

# Metallurgical test work returns high coarse graphite flake yields with 98.27% purity



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## Highlights

- Ongoing metallurgical testwork programme returned high proportions of coarse ( $>180\mu\text{m}$ ) and jumbo flake ( $>300\mu\text{m}$ ) graphite with excellent **98.27%** purity from the Epanko north primary zone
- Results from a straightforward three-stage flotation process with scope for material improvement
- Full results from the first stage programme expected mid March
- Mahenge JORC resource expected to be released within the next week.

**Black Rock Mining Limited (ASX:BKT) ("Black Rock Mining" or "the Company")** is pleased to announce an update on metallurgical test work results from Epanko north primary mineralisation from its 100% owned Mahenge project in Tanzania.

54.2% distribution of coarse and very coarse (Jumbo) flake in concentrate with grades averaging 98.27% TGC.

These are highly encouraging results from a straightforward three-stage flotation process and validate the potential to produce premium quality flake graphite.

More significantly, 86.2% of the flake concentrate, representing all graphite flake  $>75$  microns in size, returned a weighted average grade of 97.88%TGC. Flake size distribution and purity is biased towards the coarser sizing fractions. There is considerable potential for additional testing to further improve coarse flake yields and grades.

Screen Size	Mass	TGC (%)
	%	Assay
+300 $\mu\text{m}$	16.5	98.2
+180 $\mu\text{m}$	37.8	98.3
+150 $\mu\text{m}$	9.4	97.3
+106 $\mu\text{m}$	13.8	97.6
+75 $\mu\text{m}$	8.7	96.5
+38 $\mu\text{m}$	7.7	89.2
-38 $\mu\text{m}$	6.2	76.7

Table 1. Summary of the Epanko north flake concentrate by size and TGC assay. Assay method is differential LOI (Loss on Ignition).

## Current Metallurgical test work programme

The current programme is evaluating graphite mineralisation from Epanko north and Ulanzi prospects. Both oxide and primary rock types are being tested to optimise flowsheet design.

The Epanko north primary test programme has returned excellent results to date, delivering 54.3% of flake yield in the plus 180 micron range (coarse and jumbo flake size) with a weighted average grade of 98.27% TGC.

Additional test work has scope to deliver additional improvements to both coarse flake size distribution and graphite concentrate grade. Further test work is being evaluated to follow on from the completion of the first programme to focus on delivering material improvements to the current flow sheet.



Photos 1&2. Float cell in operation with Ulanzi primary feed (above). Flake graphite concentrate ready for sizing analysis (below).







Photos 3,4. Reviewing test batches at the metallurgical process laboratory (above) and Epanko north and Ulanzi concentrate and tailing samples from the current test programme (below).



## Maiden JORC Resource

The Mahenge JORC resource is expected to be finalised for release this week. It will incorporate the drilling results from Epanko north, Ulanzi and Cascades.

## Summary

- Epanko north primary graphite mineralisation shows excellent initial coarse graphite yields and purities. The Coarse and Jumbo flake proportion is 54.3% with 98.27% purity from a simple flowsheet
- The current metallurgical test work programme is testing the oxide and primary portions of the Epanko north and Ulanzi prospects. Full results from this programme are expected in March
- The Maiden Mahenge JORC resource is expected to be released within the next week

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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. Drilling of the Epanko north Ulanzi and Cascade prospects was completed in 2015. The Company plans to announce its Mahenge JORC compliant resource in February 2016.*

*The company is building a skill and knowledge base to become an explorer, 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 JORC compliant resources; and*
- *taking these resources into production*

*Our focus is on establishing a JORC resource from three advanced prospects at Mahenge, whilst further adding resource upside through exploration at Kituti.*

### 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.