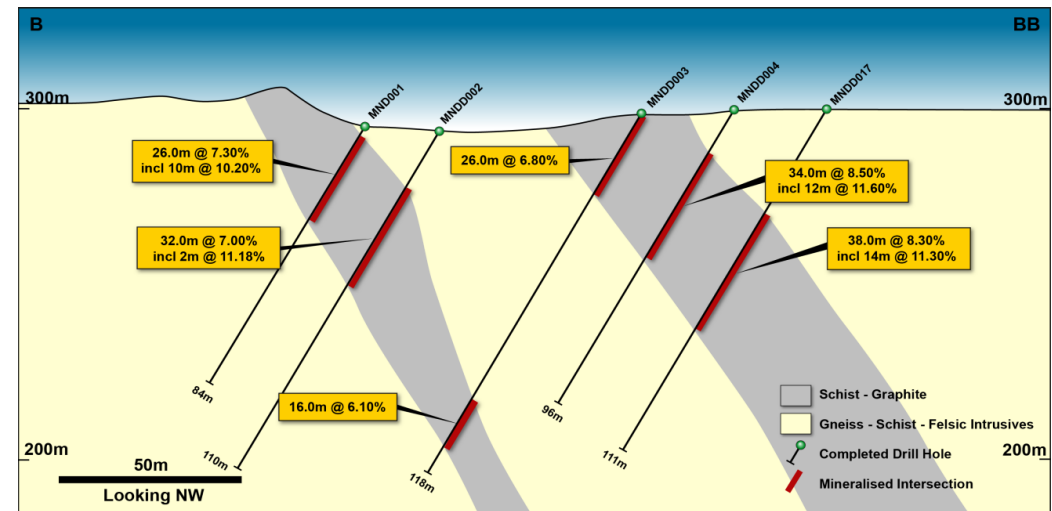
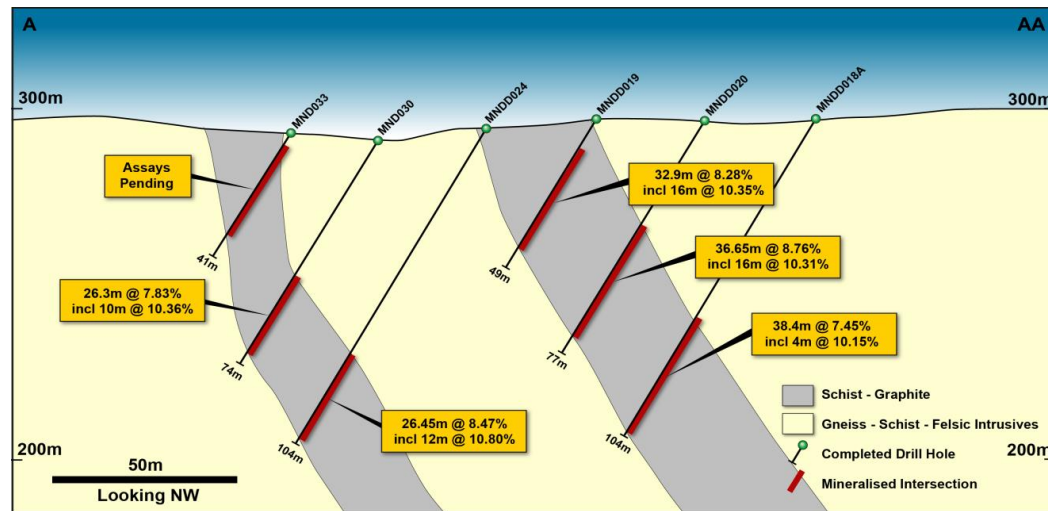
# Maniry Graphite Project

- Enormous potential exists at Maniry with an exploration Target\* of 260-380Mt at 6-8%TGC
- 34 large-scale zones of outcropping graphite schist
- The project covers an area of 7km x 3km
- Area remains open to further discovery



# Razafy Resource Drilling

- Indicated & Inferred Resource\* of 11Mt at 7.1% TGC
- Drilling confirms consistent, thick, outcropping, high grade graphite horizons
- From XRD and XRF work demonstrate that the Razafy zones of mineralisation are consistent along strike and down dip
- Razafy remains open in all directions with potential for repetition to the east





# Project Location - Community

- Regular meetings with Maniry and Ampanihy District officials who are keen to see development of a new mine in the area
- Financial and project management assistance to Australian Doctors for Africa (ADFA) for the development of a new medical clinic in the region
- BlackEarth Minerals donated the fitout to 2 newly built classrooms in Maniry
- Frequent meetings with local chiefs to discuss development plans and needs including employment of locals for general duties





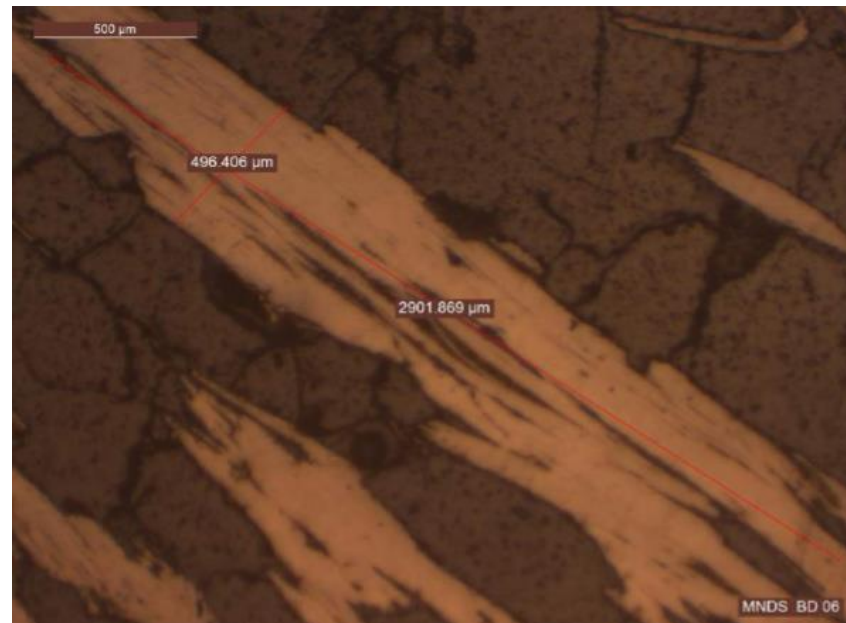
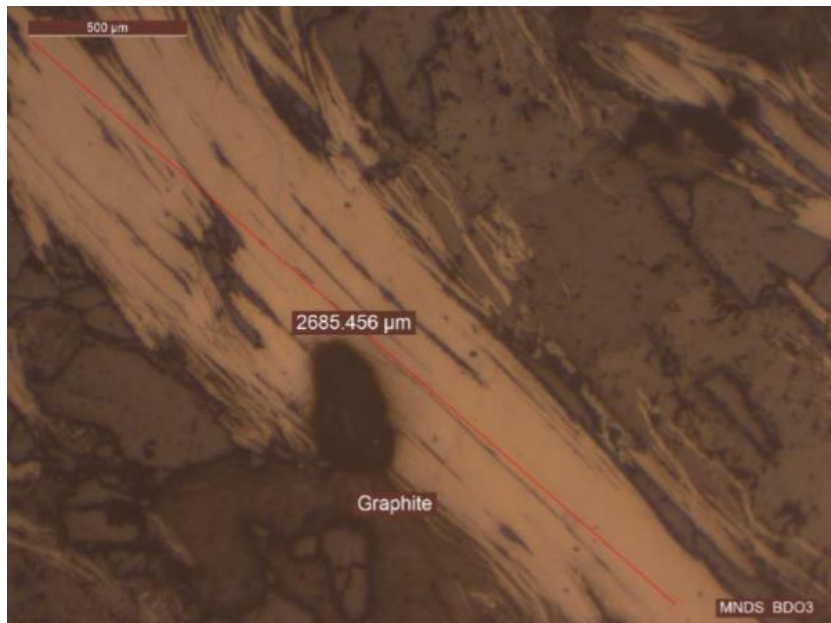
# Project Location - Infrastructure

- Port (Fort Dauphin) located 230km from Maniry (15 metre draft)
- Local roads used by trucking companies for the transport of large labradorite slabs for export
- Water to be supplied by a mine bore field
- Power to be generated by diesel powered generators. (Low energy consumption process)
- A number of all-weather airstrips exist in the immediate area



# Mineralogy & Metallurgy

- Comprehensive mineralogy undertaken on the Razafy Indicated Resource has identified a high percentage of flakes exceeding 1000 microns
- Unlike many East African graphite projects, Maniry flakes contain no deleterious sulphides – significant implications for environmental management (AMD) as well as concentrate purity / upgrading
- Current definitive metallurgical test work, will focus on optimising operating cost whilst maintaining flake size and producing high purity graphite concentrate



Razafy flakes (in situ) up to 2900 micron

# Work Completed & Outcomes (2018)

## 1 - Funding

- A\$5.5M IPO completed with ASX listing (19 Jan 2018)

## 2 - Quality Project (Maniry)

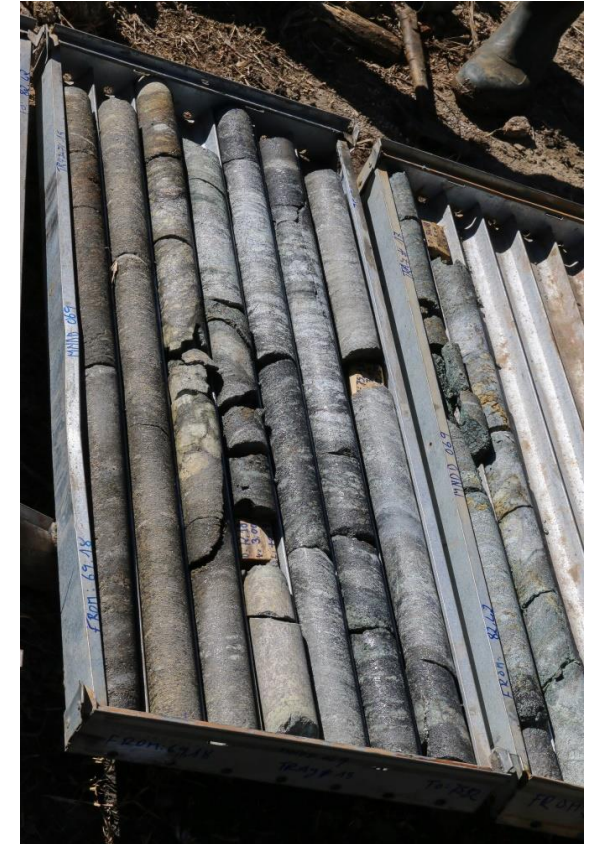
- Diamond drilling commenced within 6 weeks of listing (March 2018)
- Exploration Target: 260-380Mt @ 6-8%TGC
- Indicated Resource 9Mt @ 7.1% TGC
- Definitive mineralogy across Razafy shows the presence of super jumbo flakes (up to 3mm) free from deleterious elements – no material sulphides present
- Established infrastructure

## 3 - Demand for Product

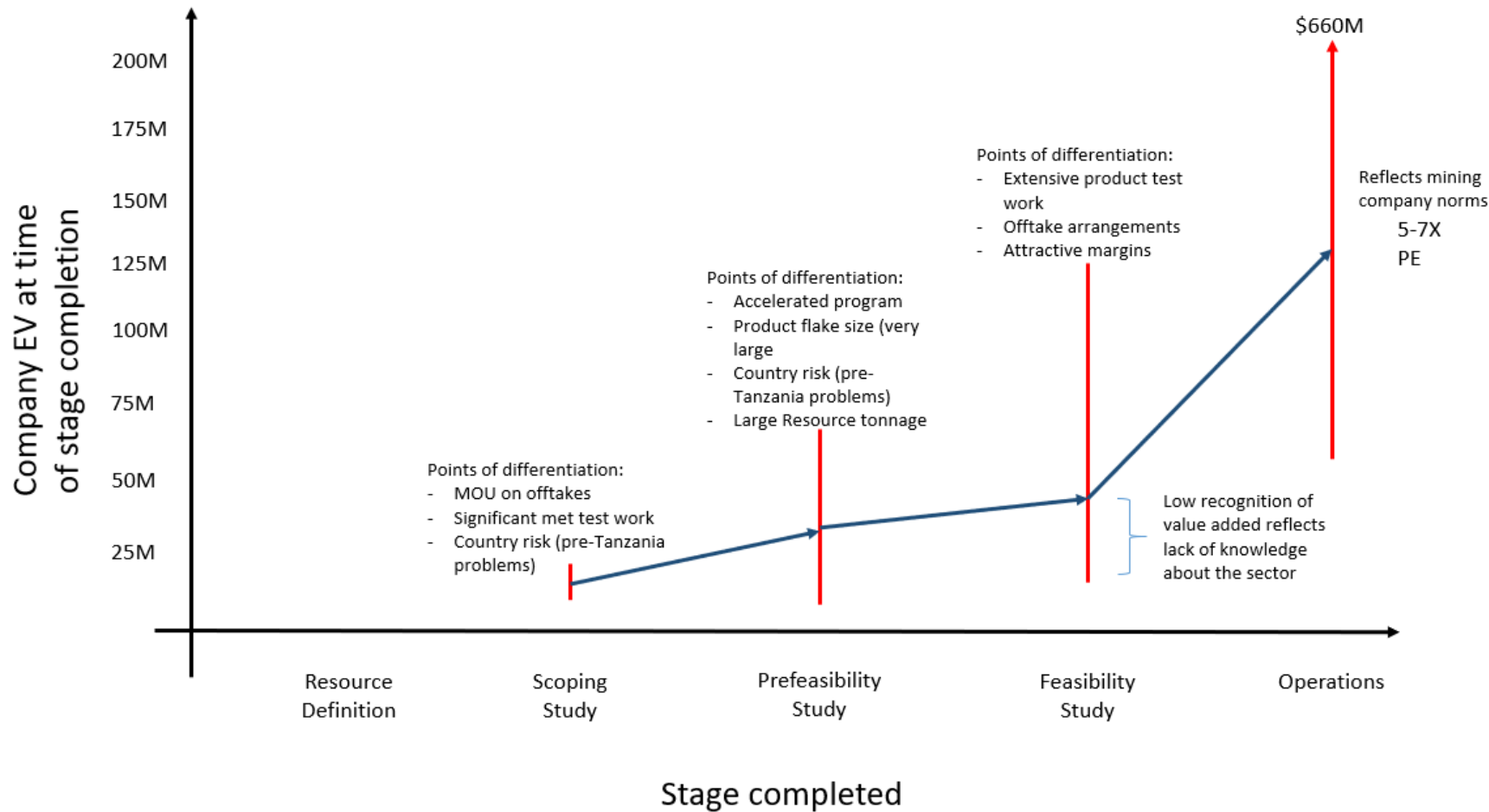
- Based on mineralogical results, the Company is targeting its current metallurgical program to supply the growing high end graphite markets (battery & expandable) as well as the established refractory and recarburiser markets

## 4 - Exploration Upside

- Haja Resource to be completed in November 2018
- Trenching to commence shortly at both Ianapera and Maniry to prove up further exploration potential.
- Work Completed & Outcomes (2018): Indicated Resource 8Mt at 7.2% TGC.



# Indicative Historic Enterprise Value - Graphite Developers



**“We will continue, as part of our ‘fast track to cash flow’ strategy, to include those points of differentiation that add value throughout the development process”**







**BlackEarth**  
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**Tom Revy**

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