

9 August 2021

ASX Announcement

COMPLETION OF MANIRY GRAPHITE PILOT PROGRAM DELIVERS OUTSTANDING RESULTS FOR BLACKEARTH

Highlights

- Completion of the Large Scale Pilot Program (“the Pilot Program”) has confirmed very high yields and coarse flake production results that are consistent with positive results previously published
- The Pilot Program has confirmed that Maniry Large Flake Graphite concentrate is highly suitable to feed its proposed Expandable Graphite Production plant with JV Partner, Metachem
- High fixed carbon (“FC”) results averaging 95.87% further demonstrate that Maniry Graphite Concentrate is highly suitable to the production of Lithium-ion batteries and could be used extensively in the production of Electric Vehicles (“EV’s)
- The Pilot Program has allowed the Company to establish its production plans with specific data provided to assist with final plant and flow sheet design
- The results will be used to assist in the fast tracking of the Company’s Definitive Feasibility Study (“DFS”) which will include, in the short term, the appointment of preferred globally recognised engineers
- Samples from the plant processing have been requested by three Tier 1 downstream, global processing companies that are significant suppliers to the rapidly expanding EV and high growth alternate graphite related markets

Commenting on this appointment, BlackEarth Managing Director, Tom Revy, said: *“The successful completion of the Pilot Program is a milestone moment for our Company. Not only are the results better than we had expected, they also validate our developed strategy to build a plant that can produce high grade graphite concentrate to meet the expanding demand for graphite. Additionally, Maniry graphite, once produced on a commercial scale, will immediately feed our proposed expandable graphite production plant in India and also be available to meet the demand from EV manufacturers and their supply chain.*

In the short term, the data from the Pilot Program will be used to complete our DFS, confirm our mining licenses in Madagascar and finalise our well progressed in country environmental and ESG plans”.

Pilot Program technical results

Following initial tests and modifications, the balance of the 54 tonnes of graphite ore were processed to assess the achievement of results with higher volumes.

The overall results were outstanding with over 40% of concentrate produced falling within the medium – jumbo flake category and over 30% in the large / jumbo flake category.

All of this was achieved whilst maintaining average FC% results of 95.87% which ranks Graphite produced from Maniry as some of the highest grade, large and jumbo flake product in the World.

Ore to concentrate recovery was 85.96% with concentrate yields of 6.56% achieved. These achievements, too, are world class and these factors are consistent with low-cost production operations.

Graphite form	Yield %	Fixed Carbon %	Recovery of Fixed Carbon %
Raw Ore	100	7.31	100
Concentrate	6.56	95.87	85.96

Figure 1 – Final Pilot Plant test results



Figure 2 – Pilot plant designed and used for program

Benefits of results achieved

The Pilot Program results have confirmed Maniry Graphite as suitable for a number of uses and this diversification provides the Company with a number of unique strategic advantages.

Firstly, the results indicate that Maniry graphite concentrate is highly suitable for the production of expandable graphite, and it is planned that a portion of this high grade, larger flake product will feed the Company's proposed expandable graphite production plant with our proposed JV partner, Metachem. The guarantee of a suitable feed source to the processing plant provides the JV with certainty of production.

Secondly, the Company continues to hold discussions with several potential buyers of its mid and fine flake, high grade product including RHI Magnesita. The demand for this concentrate from traditional users of graphite concentrate continues to grow and we are well positioned to supply product to this market in an environment of strong growth and continued increases in market prices.

And finally, the Pilot Program results demonstrate that Maniry concentrate can be produced to an exceptionally high FC level, while other technical attributes validate the concentrates' use in the production of EV's and the alternative energy market.

Whilst concentrate produced to a 94- 95% FC level is highly desired for the EV and battery production market, product already processed to a level exceeding 95.5% FC is very rare in the world supply market and will achieve a material pricing premium.

Growth in Demand and Concentrate Pricing

Recent reports have indicated a current world-wide shortage of jumbo flake graphite and projected short term shortage of all concentrate grades over the next few years (figure 3) .

As a result, material price increases have occurred and are projected to continue to grow as the strong demand for concentrate exceeds supplies in the next few years as indicated in figure 4.

Graphite Prices US\$mt (94 – 95FC product)

Concentrate 94 – 95FC	Price 2020	Price 2021	2022 est	2023 est	2024 – 28 est
P80 Large Flake FOB Price	US\$710	815	925	1,025	1,050 – 1,100
M100 Fine Flake – FOB Price	US\$485	590	700	800	825 - 885

Figure 3 - Source – UBS commodities report 3 March 2021

Continued Growth in demand for Graphite

The worldwide demand for graphite has grown in recent years and the impact and explosion in demand for EV energy is fuelling a faster level of growth with potential graphite shortages in the near future as outlined below.

Graphite Supply and Demand Forecast

Demand is forecast to exceed supply by 2023

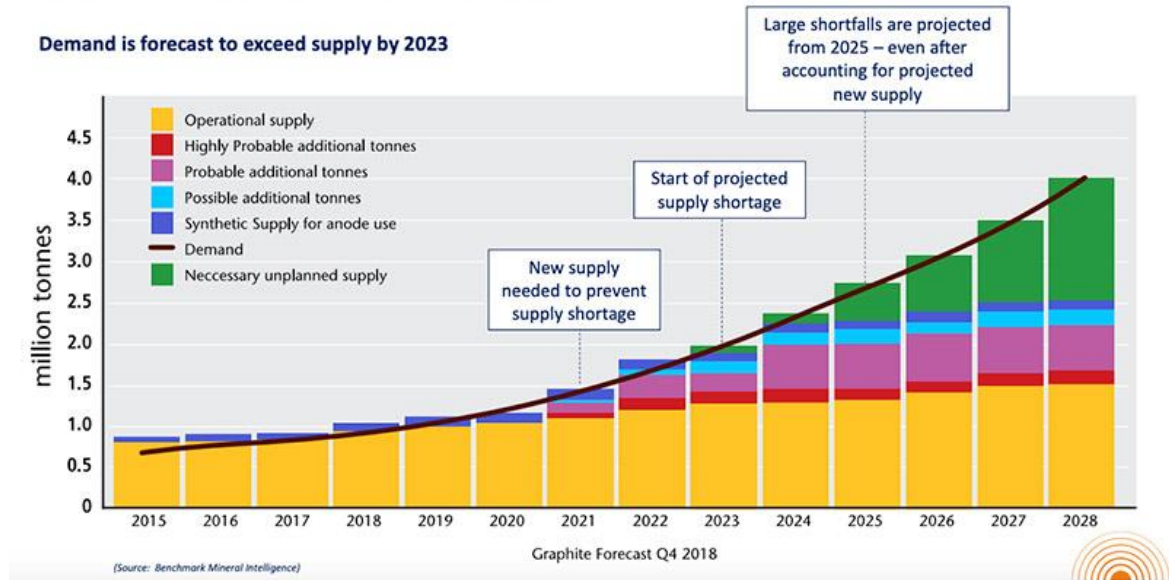


Figure 4 - Source: Benchmark Mineral Intelligence

Production Plans and DFS completion

Over the past two months, the Company has undertaken significant work in relation to the completion of its DFS.

Tasks in progress at present include –

- The ongoing drill program – designed to increase the Company's existing resource and provide additional details regarding the Company's resource
- Development of a robust and world class production flow sheet
- Drafts prepared of overall process design criteria, and engineering and power requirements
- Ongoing completion of a detailed environmental study designed to provide certainty and compliance with in country environmental requirements
- Updates to the Company's resource and overall valuation models.

The completion of the Company's large scale pilot program has provided significant technical and other information that underpins the completion of the Company's DFS.

Much of the detail available from the pilot program will now assist us to complete the DFS in the short term to the necessary confidence and quality standards the Board has set.

Environmental Management and ESG

The Company continues to work with its advisors in Madagascar with the development of a significant environmental plan, suitable for mine development, which is well progressed.

Additionally, the Company has recently engaged external consultants to assist with the implementation of the development of a world class, regionally and internationally focused ESG plan designed to achieve the following –

- ✓ To position the Company as a leading ethical producer of critical minerals required for the alternative, green energy markets

- ✓ To foster the development of regional training, education and health and safety programs in Southern Madagascar that will yield improvements to living conditions for all engaged in the Company's exploration and proposed mining region
- ✓ To exceed standards expected of governance programs and procedures relevant to our industry
- ✓ To deliver a positive social and economic outcome for all stakeholders with a focus on the delivery of material economic improvement to Southern Madagascar.

Details about our EGS and related initiatives will be outlined to the market in due course and the Board are focused on delivering positive, social outcomes in an environment that deserves the support of our Company and its key shareholders.

This release has been authorised by the Company's Disclosure Committee

CONTACTS

Tom Revy – Managing Director, BlackEarth Minerals NL	08 6145 0289 0411 475 376
David Round – Finance Director, BlackEarth Minerals NL	0411 160 445
Jane Morgan - Investor and Media Relations	0405 555 618

BlackEarth encourages investors to update their contact details to stay up to date with Company news and announcements here: <http://www.blackearthminerals.com.au/update-details/>

For more information – www.blackearthminerals.com.au

Forward Looking Statements

Some of the statements appearing in this announcement may be in the nature of forward-looking statements. You should be aware that such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which BlackEarth operates and proposes to operate as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement.

No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by a number of factors and subject to various uncertainties and contingencies, many of which will be outside the Company's control.

The Company does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this announcement. To the maximum extent permitted by law, none of the Company's Directors, employees, advisors or agents, nor any other person, accepts any liability for any loss arising from the use of the information contained in this announcement. You are cautioned not to place undue reliance on any forward-looking statement. The forward-looking statements in this announcement reflect views held only as at the date of this announcement.

This announcement is not an offer, invitation or recommendation to subscribe for, or purchase securities by the Company. Nor does this announcement constitute investment or financial product advice (nor tax, accounting or legal advice) and is not intended to be used for the basis of making an investment decision. Investors should obtain their own advice before making any investment decision.

Competent Person Statement

The information in this document that relates to Exploration Results, Exploration Targets and Mineral Resources is based on information compiled by Annick Manfrino, a Competent Person who is a member of the Australasian Institute of Mining and Metallurgy and a full-time employee of the Company.

Annick Manfrino has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

The information in this report that relates to metallurgical test work results is based on information compiled and reviewed by Mr Tom Revy, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Revy is an employee of BlackEarth Minerals NL. Mr Revy has sufficient experience relevant to the mineralogy and type of deposit under consideration and the typical beneficiation thereof to qualify as a Competent Person as defined by the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code, 2012 Edition).

Both Tom Revy and Annick Manfrino consent to the inclusion of the information in this document in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	Commentary
Sampling techniques	<p>Drilling</p> <ul style="list-style-type: none"> the drill hole database only consists of diamond drill holes sampling consists of 2m composite samples of quarter core with breaks at lithological discontinuities - typical 3-5Kg samples are cut using a diamond blade core saw duplicate samples are collected every 20th sample for QAQC purposes standards (CRMs) are inserted every 20th sample for QAQC purposes sampling is considered to be comprehensive and representative quarter cores are sent for analysis, the remaining core material is retained and stored in BEM's secure core shed metallurgical samples were obtained from diamond drilling using ½ cores. A split of crushed sample was used for metallurgical test work downstream testwork was based on a split sample taken from concentrate produced in previous metallurgical testwork program which results were reported on 18th December 2018 <p>Trenching</p> <ul style="list-style-type: none"> trenches are dug perpendicular to the strike of mineralised units with a JCB backhoe loader trained geologists log and systematically sample the trenches using a rock hammer at 2m intervals CRMs are inserted ~every 20th samples for QAQC purposes <p>Bulk Sample – 60 tonnes</p> <p>A 60t bulk sample, was taken in the same location in the east strata of the Razafy deposit (digging site centred on 487,040mE, 7,285,860mN). This samples was taken from the same location as the previous 250 kgs Stage 1 Pilot Test Program as announced on 26 February 2020</p> <p>The excavation location was chosen between drillholes MNDD047 and MNDD048, with trench MNT012 confirming the location of the strata and carbon grades, in an area where the mineralisation is thick and the base of oxidation close to the topographical surface</p>
Drilling techniques	<ul style="list-style-type: none"> diamond drilling only core size is HQ and NQ typically in 0.5-1.5m runs core from a select number of drill holes are orientated
Drill sample recovery	<ul style="list-style-type: none"> core recovery is routinely recorded every metre by trained geologists no bias or relationship has been observed between recovery and grade recovery is typically +80% within weathered rock, and +95% in fresh rock
Logging	Drilling

Criteria	Commentary
	<ul style="list-style-type: none"> • all drill holes are logged by qualified and experienced geologists • logging includes descriptions of geotechnical, mineralisation, structural and lithological aspects of the core and is digitally recorded using an industry standard code system • cores are systematically photographed • the data collected offers sufficient detail for the purpose of interpretation and further studies <p>Trenching</p> <ul style="list-style-type: none"> • all trenches are logged by qualified and experienced geologists • logging includes descriptions of mineralisation, structural and lithological aspects of the encountered rocks and is digitally recorded using an industry standard code system • the data collected offers sufficient detail for the purpose of interpretation and further studies
<p><i>Sub-sampling techniques and sample preparation</i></p>	<p>Drilling</p> <ul style="list-style-type: none"> • quarter cores are cut using a diamond core saw and collected for assay • 2 metre composite sampling is deemed to be comprehensive and representative for the style/type of mineralisation under investigation • duplicate samples are taken (remaining quarter core) every 20th sample • sample preparation from quarter core to pulp is undertaken at BEM's sample preparation facility in Antananarivo (former Intertek-Genalysis facility) <p>Trenching</p> <ul style="list-style-type: none"> • the base of the trench is chipped to obtain a representative sample over 2m intervals. Although the sampling technique is not ideal, the technique is deemed satisfactory for this exploratory phase of work • QAQC measured are deemed satisfactory for this type of sampling and exploratory phase of work • the sample size (3kg) is deemed satisfactory to the grain size of the material being sampled • sample preparation from 3Kg chip sample to pulp is undertaken at BEM's sample preparation facility in Antananarivo <p>Bulk Samples–60 tonnes</p> <ul style="list-style-type: none"> • a dense grid sampling (0.5mx1m lines, for a total of 39 samples of 1kg) covering the complete excavation area was completed mid depth of the excavation of the 60t bulk sample for close space analysis of the mineralisation continuity and full control of the quality of the excavated material. The samples were prepared at BEM's Antananarivo preparation laboratory for analysis at Intertek Perth • in both instances, portable XRF measurements were completed during excavation in parallel to the sampling
<p><i>Quality of assay data and laboratory tests</i></p>	<p>Drilling & Trenching</p> <ul style="list-style-type: none"> • assaying is undertaken by Intertek Genalysis in Perth (Aus) • samples are pulverised to 75 microns, roasted to 420°C and digested with a weak acid. Final analysis is undertaken by CS analyser (Code: C73/CSA)

Criteria	Commentary
	<ul style="list-style-type: none"> standards and duplicates (duplicates only for core, not for trench samples) are inserted every 20th sample by the BEM technical team in addition to the internal QAQC from the laboratory. No issues been observed with QAQC <p>Bulk Sample – 60tonnes</p> <ul style="list-style-type: none"> for the 60t bulk sample, the 39 samples of the dense grid sampling were analysed at Intertek Perth. The 60t bulk sample was also analysed by BGRIMM as part of the metallurgical testing <p>Metallurgical Tests</p> <ul style="list-style-type: none"> metallurgical work was undertaken by BGRIMM technology Group in Beijing. The metallurgical test work comprised. <ul style="list-style-type: none"> Head assay, mineralogy and comminution testing Primary milling optimisation rougher flotation Cleaner flotation and re grind optimisation Locked cycle flotation test Concentrate assay and sizing Industry standard test methods and analytical techniques have been employed
Verification of sampling and assaying	<ul style="list-style-type: none"> significant intersections have been verified by alternative company personnel no twin holes have been completed all data is recorded digitally using a standard logging system and files are stored in an industry standard database
Location of data points	<p>Drilling</p> <ul style="list-style-type: none"> Razafy: all collars have been located using a DGPS (accurate to 1cm) Projection and grid systems used: UTM (WGS84 Z38S). The down hole azimuth and dip is recorded using a Magshot down hole instrument (accurate to 1deg) Haja: topography and collar survey data is based on measurements taken on GPS handheld device <p>Trenching</p> <ul style="list-style-type: none"> all XYZ surveying is collected using a handheld Garmin GPS accurate to ±4m Projection and Grid system used: UTM (WGS84) Z38S <p>Bulk Sample – 60 tonnes</p> <ul style="list-style-type: none"> the limits of the 60t bulk sample excavation were surveyed using a GPS handheld device, as were the end points of the dense grid sampling lines covering the excavation site at mid-depth
Data spacing and distribution	<p>Drilling</p> <ul style="list-style-type: none"> the drill hole grid spacing is 100m along strike by 30m across strike at Razafy, and 50m across strike at Haja the drill hole spacing allowed to follow the graphitic mineralisation outlines from section to section and down dip samples have been composited to 2m length within the mineralised lenses interpreted to complete the statistical analysis, variography and estimation

Criteria	Commentary
	<p>Trenching</p> <ul style="list-style-type: none"> the geologist in charge of the program systematically samples all visible mineralised units as well as the lithologies either side of these this data is not thought to be appropriate for resource estimation purposes no sample compositing has been applied.
Orientation of data in relation to geological structure	<p>Drilling</p> <ul style="list-style-type: none"> the drilling grid matches the strike of the orebody the orientation of the drilling is not expected to introduce sampling bias as drill holes intersect the mineralisation at a sufficient angle to the dip of the orebody, in addition, the mineralisation envelopes are interpreted in three-dimensions <p>Trenching</p> <ul style="list-style-type: none"> the trenches are oriented perpendicular to the perceived orientation of the outcropping mineralisation, but since sampling is two-dimensional and not perpendicular to the dip of mineralisation, reported intercepts will be wider than the true width of the mineralised unit <p>Bulk Sample – 60 tonnes</p> <p>the 60t bulk sample was excavated within an area of approximately 7m along strike by 3m across strike</p>
Sample security	<p>Drilling</p> <ul style="list-style-type: none"> samples are cut and sampled on site before being transported to BEM's sample preparation facility in Antananarivo sample pulps are freighted by plane to Intertek Genalysis in Perth (Aus) for assaying the remaining core samples are kept in a secure facility adjacent to BEM's offices in Antananarivo <p>Trenching</p> <ul style="list-style-type: none"> samples are packaged and stored in secure storage from time of gathering to sample preparation <p>Bulk Sample – 60 tonnes</p> <ul style="list-style-type: none"> the material was bagged on site into bulk bags, and loaded on trucks the 60t bulk sample was trucked to the port of Toliara, loaded in a container, shipped to China and delivered to BGRIMM
Audits or reviews	<ul style="list-style-type: none"> sampling procedures has been reviewed by external auditors Sigma Blue Pty. Ltd. and OMNI GeoX Pty. Ltd, with site visits at the beginning of the programmes

Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

Criteria	Commentary
Mineral tenement and land tenure	<ul style="list-style-type: none"> work was undertaken upon permits 5391, 5393, 5394, 25094, 25605, 39751

Criteria	Commentary
status	<ul style="list-style-type: none"> the tenements are located within the inland South West of Madagascar tenements are held 100% by BlackEarth Madagascar SARL, a wholly owned subsidiary of BlackEarth Minerals NL through Madagascar Graphite Ltd no overriding royalties are in place there is no native title agreement required tenure does not coincide with any historical sites or national parkland tenements are currently secure and in good standing
Exploration done by other parties	<ul style="list-style-type: none"> regional mapping by BRGM historical diamond drilling and trenching by Malagasy Minerals. Ltd. (2014-2016)
Geology	The project overlies a prominent 20km wide zone consisting of a folded assemblage of graphite and quartz-feldspar schists, quartzite and marble units, with lesser intercalated amphibolite and leucogneiss. This zone, termed the Ampanihy Belt is a core component of the Neoproterozoic Graphite System. The belt is interpreted as a ductile shear zone accreted from rocks of volcanic and sedimentary origins
Drillhole Information	refer to Section 1
Data aggregation methods	<ul style="list-style-type: none"> cut offs of 5%, 10% 15% and 20% graphitic carbon have been used for aggregated reported intercepts no cutting of high grades is applied all trench samples represent a 2m interval length metallurgical sample bulk samples were composited and subject to two stage crushing to a nominal -3.35mm and mixed to form a master composite. The master composite was there rotary split in to test work charges.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> sampling does not occur perpendicular to the dip of mineralisation and therefore is not truly representative of the true width of the mineralised unit the dip of the mineralised units is known from previous drilling and/or the trenching logging the dip of the mineralised unit is shown within the diagrams
Diagrams	refer to body of text above for diagrams and tabulated intercepts when applicable
Balanced reporting	<ul style="list-style-type: none"> all significant results that are material to the project have been reported any data that has not been released has been deemed insignificant
Other substantive exploration data	no other exploration related data has been collected that requires reporting
Further work	<ul style="list-style-type: none"> future exploration work at Maniry is likely to include further mapping, trenching and drilling Additional downstream processing including purification of spheronised graphite products for Li-ion battery anodes.. Future metallurgical work will include optimising test work relating to the production of expandable graphite as well as variability test work on core samples taken within the Maniry Graphite Project area.

Criteria	Commentary

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	Commentary
Database integrity	<ul style="list-style-type: none"> the drill hole database has been loaded in an industry standard database validation for duplicates, missing data, outliers, erroneous intervals is completed before proceeding to the interpretation and analysis
Site visits	<ul style="list-style-type: none"> Annick Manfrino, Competent Person for the resource estimate visited the site during the drilling programme in March-April 2018 drilling, sampling and sample preparation procedures were reviewed and are considered of industry standard
Geological interpretation	<p>Razafy</p> <ul style="list-style-type: none"> the confidence in the geological interpretation of the graphitic lenses is considered robust for the purpose of estimating and reporting Indicated and Inferred resource graphite mineralisation hosted within graphitic schists and gneiss, visibly recognizable from the background rock the complete extent of the two main lenses outcrop and can be followed by surface mapping trenches have been used with success in early exploration stages to confirm the strike continuity no major faulting or other structural disruption has been mapped in the deposit area and the location of the drilling intercepts of the graphitic mineralisation confirms the position of the lenses anticipated from the trenches observations the boundary between graphitic schists and gneiss and the surrounding material is usually sharp with TGC below 0.5% in the background material changing to +3% grades in the graphitic lenses, leaving few options to shift the boundaries position when interpreting the mineralised body mineralisation envelopes were interpreted at a nominal +3% TGC cut-off grade only rare occurrences of non-mineralised material are included in the two main lenses logged graphitic rich zones correspond extremely well with TGC assay results no alternative interpretation has been considered at present the weathered horizon (oxide) can easily be interpreted from the sulphur depression observed in the assay data. The oxide horizon is approximately 20m thick. The transition zone is usually of very limited thickness when present <p>Haja</p> <ul style="list-style-type: none"> the confidence in the geological interpretation of the graphitic lenses at Haja is considered robust for the purpose of estimating and reporting a resource of the Inferred category graphite mineralisation hosted within graphitic schists and gneiss, visibly recognizable from the background rock the complete extent of the Haja lenses outcrop and can be followed by surface mapping

Criteria	Commentary
	<ul style="list-style-type: none"> trenches have been used with success in early exploration stages to confirm the strike continuity no major faulting or other structural disruption has been mapped in the deposit area and the location of the drilling intercepts of the graphitic mineralisation confirms the position of the lenses anticipated from the trenches observations the boundary between graphitic schists and gneiss and the surrounding material is usually sharp with TGC below 0.5% in the background material changing to +1.5% grades in the graphitic lenses, leaving few options to shift the boundaries position when interpreting the mineralised body mineralisation envelopes were interpreted at a nominal +1.5% TGC cut-off grade the Haja orebody is composed of three adjacent parallel lenses dipping 25° to the east which often coalesce into a single body logged graphitic rich zones correspond extremely well with TGC assay results no alternative interpretation has been considered at present the base of the weathered horizons- oxide & transition- can be interpreted from the sharp change in sulphur grades
Dimensions	<p>Razafy</p> <ul style="list-style-type: none"> the Mineral Resource encompasses the Razafy deposit and a new prospect named Razafy East the Razafy deposit comprises two major lenses – East Main and West Main lenses-, and four minor lenses adjacent to the main zone the solids interpreting the two main zones are 1450m long with a maximum plan width of 65m for the East main lens, and 60m for the West main lens in the south part of the deposit the two main lenses extend 155m depth below surface and define the lowest depth below surface at which a resource has been estimated the Razafy block model extents 1625m along strike, 900m across strike and 200m depth to cover the East Razafy prospect area <p>Haja</p> <ul style="list-style-type: none"> the resource model is based on six fences of drill holes 100m apart with drill holes separated by 50m on section the Haja resource model cover the volume occupied by the Haja orebody and extents 725m north-south, 550m east-west and 210m at depth the solids interpreting the Haja graphitic orebody extents 630m north-south, 500m east-west and 170m vertically
Estimation and modelling techniques	<p>Razafy</p> <ul style="list-style-type: none"> TGC and sulphur have been estimated by ordinary kriging using 140m along strike by 50m down dip by 12m across strike search ellipse which defines the outmost distances to which blocks can be extrapolated from drill holes drill sections are spaced regularly at a 100m (with the exception of the first northern section which is 200m away from the second section), with drill holes spaced at 30m across sections kriging parameters for both TGC and sulphur were obtained from modelling the directional variograms (normal variograms) for the two main lenses nugget values are 20% of the total sill for both elements the grade estimation was completed using Geovia GEMS mining software with partial

Criteria	Commentary
	<p>blocks to honour the volume of the grade envelope solids</p> <ul style="list-style-type: none"> the block model is based on 25m along strike by 5m across strike by 5m Z, which is considered adequate given the current drill spacing of 100m section lines by 30m spacing mineralised envelopes were used as hard boundaries during interpolation the base of oxide was used as a hard boundary for the sulphur estimation but as a soft boundary for the TGC estimation no top-cut measure was used as there is no evidence of outliers. The maximum TGC value for the 2m sample assays is 15% the grade estimates -TGC & sulphur- were validated visually and statistically and honour spatially and statistically the input data no previous estimate exists for this deposit <p>Haja</p> <ul style="list-style-type: none"> TGC and sulphur have been estimated by ordinary kriging using Geovia GEMS mining software mineralised envelopes were used as hard boundaries for the TGC during the interpolation oxidation zones were used as hard boundaries for the interpolation of Sulphur no top-cut was used for TGC but the influence of grades above 6.5% TGC was limited to 70mx70mx6m during interpolation. The 6.5% TGC grade corresponds to a statistical change in the data distribution. The maximum TGC value is 11.45% no top-cut measure was used for sulphur the grade estimates -TGC & sulphur- were validated visually and statistically and honour spatially and statistically the input data no previous estimate exists for this deposit
Moisture	<ul style="list-style-type: none"> the resource is reported for Razafy and Haja on a dry tonnage basis
Cut-off parameters	<ul style="list-style-type: none"> the resource is reported for Razafy at a 6% TGC cut-off grade and a 5% TGC cut-off grade for Haja. These cutoff grades are in line with other reported Mineral Resources in East Africa a Scoping Study has been completed on Razafy – refer to this study for cut-off grade calculations no mining studies have been completed to date for Haja and cut-off grade calculations are not available
Mining factors or assumptions	<ul style="list-style-type: none"> based on the orientation, thickness and depth to which the graphitic lenses have been modeled and their estimated TGC, the potential mining method is considered to be open pit mining for both deposits
Metallurgical factors or assumptions	<p>Razafy</p> <ul style="list-style-type: none"> metallurgical testwork program has been undertaken on drill core samples taken from a drill program completed in 2018. A total of 20 diamond drill holes were sampled, to create representative composite samples sample preparation was undertaken by ALS Metallurgy in Perth WA. BatteryLimits sub samples (2x 1 kg) were issued to BGRIMM technology group for initial confirmatory flotation testwork. The samples were stage ground in a rod mill to 100% passing 1mm. The samples underwent rougher flotation and up to 6 stages

Criteria	Commentary
	<p>of regrind polishing and 9 stages of cleaner flotation. multiple stages of cleaning (up to 6), with recleaning. The results indicated that high grade (94% TGC) concentrates can be produced at a recovery of 87% in open circuit</p> <p>Haja</p> <ul style="list-style-type: none"> • in accordance with Clause 49 of the JORC code (2012), the product specifications and general product marketability were considered to support the Mineral Resource Estimate for Industrial Minerals • independent preliminary flotation testwork completed by ALS Global Laboratory (Perth, WA) on three composites are reported in previous announcements and shows that: <ul style="list-style-type: none"> ○ 16% to 37% in overall weight of concentrate is of large or greater flake size category (+ 180 micron) at a concentrate grade above 97% TGC ○ overall concentrate grades range from 93.6% to 95.6% TGC
Environmental factors or assumptions	<ul style="list-style-type: none"> • it is assumed that the processing of ore will have minimal environmental impact. This is based upon other graphite processing operations and basic assumptions on how graphite ore will be processed at Maniry
Bulk density	<p>Razafy</p> <ul style="list-style-type: none"> • the bulk density used to report the Razafy Mineral Resource is based on 19 measurements made by the water displacement method by the Intertek Perth laboratory • a 2.07t/m³ value was used for the oxide material and 2.17t/m³ for the fresh material <p>Haja</p> <ul style="list-style-type: none"> • the bulk density data used to report the resource comprises 56 measurements made by caliper method on competent fresh core drilled during the 2018 BEM's drilling campaign which cover the depth and extent of the deposit. The data has been averaged in 20m vertical slices, and corresponding values assigned to the block model range from 2.05 m/t³ in the weathered material to a maximum of 2.69 m/t³ at the lowest depth. The average density of the resource reported is 2.20m/t³
Classification	<p>Razafy</p> <ul style="list-style-type: none"> • the two main lenses are continuous over the strike of the deposit. They can be followed on surface by mapping without interruption and are not disrupted by faulting • trenching completed during the early exploration stages, but not used in the resource estimate, confirm the location at surface of the thickness of the mineralisation estimated by the model • with a 100m drill section spacing and search ellipse of 140mx50mx12m, extrapolation of blocks is limited • all minor lenses, including the East Razafy prospect have been classified as Inferred material • for the East and West main lenses, the kriging slope of regression obtained for the TGC estimate was used to separate Indicated from Inferred resource at depth. Blocks with a slope of regression greater than 0.5 were classified as Indicated, the other blocks were classified as Inferred • the classification is based on a high degree of geological understanding of the mineralisation occurrence and spatial distribution, correlated by systematic drilling information with limited extrapolation • the Mineral Resource estimate appropriately reflects the view of the Competent

Criteria	Commentary
	<p style="text-align: center;">Person</p> <p>Haja</p> <ul style="list-style-type: none"> • the Haja lenses are continuous over the length of the deposit drilled • the mineralisation can be followed at surface from mapping and with the trenches available. Graphitic mineralisation is easily visually distinguished from the surrounding background rock from its colour and the presence of visible graphitic flakes • the trenches completed during the early exploration stages, but not used in the resource estimate, confirm the location at surface of the thickness of the mineralisation estimated by the model • at either strike end of the deposit, extrapolation has been limited by the wireframed envelopes which were extended 50m from the first and last drill hole fences • downdip, the mineralisation was extrapolated no more than 70m from the last drill hole intercepts on which the wireframes are based • all material inside the wireframe envelopes within the ranges detailed above has been classified as inferred material • the classification of the resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	<ul style="list-style-type: none"> • no audit nor review were undertaken for the Razafy and Haja Mineral Resource estimates
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> • the relative accuracy of the Mineral Resource estimates is reflected in the reporting of the resources as per the guidelines of the JORC Code 2012 edition • no other estimation method or geostatistical assessment has been performed • the Mineral Resource estimates of the Razafy and Haja deposits are global estimates of tonnes and grades • tonnages and grades above the nominated cut-off grades applied on TGC are provided in the body of the announcement • the contained graphite values were calculated by multiplying the TGC grades (%) by the estimated tonnage on a block by block basis • no production data is available to reconcile results with