

# Excellent metallurgical results continue from Ulanzi with 97.1% TGC average purity



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## Highlights

- Optimisation work on the Ulanzi bulk sample continues to deliver significant incremental improvements to graphite purity and flake sizing
- Significant additional improvements expected from further test work (currently underway)
- Up to **98.2%** purity achieved for coarsest fraction
- Entire **+180 $\mu$**  size fraction at **97.35% TGC**, representing **66.3%** of total product. Flake sizing is biased towards coarser (premium) flake
- Entire **+25 $\mu$**  size fraction returned a weighted average of **97.12% TGC** for **98.1%** of the entire sample, indicating that Mahenge flake graphite is a premium product across the size range
- Graphite flake concentrates prepared for marketing and spherical/battery test work

Screen Size Microns	TGC Assay %	Distribution %	Cumulative distribution %	Weighted Average %
+500 $\mu$ m	98.2	1.52	1.52	98.2
+300 $\mu$ m	97.7	25.61	27.13	97.73
+180 $\mu$ m	97.1	39.48	66.61	97.35
+150 $\mu$ m	96.4	9.15	75.76	97.24
+106 $\mu$ m	96.7	11.08	86.84	97.17
+75 $\mu$ m	96.8	6.49	93.34	97.14
+25 $\mu$ m	96.6	4.98	98.32	97.12
-25 $\mu$ m	85.7	1.68	100	96.90

Table 1. Ulanzi bulk sample assay results by size fraction and %TGC. TGC assays are by double LOI method.

**Black Rock Mining Limited (ASX:BKT)** ("**Black Rock Mining**" or "**the Company**") is pleased to announce further metallurgical testwork results from the ongoing process optimisation program. This work will indicate the expected concentrate purities from a conventional flotation process circuit.

The bulk sample optimisation results show that the flowsheet adjustments continue to improve graphite purities. Then entire +75 to +500 micron portion of flake graphite is now achieving >97.1% TGC purity and this represents 98.3% of all graphite produced. There is excellent scope to continue increasing flake purities with additional cleaner work over the next few months.

Of significance is that the Ulanzi bulk sample has a bias towards coarse sizing. 66.3% of the flake graphite produced by this test work is >180 microns in size (coarse, jumbo and super jumbo sizing) and this size fraction typically receives a price premium to finer flake. This has potential to improve the basket pricing from the scoping study where 50% coarse sizing was assumed.

New metallurgical samples will be sent from Tanzania over the coming months to comprehensively test additional portions of the Ulanzi and Cascade lodes. Two more bulk surface samples and drill core samples are being prepared.

Additional test work is planned to determine chemically upgraded purity and the suitability of Mahenge graphite flake for a suite of value-added applications including; expanded graphite, expandable graphite, spherical graphite test work and other industrial applications. The metallurgical programme is expected to continue for the next four to six months, in parallel with the Pre Feasibility and Bank feasibility studies.

Managing Director of Black Rock Mining Steven Tambanis commented: *"The ongoing metallurgical programme continues to deliver significant improvements in purity and flake size for the Company to optimise a process flowsheet. Results indicate that Mahenge graphite can manufacture premium flake products from a straightforward flotation circuit and there is scope for additional improvements. We look forward to announcing additional results over the next few months from process optimisation and expandable/spherical/battery testing"*.

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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 has graphite tenure in the Mahenge region, Tanzania, a Country which hosts world-class graphite mineralisation. The Company announced its Mahenge JORC compliant resource on 29 February 2016, which is the largest and highest grade resource in Tanzania and the 4<sup>th</sup> largest globally.*

*The company is building a skill and knowledge base to become a developer and diversified holder of graphite resources.*

*Shareholder value will be added by:*

- ✓ identifying and securing graphite projects with economic potential
- ✓ focussing on tenure with scale potential that can be commercialised by converting into a JORC compliant resource; and
- developing the resource into a producing mine

*Our current focus is on completing technical and financial studies to take the Mahenge Project into production.*

#### Competent Person Statements

The information in this report that relates to Exploration Results is based on information compiled by Steven Tambanis, who is a member of the AusIMM. He is an employee of Black Rock Mining Limited. Steven Tambanis has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 and 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Steven Tambanis consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

The information in this report that relates to Metallurgical test work and results is based on information compiled by Mr David Pass, a Competent Person who is a member of Australian Institute of Mining and Metallurgy. Mr Pass is a full time employee of Battery Limits Pty Ltd, a specialist metallurgical consultancy and an independent consultant to Black Rock Mining Limited. Mr Pass has sufficient experience that is relevant to the style of mineralogy and type of deposit under consideration and the typical beneficiation thereof. Mr Pass consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.