

## ASX Announcement

# High-Grade Graphite Discovery at Maniry

- High-grade assay results received from trenching on the northwest extension of Razafy, highlights include:
  - 48m @ 10.22% TGC (Total Graphitic Carbon) Inc. 2.0m @ 19.20% & 6.0m @ 15.10%
  - 12.0m @ 13.32% Inc. 6.0m @ 19.43%
- First batch of assay results received with further results expected over the coming weeks from numerous high-grade targets at the Maniry Graphite Project (“Project”)
- Discovery underlines potential for further high-grade graphite resources proximal to Razafy that have the potential to further enhance the value of the Project

BlackEarth Minerals NL (ASX: BEM) (“**BlackEarth**”, the “**Company**”) is pleased to provide an update on the assay results recently received from the trenching programs at the Maniry Graphite Project in Southern Madagascar. The Maniry trenching program was completed in early-December with 47 trenches excavated for 4,314.4m metres, with 2,183 samples collected for analysis (Figure 1). Thus far, 479 assay results have been returned from the laboratory with the remaining assay results expected to be received and reported upon during the current quarter.

Exceptional assay results have been received from Trench MNT041 and MNT041a which were excavated at the **Razafy NW** prospect, these are summarised in the bullet points below and depicted in Figures 2-3:

- 56.0m @ 9.89% TGC, Inc. 48.0m @ 10.22%, Inc. 2m @ 19.20% and 6.0m @ 15.10% (MNT041)
- 36.0m @ 8.07% TGC Inc. 12.0m @ 13.32% Inc. 6.0m @ 19.43% (MNT041a)

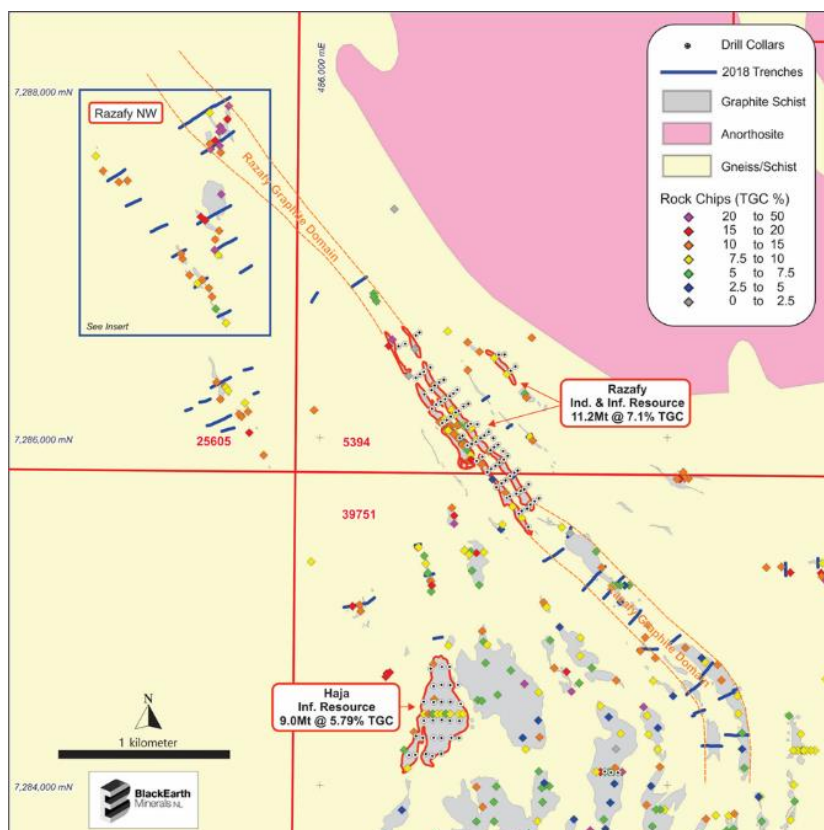


Figure 1 – Maniry Graphite Project – 2018 Trenching Program Overview

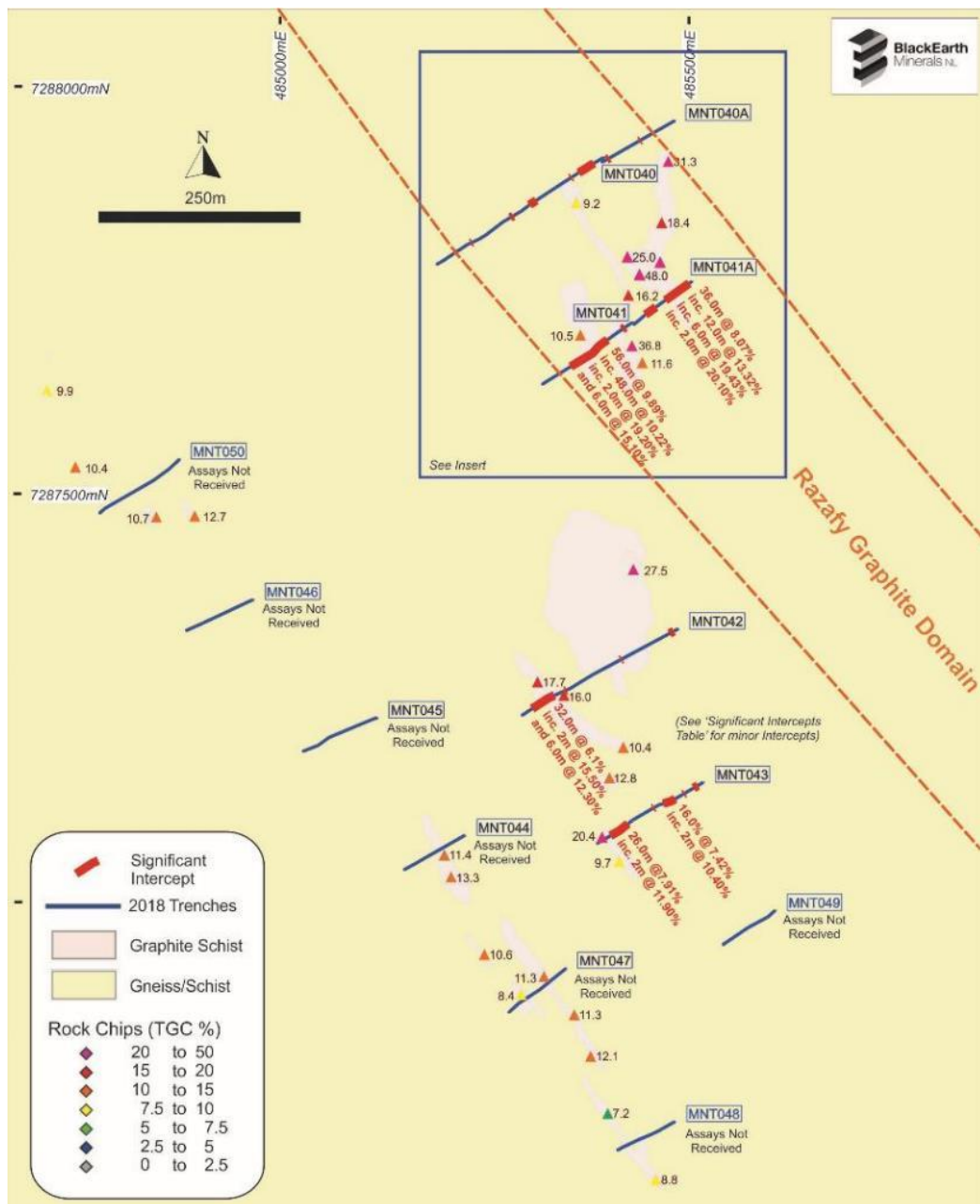
At this early stage, the dimensions and therefore size of the graphite deposit are not known, however, historical trenching across the Razafy Graphite Deposit lenses proved to provide a fairly accurate representation of the thickness and grade of graphite to be expected during exploration drilling into the lens, an example of this can be observed in Figure 4. With this in mind, BlackEarth believes, with drilling, this significant discovery has the potential to be converted into an estimated mineral resource adding high-grade resource tonnes to BlackEarth's mineral inventory.

Further significant assay results received from Razafy NW include (All significant results are summarised within table 1):

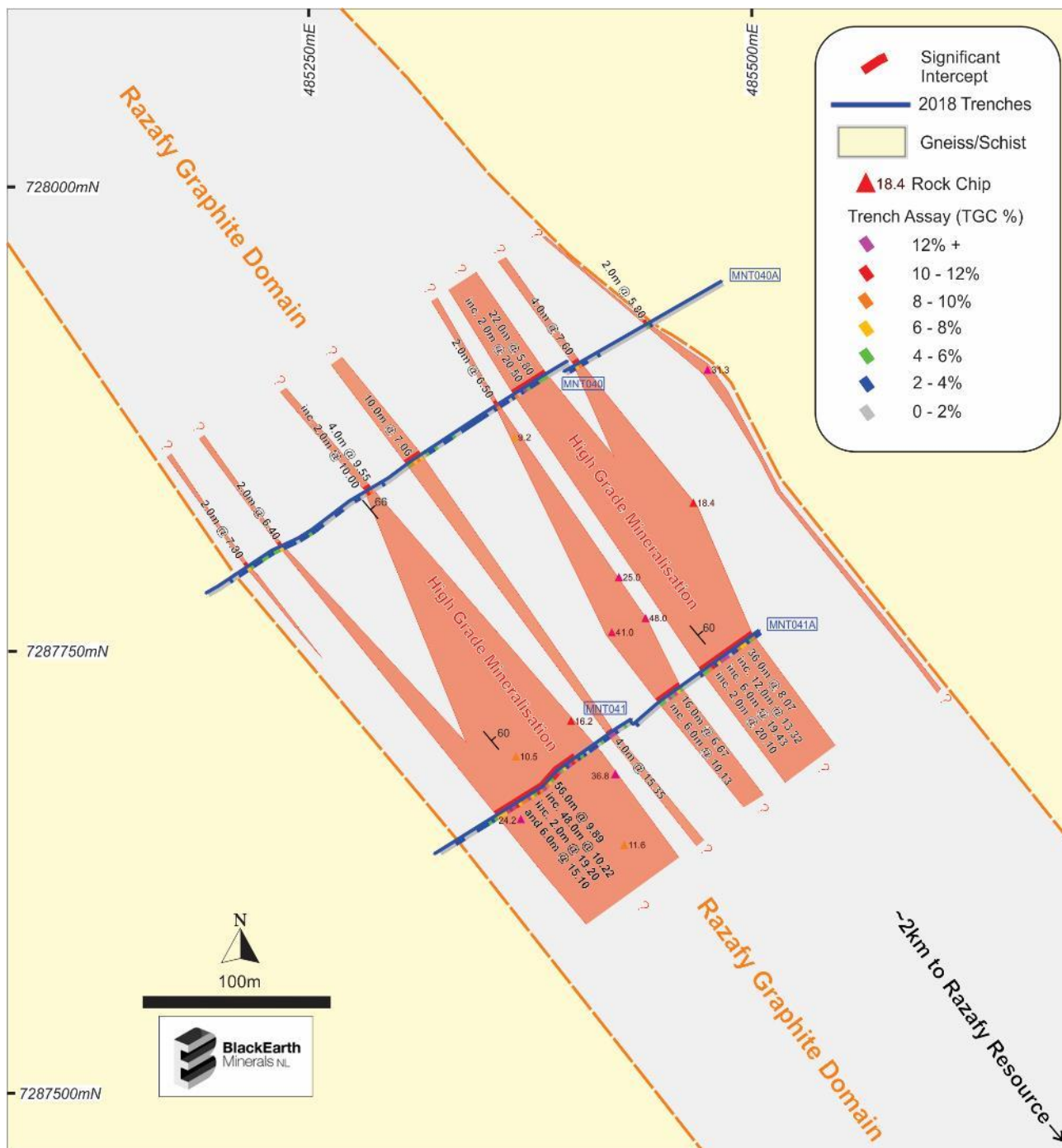
- **20.0m @ 7.06% TGC (MNT040)**
- **4.0m @ 15.35% TGC (MNT041)**
- **16.0m @ 6.67% TGC Inc. 6.0m @ 10.13% (MNT041a)**
- **32.0m @ 6.14% TGC Inc. 2.0m @ 15.50% and 6.0m @ 12.30% (MNT042)**
- **16.0m @ 7.42% TGC Inc. 2.0m @ 10.40% (MNT043)**
- **26.0m @ 7.91% TGC Inc. 2.0m @ 11.90% (MNT043)**

It is worth noting that these significant results are comparable, if not better than the results that were achieved during historical trenching at Razafy and Haja.

The Razafy NW high-grade discovery is part of the 'Razafy Domain' and directly along strike from the Razafy Mineral Resource. This discovery has now extended the known mineralisation within the 'Razafy Domain' to >5km in length. This domain is currently the main focus of exploration efforts by BlackEarth with the aim of outlining the scale and potential of the domain and also the delineation of high-grade mineralisation to compliment the initial stages of a mining operation.

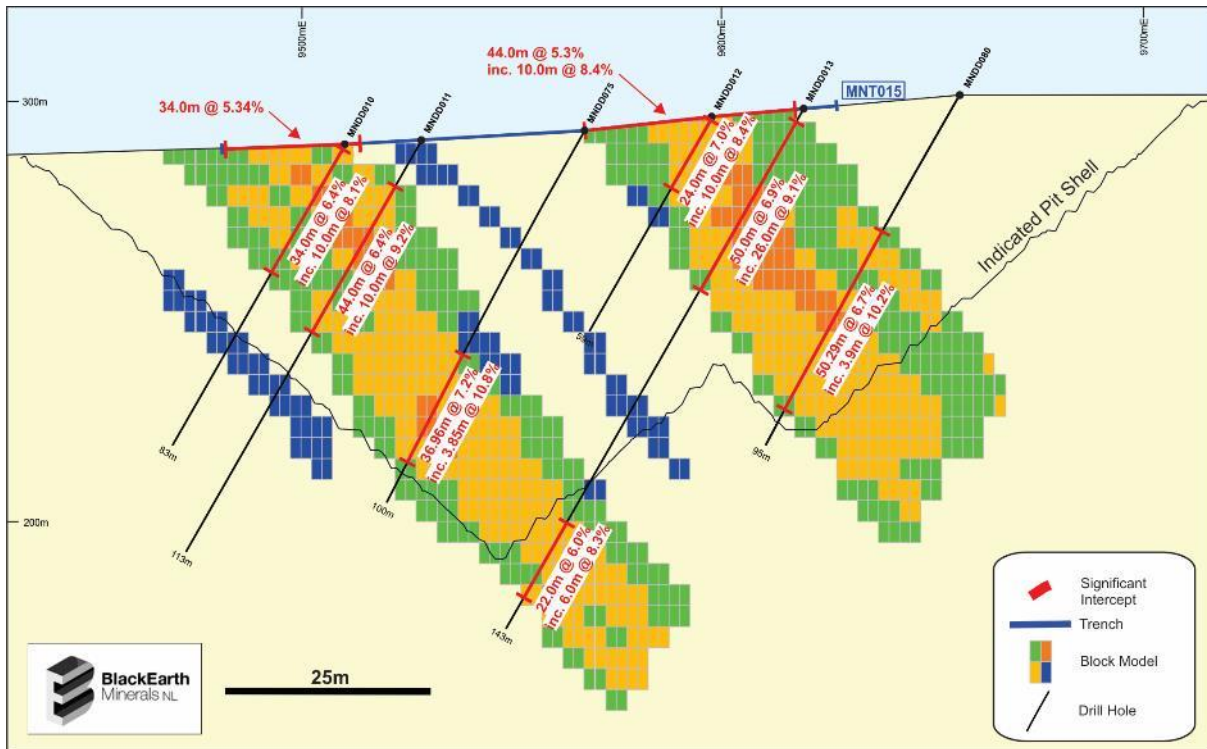


**Figure 2 – Maniry Graphite Project – Razafy NW Prospect – Trenching Results**



**Figure 3 – Maniry Graphite Project – Razafy NW Prospect – Trenching Results**





**Figure 4 – Maniry Graphite Project – Razafy Deposit – Cross Section – Drilling v Trenching Comparison**



**Figure 5 - Razafy NW Prospect – Trenching High Grade Samples**

**Table 1 – Trenching Significant Results**

Trench_ID	Easting	Northing	RL	Length (m)	Azi (deg)	From (m)	To (m)	Inteval (m)	TGC (%)	
MNT040	485396	7287913	300	242	237	14.0	36.0	22.0	5.80	
						inc.	28.0	30.0	2.0	20.50
						and	46.0	48.0	2.0	6.50
						and	98.0	108.0	20.0	7.06
						and	132.0	136.0	4.0	9.55
						inc.	134.0	136.0	2.0	10.00
						and	192.0	194.0	2.0	6.40
						and	214.0	216.0	2.0	7.80
MNT040a	485483	7287958	304	102	240	48.0	50.0	2.0	5.80	
						92.0	96.0	4.0	7.60	
MNT041	485432	7287711	306	132	235	12.0	16.0	4.0	15.35	
						and	38.0	94.0	56.0	9.89
						inc.	40.0	88.0	48.0	10.22
						(inc.)	50.0	52.0	2.0	19.20
						(inc.)	82.0	88.0	6.0	15.10
MNT041a	475504	7287761	305	88	233	4.0	40.0	36.0	8.07	
						inc.	22.0	34.0	12.0	13.32
						(inc.)	22.0	28.0	6.0	19.43
						((inc.))	24.0	26.0	2.0	20.10
						and	54.0	70.0	16.0	6.67
						inc.	58.0	64.0	6.0	10.13
MNT042	485487	7287335	307	218	240	6.0	12.0	6.0	5.90	
						and	78.0	80.0	2.0	5.60
						and	156.0	158.0	2.0	6.30
						and	172.0	204.0	32.0	6.14
						inc.	172.0	174.0	2.0	15.50
						inc.	182.0	188.0	6.0	12.3
MNT043	485518	7287147	308	150	240	8.0	14.0	6.0	5.13	
						and	26.0	28.0	2.0	10.60
						and	40.0	56.0	16.0	7.42
						inc.	40.0	42.0	2.0	10.40
						and	68.0	70.0	2.0	9.60
						and	106.0	132.0	26.0	7.91
						inc.	120.0	122.0	2.0	11.90

Reporting cut-off grades @ 5, 10, 15 & 20% TGC

Coordinates WGS84 Z38S

**Managing Director, Mr Tom Revy commented:**

“Last month was a milestone event with the release of our Scoping Study on our Maniry Graphite Project in Madagascar. Bottom line is that we set ourselves some very ambitious targets in our first 12 months, targets that many thought were too much of a stretch, but we met them and the results we achieved certainly exceeded even our expectations and today’s release is no exception.

As the company officially moves from explorer to developer, the potential of the Maniry graphite project is extraordinary – the size of the district, the work completed to date and the value that lies before us.

The more we look, the more we find, the better the Project looks.”

**CONTACTS**

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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/>

**Competent Person’s Statement**

The information contained in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Mr. Peter Langworthy, a member of The Australasian Institute of Mining and Metallurgy. Mr. Langworthy is an employee of OmniGeoX Pty Ltd which is a consultant to BlackEarth. Mr. Langworthy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the “Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.” Mr. Langworthy consents to the inclusion in this report of the matters based on the 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 and Haja at the Maniry Graphite Project is extracted from the reports entitled “Update – Maiden Resource Estimation for Razafy at the Maniry Graphite Project” dated 14 August 2018 and “Maiden Resource Estimation for Haja” dated 27 December 2018, both reports are 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.

For more information – [www.blackearthminerals.com.au](http://www.blackearthminerals.com.au)



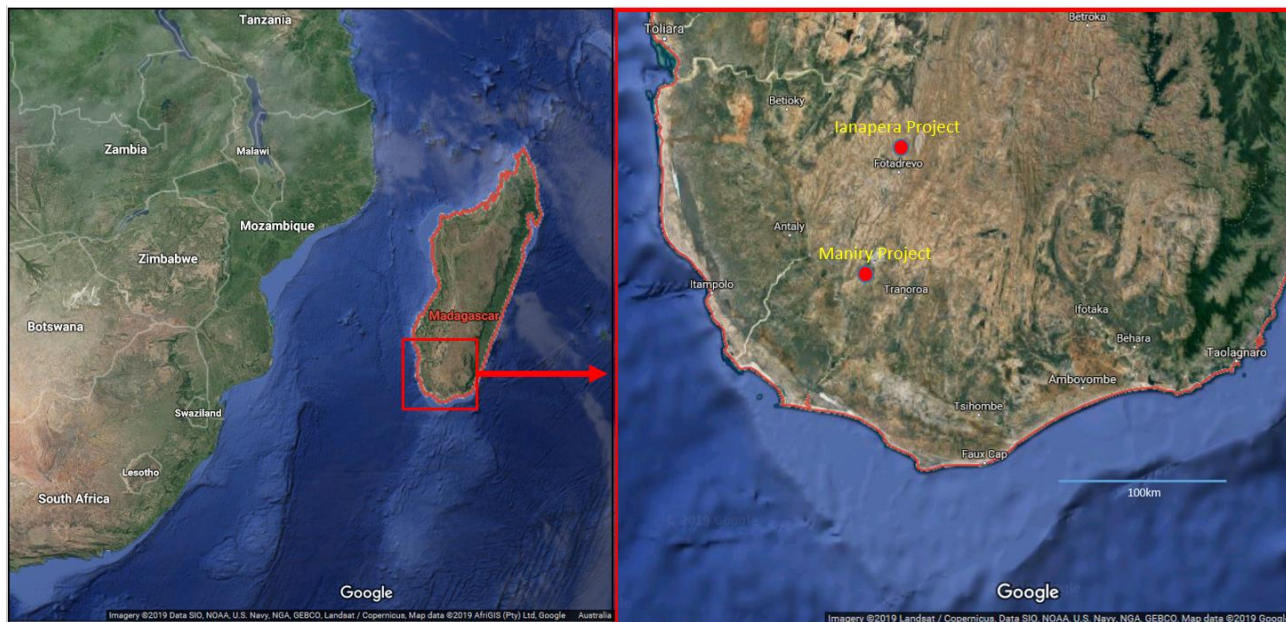


**BlackEarth  
Minerals NL**

ACN 610 168 191

**About BlackEarth Minerals NL ( [www.blackearthminerals.com.au](http://www.blackearthminerals.com.au) )**

BlackEarth Minerals NL (ASX: BEM) ("Company") is an ASX listed company focused primarily on the development of its 100% owned Madagascan Maniry and Ianapera graphite projects



The location of the Company's primary graphite projects: Madagascar (Maniry & Ianapera - above)

#### Maniry Graphite Project - Scoping Study Results

Project life (processing)	10 years
NPV @ 10% pre-tax	US\$ 103M
IRR pre-tax	42%
Project CAPEX Stage 1	US\$ 41M (500ktpa ore)
Stage 2	US\$ 29M (1Mtpa ore)
Operating Cost FOB (Port of Ehoala)	US\$ 593/t
Payback for Stages 1 & 2	3.7 years (Stage 1 only: 2.7 years)
Annual graphite production	Av 30ktpa (Stage 1 – Years 1-3) Av 60ktpa (Stage 2 – Years 4+ )
Average Basket Price	US\$ 1215/t

Refer to ASX Release 30 Jan 2019 – Positive Scoping Study results for the Maniry Graphite Project

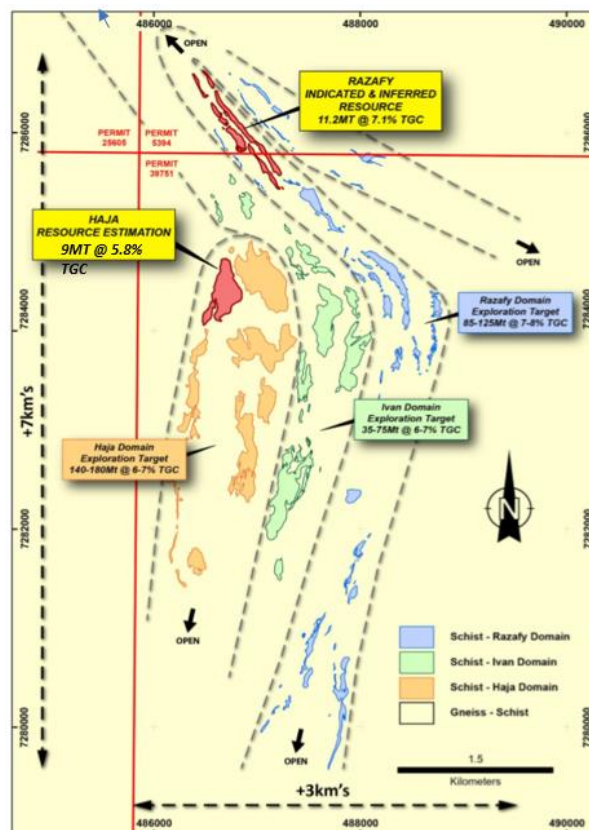
Project	Deposit	Tonnes (Mt)	TGC Grade (%)	Contained Tonnes (t)
Maniry	Razafy - Indicated	8.0	7.22	577,600
	Razafy - Inferred	3.2	6.80	217,600
	Razafy Total	11.2	7.10	795,200
	Haja - Inferred	9.0	5.79	521,100
	Haja Total	9.0	5.79	521,100
	<b>Total Resources</b>	<b>20.2</b>	<b>6.51</b>	<b>1,316,300</b>

Razafy - Resource reported at a 6% TGC cut off with constraining wireframe so lids defined at a nominal 3% cut-off grade

Haja - Resource reported at a 5% TGC cut off with constraining wireframe so lids defined at a nominal 15% cut-off grade

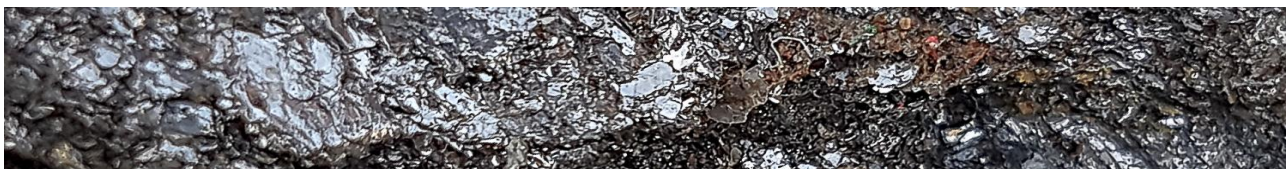
For Razafy CP statement refer to ASX release 14th August 2018 - 'Update Razafy resource estimation'

For Haja CP statement refer to ASX release 27th December 2018 - 'Maiden Resource Estimation for Haja'



#### Maniry Graphite Project - Overview

For Maniry Exploration Target refer to ASX release 14 August 2018 – "Update Maniry exploration target"



**Table 2 – JORC**

**JORC Table**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	This program of works was a trenching program was at the Maniry and lanapera Projects.. The program consisted of 76 trenches dug perpendicular to the strike of mineralised units with a JCB/back hoe. A trained geologist geologically logged and systematically sampled the trench using a rock hammer at 2m intervals. Standards (CRM's) were inserted for QAQC purposes every ~20 samples. Samples were submitted for assay at Intertek Genalysis (Perth) (Graphitic Carbon %).
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	N/A - Trenches were undertaken with a JCB/back hoe
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Sample recovery was routinely recorded, however, no recovery issues were encountered in the program. Sampling was undertaken by a trained geologist using a rock hammer. The geologist routinely chipped the base of the trench to obtain a representative sample over 2m intervals. No grade:recovery relationship can be interpreted. Sample bias due to loss/gain of fine/coarse material is not thought to exist either.
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	All trenches were logged by a qualified and experienced geologist. All logging included descriptions of mineralisation, structural and lithological aspects of the encountered rocks and was digitally recorded using an industry standard code system. Logging is qualitative. Data collected offers sufficient detail for the purpose of interpretation and further studies. All trenches were logged (100%).
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	The geologist routinely chipped the base of the trench 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 is deemed satisfactory for this type of sampling and exploratory phase of work. The sample size (3kg) was deemed satisfactory to the grain size of the material being sampled.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	Samples were prepared (Crushed and sub-sampled - 200g) at the former Intertek-Genalysis Madagascan facility. Samples were then freighted using DHL to Intertek Genalsys (Perth). Samples were then pulverised to 75 micron. Samples were leached with concentrated nitric acid followed by KOH and finally dilute HCl then analysed by a LECO Carbon-Sulphur analyser to give a Total Graphitic Carbon (TGC) percentage. The laboratory procedures are considered to be appropriate for reporting TGC according to industry best practice. The insertion of CRM's every ~20 samples by MGY was used as an internal means of QAQC of laboratory standards. No issues were encountered.
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Significant intercepts have been verified by consulting Geologists' OMNI GeoX Pty. Ltd. No Trenches have been twinned. Data was collected by experienced and trained geologists digitally and stored within the company database.
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> <li>Data spacing for reporting of Exploration Results.</li> </ul>	All XYZ surveying was collected using a handheld Garmin GPS accurate to ±4m. Projection and Grid sytem used: UTM (WGS84) Z385
Data spacing and distribution	<ul style="list-style-type: none"> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	The field geologist in charge of the program has systematically sampled all visibility mineralised lithologies including relatively unmineralised units either side. This data is not thought to be appropriate for the the use within a resource estimation. No sample compositing has been applied.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	The orientation of the sampling is not thought to create a sampling bias. Sampling is not perpendicular to the dip of mineralisation however, and as reported intercepts will be wider than the true width of the mineralised unit.
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	Samples were packaged and stored in secure storage from the time of gathering through to submission. Laboratory best practice methods were employed by the laboratory upon receipt.
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	An audit of the sampling technique and data was carried out by consulting geologists to the group, OMNI GeoX Pty. Ltd. and deemed to have been satisfactory.



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<p>Work was undertaken upon permits 5391, 5393, 5394, 25094, 25605, 39751</p> <ul style="list-style-type: none"> <li>The tenements are located within the inland South West of Madagascar.</li> <li>Tenements are held 100% by BlackEarth Madagascar SARL, a wholly owned subsidiary of BlackEarth Minerals NL through Madagascar Graphite Ltd.</li> <li>No overriding royalties are in place</li> <li>There is no native title agreement required</li> <li>Tenure does not coincide with any historical sites or national parkland</li> <li>Semi-arid, thinly vegetated, relatively flat to low lying hills with sub-cropping rock.</li> <li>Tenements are currently secure and in good standing.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Regional mapping by BRGM, Historical diamond drilling and trenching by Malagasy Minerals. Ltd. (2014-2016)
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	The project overlies a prominent 20km wide zone consisting of a folded assemblage of graphite and quartz-feldspar schists (<60% graphite), 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
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	Refer to table within text
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	A cut off of 5%, 10% 15% and 20% graphitic carbon has been used for aggregated reported intercepts. Weighted averages have been calculated by 'the sum of the assays divided by the number of assays'.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	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 well understood with both previous drilling and this current trenching programs confirming this. The dip of the mineralised unit is shown within the diagrams within the text.
Diagrams	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	See body of text above for diagrams and tabulated intercepts.
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	All significant results that are material to the project have been reported. Any data that has not been released has been deemed in-significant.
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	No other exploration related data has been collected that requires reporting.
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Future work programs at the project will probably involve further drilling, mapping, rock-chipping.