

ASX Release
31 October 2017

BLACK ROCK SEPTEMBER QUARTERLY ACTIVITIES REPORT

HIGHLIGHTS

- **Optimised Mahenge Preliminary Feasibility Study released during the quarter.**
 - Three-stage development delivering up to 250k tonnes per annum of 98.5% graphite concentrate for 31 years.
 - Pre-production capex remains US\$90.1m, with peak capital intensity falling to \$360 per annual tonne by stage three
 - Steady state opex reduced to US\$378 per tonne
 - Realistic basket price assumption of US\$1,241 per tonne delivering an operating margin of US\$863 per tonne
 - Ore Reserves increased to 69.6m tonnes at 8.5% Total Graphite Contained (TGC) contributing to 80% of planned mill feed
- **Financial metrics include projected Government of Tanzania 16% free carry and adjustments to royalties and inspection fees include:**
 - Post-tax unlevered project NPV₁₀ of US\$905m
 - Post-tax, unlevered IRR of 45.1%
 - Financing process in place supported by two existing MoUs with end users of graphite concentrate
 - New battery performance standards set for natural graphite using Mahenge Graphite:
 - 200 cycle battery test results confirmed Mahenge has the potential to enable battery manufacturers to produce more stable lithium-ion batteries at a lower cost with a longer cycle life.
 - Evidence from graphite performance at 200-cycles indicates it strongly outperforms commercially available products, potentially establishing new performance benchmarks of natural graphite in the battery market.
Interest from battery manufacturers growing; continues to grow with strong results from test work
- Subsequent to quarter ending, **respected mining industry leader, Richard Crookes appointed Chairman** effective 16 October 2017, with Current Chairman, Stephen Copulos to move into Non-Executive Director role

Tanzanian graphite developer **Black Rock Mining Limited (BKT: ASX)** ("Black Rock" or "the Company") is pleased to provide its September 2017 Quarterly report.

During the September Quarter, the Company successfully completed the Optimisation Study of its previously released Preliminary Feasibility Study ("PFS") (ASX Release 24 April 2017) for its 100%-owned Mahenge Graphite Project ("the Project").

Black Rock Mining Ltd
ACN 094 551 336
ASX: BKT

Issued Capital
364.7 Shares
52.2m Options
9.4m Performance Rights

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E: info@blackrockmining.com.au

Tanzanian Office
Mahenge Resources Ltd
202 Village Walk Building
Toure Drive, PO Box 80003
Dar es Salaam Tanzania

Directors
Richard Crookes
Stephen Copulos
John de Vries
Gabriel Chiappini

The Optimisation Study adds a third staged module to take production to 250k tonnes per annum of 98.5% graphite concentrate for 31 years. The second and third modules are expected to be funded from cash flow, enabling the Company to deliver the entire operation for peak capital of only US\$90.1m. This equates to industry leading peak capital intensity of only US\$360 per tonne per annum. This exceptional result is driven by relative high grade, low strip ratios and industry leading product quality and attributes.

For more details on Graphite Pricing Assumptions or Tanzanian Mining Legislation and State Agreements please see the ASX announcement dated 8 August 2017.

Basket Price Assumption (US\$ per tonne)	NO FREE CARRY		16% FREE CARRY + INSPECTION FEE	
	NPV ₁₀ (nominal) \$USD m	IRR %	NPV ₁₀ (nominal) \$USD m	IRR %
\$1,621	1,735	69.1	1,421	62.8
\$1,421	1,425	59.7	1,163	54.0
\$1,241	1,114	49.4	905	45.1
\$1,041	804	40.1	648	36.0
\$841	494	29.5	390	26.6

New standards set for natural graphite in battery performance

Black Rock's long-term battery test work continued to deliver further industry-leading results with Mahenge natural graphite outperforming commercial coated natural flake graphite in the Company's latest test work, in which it was tested through 200 charge/discharge cycles. The Company's graphite has potential to deliver battery manufacturers more stable lithium-ion batteries, at a lower cost, and with superior cycle life.

Overview of results:

- 200-cycle battery performance test results confirmed Mahenge graphite has the potential to enable battery manufacturers to produce more stable lithium-ion batteries (LIBs) at a lower cost with a longer cycle life
- Evidence from Mahenge graphite's performance at 200-cycles indicates it strongly outperforms commercially available products, potentially establishing new performance benchmarks of natural graphite in the battery market. Establishing new industry performance benchmarks is an important step in the Company's commercialisation strategy
- Potential for performance and cost advantages over synthetic graphite in LIBs
- Interest from battery manufacturers growing; continues to grow with strong results from test work
- The extended battery performance testing is consistent with the strategy of de-risking the Company's marketing of its product through demonstrating outperformance.

The Company's next steps will be to provide bulk quantities of Mahenge graphite concentrates for commercial scale spherulising tests together with detailed spherical test work results from the recently completed programme in Europe.

Mahenge graphite mineralisation is considered to be consistent in characteristics and distribution across each orebody. This is very significant to end users as the Mahenge Project has potential to deliver consistent quality graphite concentrates for decades. This in turn can allow SPG (spherical graphite) manufacturers to deliver consistent quality SPG product to battery manufacturers.

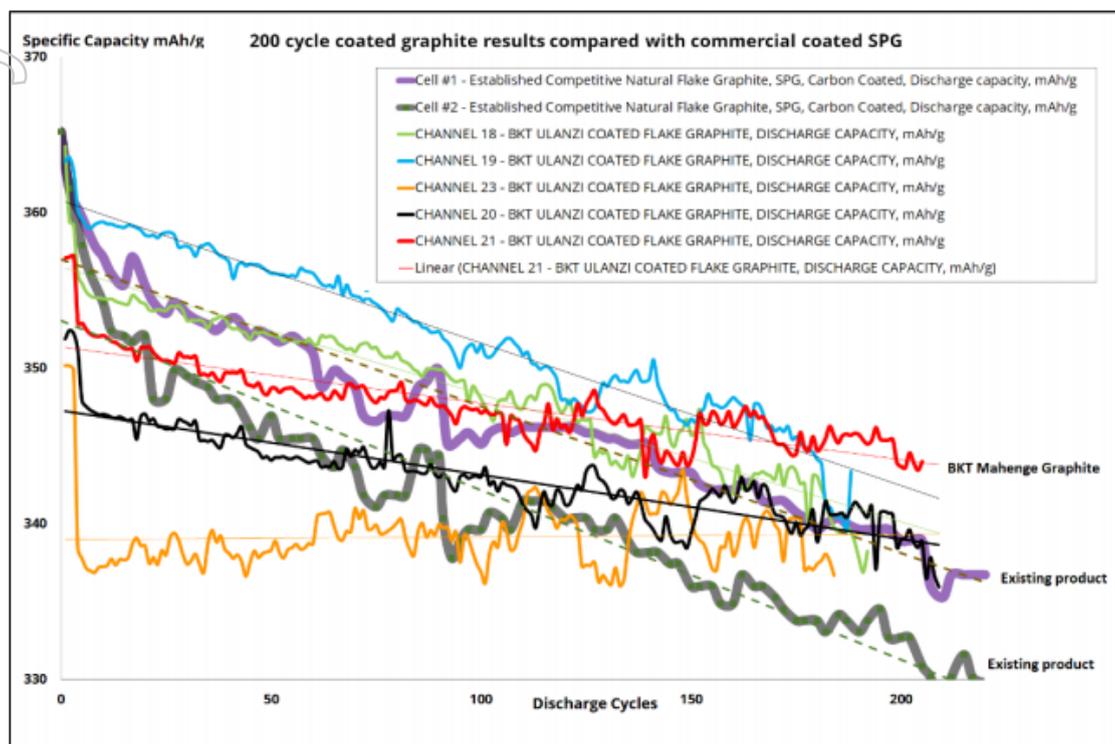


Figure 1.

Discharge curves of five Mahenge test cells showing higher capacities than a leading commercial coated natural flake graphite (Cell 1 and Cell 2). This data represents up to 209 charge and discharge cycles and shows Mahenge test cells demonstrate both flatter charge/discharge curves and higher specific capacities (in mAh/g) for the than the commercial comparison samples.

Test Results

Initial cell testing delivered excellent charge/discharge metrics with exceptionally high reversible capacity of 371.28 mAh/g vs industry average of 342 to 350 mAh/g and highly positive BET (Brunauer, Emmett and Teller ratio m²/g).

The ongoing long-term electrochemical tests have enhanced these initial results. Over approximately 200 charge/discharge cycles, Black Rock's test cells demonstrated consistently higher charge capacity and flatter performance curves than a leading coated spherical graphite used as a comparison. This is believed to occur due to the thicker Mahenge graphite flakes which are more stable in cell use than thin flakes.

The cell test trials used several variations in the composition of anode/binder/electrolyte and cell construction method, hence the different performance curves for the five test cells in Figure 1. The key result from the long-term testing is that Mahenge test cells have flatter sloping performance curves than a leading commercial SPG, indicating potential for longer cell life. Cell 23, for example, is yet to show cell performance degradation after 200 cycles. This cell has a slightly lower initial specific charge than the other test cells but is demonstrating remarkably stable performance. The other BKT cells show flatter performance curves than commercial SPG.

Planned Work

The Company is preparing to undertake the following detailed evaluation programmes during the December 2017 Quarter:

1. Advance the Environmental Impact Statement and prepare an application for a mining license before end of CY 2017
2. Pending resolution of Tanzanian mining legislation, re-commence Pre-Feasibility Study, including resumption of metallurgical variability drilling and bulk sampling activities for pilot plant feed stock, deliver metallurgical design parameters and bulk concentrate samples for market development
3. Continue to validate product performance by establishing new performance parameters by taking battery test beyond 300 cycles.

Black Rock expects these evaluation initiatives will underpin ongoing discussions with stakeholders.

Tanzanian Government Update

In July 2017 the Government of Tanzania announced significant changes to legislation governing mineral investment in Tanzania. Black Rock Mining has considered the impact of the proposed changes and where appropriate modified our expected economic return based on our assessment of the proposed changes. Concurrently with the above, the company has minimized expenditures while awaiting a final version of the new mining legislation. This has included suspension of the metallurgical infill drill program, and bulk sample programs.

Subsequent to the quarter, the Government of Tanzania has reached an agreement in principal with Barrack (Acacia 70% owner) paving the way for development of the new mining code. The company remains optimistic that that a new code shall be available in the short to medium term, and that the economic impact of this code will not be significantly different from our estimates already incorporated in the project economics.

Corporate

In the September quarter, Black Rock made two key appointments to its Board of Directors. Mr John de Vries formally joined the Company as Chief Executive Officer and Mr Richard Crookes was appointed as Chairman.

Since joining Black Rock, Mr de Vries successfully finalised the PFS for Mahenge Graphite Mine released in April 2017, followed by the Optimised PFS released in August 2017. He has played an integral part in planning of the Definitive Feasibility Study and selection of the Engineering Contractor.

Mr. Crookes joined Black Rock with 30 years' experience in the resources and investments industry and as such has a unique blend of broad resources industry experience coupled with a successful career in investment management. Mr. Crookes, a geologist by background, is an Investment Director at leading private equity resources fund, EMR Capital, which has successfully raised two funds with more than US\$2 billion of asset and capital under management.

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 announced a JORC compliant Mineral Resource Estimate of 211.9m tonnes at 7.8% TGC for 16.6m tonnes of contained Graphite, making the Mahege Graphite Project one of the largest JORC compliant flake graphite Mineral Resource Estimates globally. Over 50% of the Mineral Resource is in the Measured and Indicated categories. In April 2017, Black Rock announced results of a Preliminary Feasibility Study (PFS) for its Mahenge Graphite Project which confirmed its potential as a long-life, low capex, high margin operation.

The PFS estimated a post-tax, unlevered, internal rate of return ("IRR") for the Project of 48.7%; and a net present value (NPV) using a discount rate of 10% (NPV10) of US\$624m. Black Rock confirms, that except for the proposed legislative changes relating to 16% free carry position of the Tanzanian Government and the royalty fee increasing to 4.3%, the key assumptions used in the PFS have not materially changed and that the material assumptions continue to apply per the PFS announcement released to the ASX on 24 April 2017. Subject to clarification on Tanzanian legislative changes, Black Rock is moving towards commencing a Definitive Feasibility Study (DFS). With a successful DFS and associated financing, construction could commence in 2018 with first production in 2019.

For further information on the company's development pathway, please refer to the company's website at the following link: <http://www.blackrockmining.com.au> and the corporate video presentation at <http://www.blackrockmining.com.au/#video>.

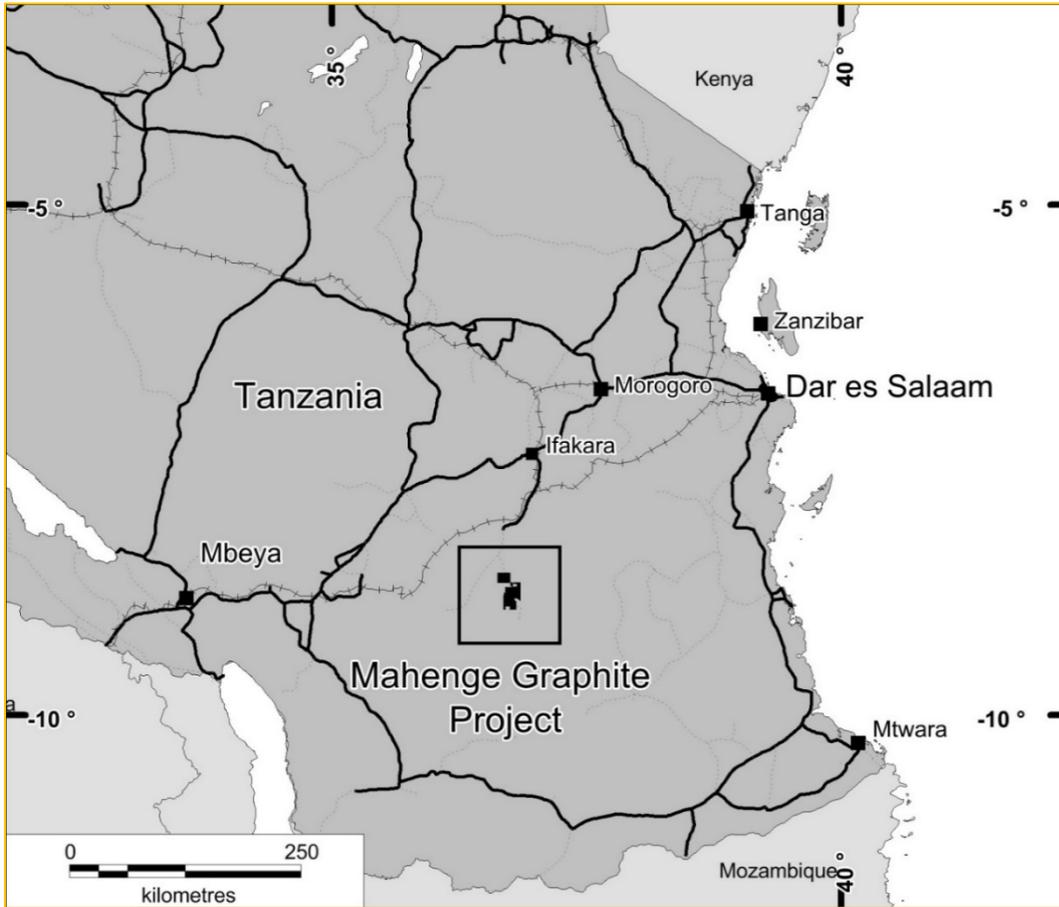


Figure 1: Location of Black Rock's Mahenge Graphite Project within Tanzania

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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 September 2017

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (3 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	0	0
1.2 Payments for		
(a) exploration & evaluation	(673)	(673)
(b) development	0	0
(c) production	0	0
(d) staff costs	(192)	(192)
(e) administration and corporate costs	(354)	(354)
1.3 Dividends received (see note 3)	0	0
1.4 Interest received	0	0
1.5 Interest and other costs of finance paid	0	0
1.6 Income taxes paid	0	0
1.7 Research and development refunds	0	0
1.8 Other (provide details if material)	0	0
1.9 Net cash from / (used in) operating activities	(1,219)	(1,219)
2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	(4)	(4)
(b) tenements (see item 10)	0	0
(c) investments	0	0
(d) other non-current assets	0	0

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Mining exploration entity and oil and gas exploration entity quarterly report

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (3 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	0
	(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
2.6	Net cash from / (used in) investing activities	(4)	(4)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	0	0
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	0
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
3.10	Net cash from / (used in) financing activities	0	0

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	2,140	2,140
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(1,219)	(1,219)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(4)	(4)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	0	0
4.5	Effect of movement in exchange rates on cash held	(62)	(62)
4.6	Cash and cash equivalents at end of period	855	855

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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	855	2,140
5.2 Call deposits	0	0
5.3 Bank overdrafts	0	0
5.4 Other (provide details)	0	0
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	855	2,140

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	192
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	0
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

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

7. Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1 Aggregate amount of payments to these parties included in item 1.2	0
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	0
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

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Mining exploration entity and oil and gas exploration entity quarterly report

8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
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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9. Estimated cash outflows for next quarter	\$A'000
9.1 Exploration and evaluation	75
9.2 Development	225
9.3 Production	
9.4 Staff costs	75
9.5 Administration and corporate costs	40
9.6 Other (provide details if material)	
9.7 Total estimated cash outflows	415

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				
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.
- This statement gives a true and fair view of the matters disclosed.

Gabriel Chiappini

Gabriel Chiappini

Director & Company Secretary

31 October 2017

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.