# BlackEarth Minerals NL

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## BLACKEARTH QUARTERLY ACTIVITIES REPORT

ASX Announcement

## Quarter ended 31 December 2018

During the December 2018 quarter BlackEarth Minerals NL completed the following

- Scoping Study on the Maniry Graphite Project nears completion
- Razafy produces high grade, large flake concentrates as part of its bulk sample metallurgical test work program completed in November
- Maiden Resource estimation on Haja resource adds to Maniry Resource inventory
- Preliminary metallurgical test work results on Haja core sample confirmed high-grade large flake concentrate
- North West Razafy rock chips returned samples of up to 48% TGC as lead-in to trenching which was also completed during the quarter: results are imminent

BlackEarth Minerals NL (ASX: BEM) (the **Company** or **BlackEarth**) is pleased to provide its December 2018 quarterly update on its Maniry Graphite Project. In summary, BlackEarth continues to fast-track the development of its 100% owned Maniry Graphite Project in southern Madagascar.

## BlackEarth continues scoping study

During the December quarter, BlackEarth continued with its scoping study which is intended to be a precursor to a feasibility study.

A detailed metallurgical test plan programme was completed during the quarter. This will pave the way to commence marketing of graphite concentrates produced from a bulk sample generated from core from the Razafy graphite prospect drilling campaign.

BlackEarth's immediate focus is to complete the Scoping Study and transition from graphite explorer to developer.

### Update to Metallurgical test work for Razafy & Haja

BlackEarth provided an update on the metallurgical test work, completed on an 800kg bulk composite sample taken from the Razafy Resource.

The head grade of the master composite achieved 9.0% Total Graphitic Carbon (TGC) and the results obtained from the initial flotation tests, indicate the potential to produce high grade concentrates, in excess of 96% TGC (see Figure 1). According to London based Benchmark Mineral Intelligence data, graphite concentrates at this level can attract US\$100-200 premiums over comparable flake size 90-95%TGC material. The initial test work was performed on diamond drill core samples as part of the 800kg bulk drill core, sent to ALS Perth laboratories after recent completion of a drilling program.

The concentrate size distribution as shown in Table 1 below.

Size	Weight	TGC
(μm)	(%)	%
500	3.8	95.1
300	18.5	96.4
180	29.7	96.5
150	12.8	96.3
106	11.7	96.0
75	9.6	95.5
-75	14.0	94.0

#### Table 1 Graphite Concentrate Size Distribution – Razafy

#### Наја

Preliminary metallurgical testwork was completed in December 2018 by ALS Global Laboratory (Perth, WA) on a 25kg core sample taken from diamond drillholes MND0093, MND0094 and MND0095 drilled by BlackEarth in 2018 (Table 2). Further technical details in regard to this sample are in the ASX release dated 27 December 2018.

	Particle	Particle Composite 93		Compo	site 94	Composite 95	
Flake Size Category	Size Microns (µm)	Distribution (weight%)	Graphitic Carbon Grade (%)	Distribution (weight%)	Graphitic Carbon Grade (%)	Distribution (weight%)	Graphitic Carbon Grade (%)
Jumbo	≥ 300	2.5	97.6	11.4	98.4	7.2	98.2
Large	180 to 300	12.7	97.9	26.5	97.3	19.3	97.2
Medium	150 to 180	7.3	97.6	10.0	96.6	8.8	96.4
Small	75 to 150	31.9	97.2	29.8	96.1	32.0	95.1
Fine	<75	45.5	89.6	22.3	91.0	32.6	88.2
All Categories		100.0	93.9	100.0	95.6	100.0	93.6

Note: Total graphitic carbon grades determined by the Nc425 LOI method from ALS Global Laboratory, Perth Table 2 – Haja Graphite Flake Size Distribution & Grade



Figure 1 Metallurgical test work undertaken at ALS in Perth

#### **Trenching at North-West Razafy**

Mapping by the BlackEarth technical team identified a number of outcropping graphitic schists within 2km of the Razafy Graphite Resource, with rock chips returning exceptional assay results from all of the identified lenses. These zones of high-grade mineralisation were systematically explored during the trenching program. The results of this program are expected shortly.

In total, 56 rock chips were taken: the vast majority of which returned grades >10% TGC, with two results >40% TGC. A breakdown of the distribution of these results is provided in Table 3 to demonstrate the consistent high grades that have been achieved. The identification of these exceptionally mineralised lenses towards the under-explored, north west corner of the project area is suggestive of a previously unrecognized area of high-grade mineralisation - much of this zone is covered by a relatively thin veneer of alluvial cover.

Grade	<10%	10-20%	20-30%	30-40%	>40%
Samples	14	34	4	2	2

Table 3 – Maniry Rock Chips – Grade Distribution



Figure 2 - BlackEarth's Managing Director on the ground at Razafy North West with BlackEarth Madagascar geologist Mr Miravelo Rakotonanahary

In regard to the lanapera Graphite Project, the Company has completed initial trenching of its northern project and is expecting results in February 2019.

#### Quarterly Activities on the Maniry Graphite Project Resource Base

#### Razafy, Haja and North West Razafy

On 27 December 2018, BlackEarth announced the maiden Haja JORC Resource. The Haja Inferred Resource (Haja Resource), comprising of **9.0Mt** @ **5.79%** TGC at a 5%TGC cut-off grade. The Haja Resource report for several TGC cut-off grades is summarised in Table 4 below. The Haja Resource has been classified as 'Inferred' and is located 800m to the west of the Razafy Resource in a highly prospective area (see Figure 2 above).

Cut-off Grade TGC	Tonnage (Mt)	Total Graphitic Carbon Grade (%)	Contained Graphite (t)
6.0%	2.5	6.68	167,000
5.5%	5.2	6.18	321,400
5.0%	9.0	5.79	521,100

Table 4 – Haja	Mineral Inferred	Resource	Estimate
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Note: The Mineral Resource was estimated within constraining wireframe solids defined at a nominal 1.5% TGC cut-off grade

This Haja Mineral Resource Estimate consolidates the Company's Maniry Project resource base, adding a substantial resource to the adjacent high grade Razafy Graphite deposit (see Table 5).

Classification	Tonnes (Mt)	TGC Grade (%)	Contained Tonnes (t)
Razafy Indicated	8.0	7.22	577,600
Razafy Inferred	3.2	6.80	217,600
<b>Total Resources</b>	11.2	7.10	795,200

#### Table 5 – Mineral Resource Estimates for Razafy as part of the Maniry Graphite Project

Note: The Mineral Resource is reported at a 6% TGC cut-off grade The Mineral Resource was estimated within constraining wireframe solids defined at a nominal 3% TGC cut-off grade

#### **Community Relations**

BlackEarth continues its partnerships with the local communities in which it operates, to ensure positive and enduring impacts well into the future.

#### Western Australia tenements

The Company continues to review its West Australian tenements and will update the market in regard to any major developments on these tenements as appropriate. The Company plans on focusing its efforts during 2019 on its Maniry and Ianapera graphite projects located in Madagascar.

#### CONTACTS

Tom Revy	BlackEarth Minerals NL	08 6145 0289   0411 475 376
Jane Morgan	Investor and Media Relations	0405 555 618

BlackEarth Minerals will be holding a special online investor briefing on January 30 to present the Scoping Study results and plans for 2019. Investors are invited to attend the online briefing and can register at: <u>http://www.blackearthminerals.com.au/webinar</u>

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

#### **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 (<u>www.blackearthminerals.com.au</u>). 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). 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 contained in this report that relates to Mineral Resources is based on information compiled by Ms. Annick Manfrino, Principal of Sigma Blue and Manager Geology of Black Earth Minerals. Ms. Manfrino is a member of The Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities 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." Ms. Manfrino completed a site inspection and is the Competent Person for the resource estimation. Ms. Manfrino consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.

The information in this report that relates to the Maiden Resource Estimation for Haja at the Maniry Graphite Project is extracted from the report entitled "Update – Maiden Resource Estimation for Haja at the Maniry Graphite Project" dated 27 December 2018 and is available to view on the Company's website (<u>www.blackearthminerals.com.au</u>). 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 document that relates to metallurgical test work results is based on information compiled and reviewed by Mr David Pass, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Pass is an employee of BatteryLimits. Mr Pass 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). Mr Pass consents to the inclusion in the report of the matters based on the reviewed information in the form and context in which it appears.

Listed	below	are	the	releases	made	during	the	quarter	and	are	available	at:
www.bla	ackearthr	<u>ninera</u>	ls.com	<u>au</u>								

Date	Description
27/12/2018	Maniry Graphite Project resource increases by over 80%
12/12/2018	Update to Maniry metallurgical test work
10/12/2018	Maniry met test work confirms high value product potential
30/11/2018	Results of Meeting
30/11/2018	Managing Director 2018 AGM Address
21/11/2018	Exploration update BEM continues trenching at Maniry
31/10/2018	Notice of Annual General Meeting/Proxy Form
31/10/2018	Annual Report to shareholders
31/10/2018	Appendix 4G
23/10/2018	Quarterly Activities Report and Quarterly Cashflow Report
18/10/2018	BlackEarth Minerals online investor briefing
16/10/2018	High-grade large flake concentrate produced from Razafy
09/10/2018	Rock Chip Samples at Razafy Return Up To 48% TGC
03/10/2018	Final assays from Haja highlight thick zones of Graphite

#### About BlackEarth Minerals NL ( www.blackearthminerals.com.au )

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



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

The Company's Madagascan projects consist of two primary exploration areas: the Maniry Project (**Maniry**) in the south, and the lanapera Project (**Ianapera**) in the north. Maniry is highly prospective for large-scale, high-quality graphite deposits and is currently at an advanced evaluation stage. The Razafy indicated and inferred resource, comprising of **11.2Mt** @ **7.10% Total Graphitic Carbon** (**TGC**) is summarised in Table below. The vast majority of the resource has been classified with a high degree of confidence at an 'Indicated' classification, with the remainder classified as 'Inferred'. The Mineral Resource is reported at a 6% TGC cut-off grade.

The higher confidence classification of the majority of the resource was supported by detailed petrological assessments (ASX Announcements dated 16 February 2018 and 5 July 2018).

The Mineral Resource was estimated within constraining wireframe solids defined at a nominal 3% TGC cut-off grade.

Classification	Tonnes (Mt)	TGC Grade (%)	Contained Tonnes (t)
Razafy Indicated	8.0	7.22	577,600
Razafy Inferred	3.2	6.80	217,600
<b>Total Resources</b>	11.2	7.10	795,200

#### **Mineral Resource Estimates for Maniry Project**

Results, from recent diamond drilling have confirmed that the Razafy Prospect (contained within the Maniry Project area) consists of high grade, thick outcropping graphitic mineralisation contained within distinct lenses which remain not only open along strike but also at depth. Recent identification of further lenses to the east also highlights the prospectivity of the immediate area which, based on mapping and previous exploration represents only 5% of the current Maniry Project area.

lanapera is located approximately 50km north of Maniry. It consists of a series of high-grade outcrops, up to 800m long and 30m wide, of graphite mineralisation within a broader graphite trend. Identified as a large conductive body, potential exists for the presence of a large graphitic mineralised system.



Detail	Details of Mining Tenements at Quarter ended 31 December 2018			
	(ASX Listing Rule 5.3.3)			
	Australia			
Tenement ID	Location	State	Interest	
E66/95	Northern Gully	WA	100%	
E70/4811	Kauring, Greenhills	WA	100%	
E70/4812	Kauring, Greenhills	WA	100%	
E70/4824	Yanmah, Donnelly	WA	100%	
E70/4825	Manjimup, Donnelly	WA	100%	
E70/4903	Kauring, Greenhills	WA	100%	
E70/4906	Kauring, Greenhills	WA	100%	
	Internatio	onal		
Tenement ID	Location	Country	Interest	
PR25605	Maniry	Madagascar	100%	
PR25606	Maniry	Madagascar	100%	
PR3432	Maniry	Madagascar	100%	
PR39750	Maniry	Madagascar	100%	
PR39751	Maniry	Madagascar	100%	
PE5394	Maniry	Madagascar	100%	
PE5391	lanapera	Madagascar	100%	
PE5392	lanapera	Madagascar	100%	
PE5393	lanapera	Madagascar	100%	
PE25093	lanapera	Madagascar	100%	
PE25094	lanapera	Madagascar	100%	

## **CORPORATE INFORMATION**

(29 January 2019) 60,785,500 fully paid ordinary shares 28,142,750 \$0.25 partly paid shares paid to \$0.0001 and unpaid \$0.2499 2,750,000 Unlisted \$0.30 options 10,000,000 Performance Rights \$6.3 million market capitalisation

#### **BOARD OF DIRECTORS**

Phil Hearse (Non-executive Chairman) Tom Revy (Managing Director) George Bauk (Non-executive Director)

## Appendix 5B

## Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

Name of entity	
BlackEarth Minerals NL	
ABN	Quarter ended ("current quarter")
66 610 168 191	31 December 2018

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000	
1.	Cash flows from operating activities			
1.1	Receipts from customers	-	-	
1.2	Payments for			
	(a) exploration & evaluation	(395)	(1,224)	
	(b) development	-	-	
	(c) production	-	-	
	(d) staff costs	(346)	(542)	
	(e) administration and corporate costs	(47)	(117)	
1.3	Dividends received (see note 3)	-	-	
1.4	Interest received	2	7	
1.5	Interest and other costs of finance paid	-	-	
1.6	Income taxes paid	-	-	
1.7	Research and development refunds	-	-	
1.8	Other (provide details if material)	-	-	
1.9	Net cash from / (used in) operating activities	(786)	(1,876)	

2.	Cas	sh flows from investing activities	
2.1	Payr	ments to acquire:	
	(a)	property, plant and equipment	
	(b)	tenements (see item 10)	
	(c)	investments	
	(d)	other non-current assets	
2.2	Proc	eeds from the disposal of:	
	(a)	property, plant and equipment	
	(b)	tenements (see item 10)	
	(c)	investments	
	(d)	other non-current assets	
2.3	Casl	h flows from loans to other entities	
2.4	Divio	dends received (see note 3)	

#### **Appendix 5B** Mining exploration entity and oil and gas exploration entity quarterly report

Consolidated statement of cash flows		statement of cash flows Current quarter \$A'000	
2.5	Other (provide details if material)	-	
2.6	Net cash from / (used in) investing activities	-	
3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	-	
3.2	Proceeds from issue of convertible notes	-	
3.3	Proceeds from exercise of share options	-	
3.4	Transaction costs related to issues of shares, convertible notes or options	-	
3.5	Proceeds from borrowings	-	
3.6	Repayment of borrowings	-	
3.7	Transaction costs related to loans and borrowings	-	
3.8	Dividends paid	-	
3.9	Other (Proceeds from IPO shares in trust)	-	
3.10	Net cash from / (used in) financing activities	-	
4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,046	3,

4.6	Cash and cash equivalents at end of period	1,258	1,258
4.5	Effect of movement in exchange rates on cash held	(2)	37
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	-
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	-
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(786)	(1,876)
4.1	period	2,046	3,097

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	1,258	2,046
5.2	Call deposits (IPO shares in trust)	-	-
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	1,258	2,046

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6.	Payments to directors of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to these parties included in item 1.2	99
6.2	Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3	Include below any explanation necessary to understand the transactions incl	uded in items 6.1 and 6.2

Payments to directors and employees for services to the economic entity.

7.	Payments to related entities of the entity and their
	associates

associates	
Aggregate amount of payments to these parties included in item 1.2	
Aggregate amount of each flow from loans to these parties included in	

- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

8.	Financing facilities available		
	Add notes as necessary for an understanding of		
	the position		
8.1	Loan facilities		

Credit standby arrangements

Other (BEMPP's)

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
-	-
-	-
7,033	-

Current quarter \$A'000

-

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8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

BEMPP's - Current outstanding amounts on BEMPP - 25 cent contributing shares

9.	Estimated cash outflows for next quarter	\$A'000
9.1	Exploration and evaluation	157
9.2	Development	-
9.3	Production	
9.4	Staff costs	179
9.5	Administration and corporate costs	80
9.6	Other (provide details if material)	-
9.7	Total estimated cash outflows	416

7.1

8.2

8.3

#### Appendix 5B Mining exploration entity and oil and gas exploration entity quarterly report

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter		
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	E09/2234	100% owned	100%	0%		
10.2	Interests in mining tenements and petroleum tenements acquired or increased						
Compliance statement							

- This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here:	"Barry Woodhouse"	Date: 29 January 2019
	(Director/Company secretary)	

Print name: Barry Woodhouse.

#### Notes

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- 1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
- 2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
- 3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.