

## JUNE 2018 QUARTERLY ACTIVITIES REPORT

### HIGHLIGHTS

#### **Black Rock delivers ultra-high graphite concentrate grade over 99% in processing testwork**

- Black Rock delivers world first 99%+ purity graphite concentrate in a conventional flotation circuit **at scale**
- Black Rock generated **200kg of 99%+ graphite concentrate** during a pilot plant run which was reprocessed through a closed polishing circuit to generate the ultra-high concentrate grades
- Black Rock produced an average grade of 99.3% TGC (graphite) using double LOI (Loss on Ignition) method **with impressive overall recoveries of +92.0% for oxides and 92.3% for fresh**
- Industry leading large flake product was produced after taking it to 99%, **demonstrating the mechanical strength** of the Mahenge flake
- 55% of ultra-high concentrate remains in the large/jumbo size fraction and **minimal flake degradation** occurred in the upgrade circuit.

#### **Positive feedback received from potential Mahenge customers**

- **22 potential customers received concentrate** from Black Rock's 90-tonne pilot plant operation
- Positive initial feedback received, with potential customers confirming ASTM mesh screen targets, reported purity targets and application targets including pH levels, moisture and halogens limits;
- Black Rock's graphite concentrate demonstrates a unique chemical and metallurgical signature, making it **suitable for battery applications, expandable graphite applications for fire retardants, and various graphene product applications.**
- Discussions are well advanced with reputable **end-users with a view to developing significant and binding off-takes.**

#### **530-tonne shipment of ore from Mahenge validates logistics route**

- During the Quarter Black Rock delivered a **+530-tonne bulk sample of Mahenge ore** via rail from Ifakara to the Port of Dar es Salaam, which has now arrived at SGS Lakefield in Canada.
- This bulk sample will be processed in a second pilot plant trial to further validate flow sheet design and provide additional samples to be distributed to **off-takers to continue pre-qualification** of sales
- Importantly, this shipment marks the **first export of graphite mine feed from Tanzania** since the mining legislation change in July 2017
- Rail haulage **materially reduces Black Rock's logistics and transport costs** by an estimated USD\$40/tonne
- The rail haulage and export ceremony was attended by representatives of Tanzania's Ministry of Minerals and Australian government personnel.

#### **Definitive Feasibility Study on track for completion in September 2018**

- **Operating expenditure (opex) expected to significantly benefit** from early access to grid electricity and rail haulage
- Stage-1 capex tracking in line with optimised PFS with **potential for capex reduction** likely from Chinese EPCM procurement strategy
- Environmental and Social Impact Assessment (ESIA) lodged for approval

Tanzanian graphite developer Black Rock Mining Limited (BKT: ASX) ("Black Rock" or "the Company") pleased to provide its June 2018 Quarterly report.

### **Black Rock delivers +99% ultra-high grade graphite concentrate**

Black Rock reported a world-first pilot plant production of 99%+ purity graphite concentrate from its testwork using floatation methods only. The test was conducted as part of an upgrade program during recent pilot plant testing at SGS Lakefield in Canada for its 100%-owned Mahenge Graphite Project. A summary of the test production of Ultra class concentrate from Ulanzi is presented below:

Size		% Retained Individual	Grade C (t) %	Distribution C (t) %
Mesh	um			
32	500	0.2	99.1	1.6
48	300	12.9	99.8	25.9
65	212	25.3	99.7	32.3
80	180	16.6	98.4	16.2
100	150	16.4	99.6	9.3
150	106	11.1	99.1	7.3
200	75	7.1	99.3	3
-200	-75	10.4	99	4.4
<b>Total (calc)</b>		<b>100</b>	<b>99.3</b>	<b>100</b>
<b>Total (direct)</b>				
<b>K<sub>80</sub></b>		<b>276</b>		

**Table 1: Ultra Class Concentration Flake Distribution**

Testing was completed on 90 tonnes of Mahenge ore comprising 50 tonnes from Cascades and 40 tonnes from Ulanzi. Ultra-high-grade concentrate was delivered by repossessing 97.5% premium concentrate, processing it through a closed polishing circuit to generate the ultra-high concentrate grades. Final reconciled recoveries of +92.0% for oxides and 92.3% for fresh were achieved for the Ultra Grade concentrate.

Black Rock produced an average grade of 99.3% TGC (graphite) using double LOI (Loss on Ignition) method.

Black Rock produced the industry-leading large flake product after taking it to 99%, demonstrating the mechanical strength of the Mahenge flake.

Samples of the *Ultra Purity FP™ Flake Graphite* produced in the test work has been distributed to potential customers with encouraging feedback.

During the quarter Black Rock exported a further +530-tonne sample to SGS Lakefield in Canada for further pilot plant test work to validate flow sheet design, optimise operating parameters and continue product qualification with off takers. Post the Quarter the sample has arrived at SGS's lab for pilot plant runs schedule in CY18 Q4.

### **Positive feedback received from potential customers**

Black Rock delivered samples to 22 potential customers from its 90-tonne pilot plant operation during the quarter and reported positive initial feedback.

Test works included defining production mesh fractions, achievable concentrate purity ranges in line with market and application requirements, as well as production yields by fraction, and finally production efficiency targets for commercial plant design and construction. This enabled evaluation for suitability and performance in several applications. Initial feedback to Black Rock was very positive, including:

- Potential customers confirmed ASTM mesh screen targets, reported purity targets and application targets including pH levels, moisture and halogens limits;
- Black Rock's graphite concentrate demonstrated a unique chemical and metallurgical signature; and
- This signature is positive for battery applications, expandable graphite applications for fire retardants, and various graphene product applications.

Black Rock's recently introduced *Ultra Purity-FP™ Flake Graphite*, with a minimum purity of 99.0% LOI, was particularly well received by potential customers. The Company has received confirmation that the 1% or less total ash content offers the ability for specific applications to use this new high-purity flake graphite without the concern of any caustic chemical intervention to reach the 99.0% LOI purity target.

### **Rail Haulage Demonstrates Superior Logistics Solution**

A second bulk sample of 530 tonnes has been rail hauled from Ifakara to Port of Dar es Salaam. as proof of concept for viability of rail haulage for Mahenge production. Celebrations held to recognise significant project milestone attended by Teresa Ntuke, Commissioner of Mines Morogoro as representative of Deputy Minister of Mines The Honourable Dotto Biteko Deputy Minister for Mines and Australian High Commissioner, for Tanzania Ms Alison Chartres.

Rail haulage materially lowers cost relative to road haulage, with a provisional cost advantage of USD\$40/tonne. Rail haulage significantly simplifies logistics for inbound and outbound freight and provides wharf access to the Port of Dar es Salaam, the fourth largest Indian Ocean port in Africa. Discussions with Tazara (Tanzania Zambia Railway Authority) around commercial terms are progressing.

This sample comprises bulk samples and close spaced metallurgical drilling has arrived at SGS Lakefield laboratory and is scheduled for processing in CY18 Q4. Production from second pilot plant will be distributed to off-takers to continue pre-qualification.

### **Update on Mahenge DFS**

Black Rock is completing a Definitive Feasibility Study (DFS) for Mahenge, building on the highly positive optimised Pre-Feasibility Study completed in July 2017.

Work on the DFS progressed from flowsheet development to design and estimation supported by the 90-tonne pilot plant run in Canada. Flowsheet design has been optimised on a base case 93% recovery delivering a 97.5% concentrate. *Ultra Purity-FP™ Flake Graphite* product can be delivered from the same circuit by increasing retention time of the polishing circuit.

Vendors have completed test work and mechanical equipment selections finalised. Process and Instrumentation diagrams are complete and material take-offs commenced during the quarter.

A dry stacking flowsheet aimed at simplifying water management and reducing residue footprint is well advanced, and Black Rock is considering the use of rail haulage, using a dedicated containerisation facility at Ifakara, where the railhead is 60km from mine site, which is expected to benefit operating expenditure estimates for the project.

Discussions have commenced with a Chinese engineering, procurement, construction and management (EPCM) firm to assess the potential for a single-source mining infrastructure procurement process. Such an arrangement is expected to lead in a reduction in capital expenditure requirements and potential funding pathway.

The DFS is on track for release in September 2018.

### **Corporate**

The Company had \$1.78 million cash at bank as at 30 June 2018.

### **For more information:**

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## About Black Rock Mining

Black Rock Mining Limited is an Australian-based company listed on the Australian Securities Exchange. The Company owns graphite tenure in the Mahenge region of Tanzania.

The Company's 100%-owned Mahenge Graphite Project is one of the largest JORC-compliant flake graphite Mineral Resource Estimates globally, with a Mineral Resource Estimate of 211.9m tonnes at 7.8% TGC for 16.6m tonnes of contained graphite. Importantly, more than 50% of the Mineral Resource is in the Measured and Indicated categories and is in accordance with the company's previous announcement on its Measured & Indicated Resource released on 20 July 2017. The Company confirms that it is not aware of any new information that materially affects the resources estimate.

For further information on the Company's development pathway, please refer to Black Rock's website at <http://www.blackrockmining.com.au>.

A corporate video presentation is available at <http://www.blackrockmining.com.au/#video>.

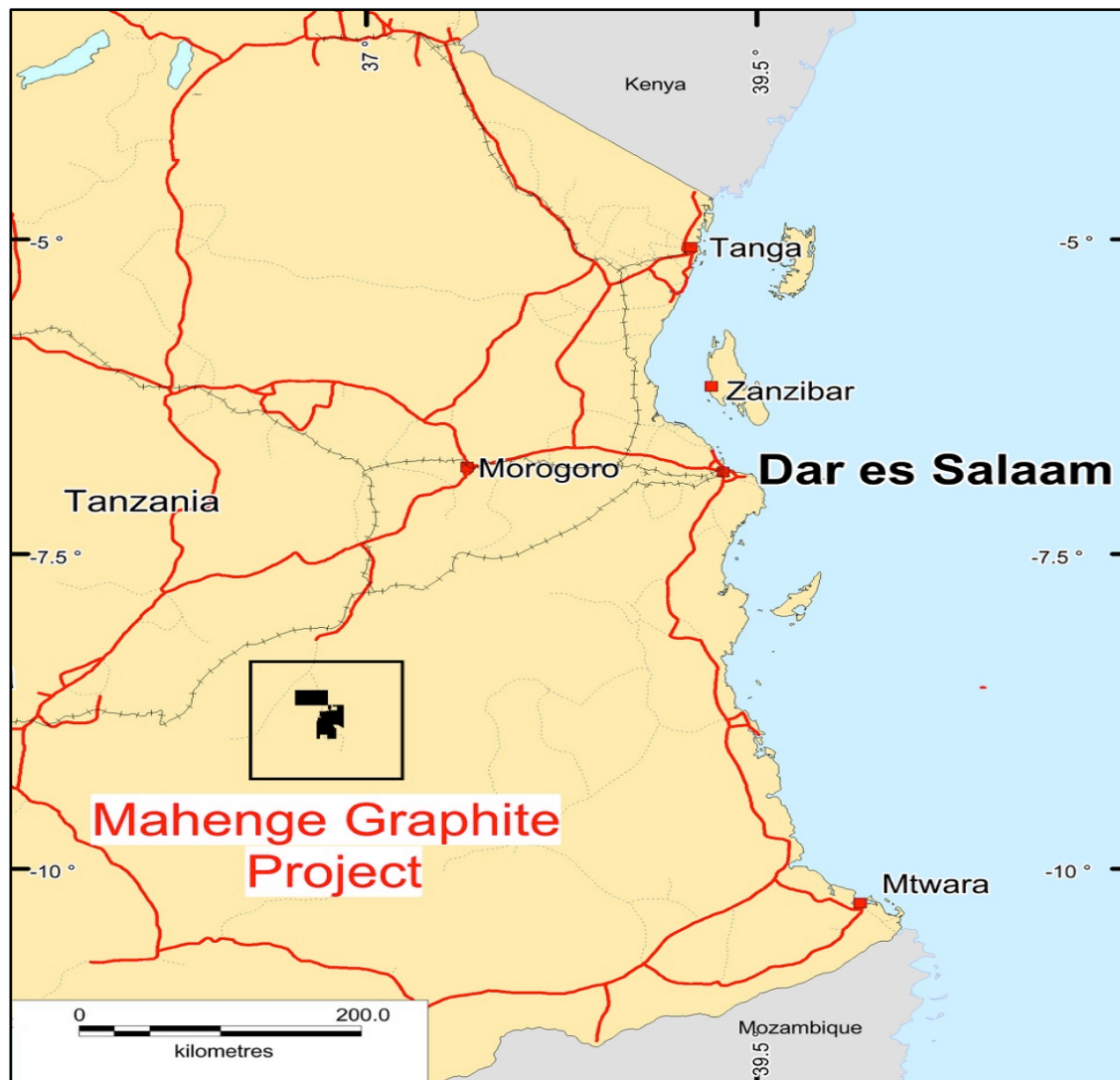


Figure 1: Location of Black Rock's Mahenge Graphite Project in Tanzania.

PROSPECT	CATEGORY	TONNES (MILLIONS)	TGC (%)	CONTAINED TGC (MILLIONS TONNES)
<b>Ulanzi</b>	Measured	13.3	8.9	1.2
	Indicated	49.7	8.2	4.1
	Inferred	50.2	8.1	4.1
	Sub-total	113.3	<b>8.2</b>	<b>9.3</b>
<b>Epanko</b>	Measured	12.1	8.3	1.0
	Indicated	20.8	8.3	1.7
	Inferred	27.3	7.9	2.2
	Sub-total	60.2	<b>8.1</b>	<b>4.9</b>
<b>Cascades</b>	Measured			
	Indicated	17.6	6.4	1.1
	Inferred	20.8	5.9	1.2
	Sub-total	38.4	<b>6.1</b>	<b>2.4</b>
<b>COMBINED</b>	MEASURED	25.5	<b>8.6</b>	<b>2.2</b>
	INDICATED	88.1	<b>7.9</b>	<b>6.9</b>
	INFERRED	98.3	<b>7.6</b>	<b>7.4</b>
	TOTAL	211.9	<b>7.8</b>	<b>16.6</b>

Resource breakdown by prospect and total combined global resource

## 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

Black Rock Mining Limited

### ABN

59 094 551 336

### Quarter ended ("current quarter")

30 June 2018

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	0	0
1.2 Payments for		
(a) exploration & evaluation	(1,395)	(3,655)
(b) development	0	0
(c) production	0	0
(d) staff costs	(134)	(638)
(e) administration and corporate costs	(317)	(1,091)
1.3 Dividends received (see note 3)	0	0
1.4 Interest received	5	13
1.5 Interest and other costs of finance paid	0	0
1.6 Income taxes paid	0	0
1.7 Research and development refunds	360	360
1.8 Other (provide details if material)	11	11
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(1,470)</b>	<b>(5,000)</b>

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	(4)	(13)
(b) tenements (see item 10)	0	0
(c) investments	0	0
(d) other non-current assets	0	0

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
2.2 Proceeds from the disposal of:		
(a) property, plant and equipment	0	0
(b) tenements (see item 10)	0	0
(c) investments	0	228
(d) other non-current assets	0	0
2.3 Cash flows from loans to other entities	0	0
2.4 Dividends received (see note 3)	0	0
2.5 Other (provide details if material)	0	0
<b>2.6 Net cash from / (used in) investing activities</b>	<b>(4)</b>	<b>215</b>

<b>3. Cash flows from financing activities</b>		
3.1 Proceeds from issues of shares	0	4,740
3.2 Proceeds from issue of convertible notes	0	0
3.3 Proceeds from exercise of share options	0	0
3.4 Transaction costs related to issues of shares, convertible notes or options	0	(294)
3.5 Proceeds from borrowings	0	0
3.6 Repayment of borrowings	0	0
3.7 Transaction costs related to loans and borrowings	0	0
3.8 Dividends paid	0	0
3.9 Other (provide details if material)	0	0
<b>3.10 Net cash from / (used in) financing activities</b>	<b>0</b>	<b>4,446</b>

<b>4. Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1 Cash and cash equivalents at beginning of period	3,229	2,140
4.2 Net cash from / (used in) operating activities (item 1.9 above)	(1,470)	(5,000)
4.3 Net cash from / (used in) investing activities (item 2.6 above)	(4)	215
4.4 Net cash from / (used in) financing activities (item 3.10 above)	0	4,446
4.5 Effect of movement in exchange rates on cash held	33	(13)
<b>4.6 Cash and cash equivalents at end of period</b>	<b>1,788</b>	<b>1,788</b>



5. <b>Reconciliation of cash and cash equivalents</b> 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	1,788	3,229
5.2 Call deposits	0	0
5.3 Bank overdrafts	0	0
5.4 Other (provide details)	0	0
<b>5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>1,788</b>	<b>3,229</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 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 included in items 6.1 and 6.2

Current quarter \$A'000
134
0

Director related payments – relate to both Executive and Non-Executive Director fees and company secretarial fees.

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

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 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

Current quarter \$A'000
0
0

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

<b>8. Financing facilities available</b> <i>Add notes as necessary for an understanding of the position</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
8.1 Loan facilities	0	0
8.2 Credit standby arrangements	0	0
8.3 Other (please specify)	0	0
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.		

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<b>9. Estimated cash outflows for next quarter</b>	<b>\$A'000</b>
9.1 Exploration and evaluation	-
9.2 Development	750
9.3 Production	-
9.4 Staff costs	100
9.5 Administration and corporate costs	150
9.6 Other (provide details if material)	-
<b>9.7 Total estimated cash outflows</b>	<b>1,000</b>

<b>10. Changes in tenements (items 2.1(b) and 2.2(b) above)</b>	<b>Tenement reference and location</b>	<b>Nature of interest</b>	<b>Interest at beginning of quarter</b>	<b>Interest at end of quarter</b>
10.1 Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2 Interests in mining tenements and petroleum tenements acquired or increased				

**Compliance statement**

- 1 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.

Gabriel Chiappini, Director & Company Secretary

30 July 2018

**Notes**

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.
4. The Company undertakes that it will disclose the following in each annual report, annual audited accounts, half-yearly report and quarterly cash flow report issued by the Company, in respect of any period during which the Performance Shares remain on issue or are converted or redeemed.
  - (a) The number of Performance Shares on issue during the relevant period.
  - (b) A summary of the terms and conditions of the Performance Shares, including without limitation the number of ordinary shares into which the Performance Shares are convertible and the relevant milestones that have to be satisfied in order for the Performance Shares to be converted.
  - (c) Whether any of the Performance Shares were converted or redeemed during that period.
  - (d) Whether a milestone for the Performance Shares was met during that period.