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# A S X A N N O U N C E M E N T

## LINDI JUMBO PROJECT - METALLURGY

#### Continued significant metallurgical test work results

#### **Highlights**

18 February 2016

- Continued improvement for results within metallurgical program
- Further tests confirm target recoveries and improved flake size retention
- Flake size ratios of Jumbo flakes (+300µ) now up to 40% and Large flakes (+180µ) between 60% and 74% in concentrate
- Consistently high recoveries of between 95% and 97%
- Flake size recoveries can be maximised and are highlighted by petrographic results previously reported
- Focus to move to attrition and comminution mechanics to optimise flake size retention

#### Overview

African focussed, ASX listed junior explorer Walkabout, (ASX:WKT) is pleased to report on further metallurgical results from test-work being conducted on representative samples from the Lindi Jumbo Graphite Project in south east Tanzania.

10 samples (9 core samples and one surface sample) were submitted to NAGROM for preliminary metallurgical test work to determine grade, flake size distribution and the concentration of graphite through a standardised flotation regime with the aim of producing saleable concentrate grades (> 95 % TGC) while largely preserving the exceptional flake size distribution known to exist within the deposit.

The test regime for flotation test-work and size analysis has now completed 8 tests. Each test, while not yet at an optimisation stage, is showing improvement over previous work.

The assay grade of the samples varied between 4.8% TGC and 36.7% TGC with an average of 21.7% TGC.

Managing Director, Allan Mulligan said: "We're very pleased with the results of this fast-tracked work. These results are exactly in line with what other projects achieved at the same stage. We have a few more tests to do then the program moves from the characterisation stage into the design stage."

"We now know the optimisation is not so much about the flotation regime but about the attritioning mechanics and we will gather about a 200kg sample from site for transport to our design engineering laboratory."



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## ASX ANNOUNCEMENT

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#### Test-Work Summary Results

Ongoing metallurgical testing is focused on the core drill material from the Gilbert Arc JORC Inferred Resource recently published. There have been no changes to this resource since the announcement 19 January 2016.

The results reported here are for all the metallurgical tests that have been performed on the Gilbert Arc core to date. Table 1 summarises the flake size distribution for large and jumbo sized flakes achieved in the concentrate product. Also listed is the concentrate grade of the large and jumbo fraction and the overall grade for each saleable product.

Industry benchmarks for saleable product target a grade of more than 94% TGC in concentrate. This table demonstrates key results for each test and highlights the improvements being achieved through the regime. The graphitic carbon content (%TGC) for all reporting has been determined from the difference in the loss of ignition (LOI) between the temperatures of 425°C and 100°C.

P100 850µm	Flake Size Ratios		Concentrate Grade	
Float Test	Ratio over Large +180µm %	Ratio over Jumbo +300µm %	Ave Concentrate Grade %TGC +180µm	Ave Concentrate Grade %TGC (all sieve sizes)
Test 10	74	47	79.4	85.7
Test 1	68	31	93.9	89.8
Test 2	57	22	95.9	94.3
Test 3	52	17	96.4	95.5
Test 4	52	17	95.3	95.7
Test 5	57	25	96.4	93.7
Test 6	61	35	95.1	94.0
Test 7	60	40	91.7	91.4

Table 1:.Summary of relevant results from all tests to date.

The test samples were subject to a standardised and simple roughing flotation regime with various stages of grinding and/or polishing and slight variations in flotation conditions. At a coarse grind size of 850 micron the tests indicate that a high concentrate grade above 95% is easily achieved and maintained with the later testwork showing that the larger flakes can be preserved and are constantly improved with each test. Further work will now be focussed on attrition mchanics to retain more of the high ratios of >300µ and >500µ material highlighted in the intensive petrographic studies reported earlier. (See ASX announcement 15 February 2016.

Of further interest in Test 6 and 7 is that while the total "plus  $180\mu$ " ratio is up marginally, the "plus  $300\mu$ " or Jumbo ratio has more than doubled. This will have a material effect on the basket revenue of the concentrate.)



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In addition, the size to value ratio of the ore material and the concentrate being produced is significantly in favour of the larger fractions allowing a distinguishing product size cut to be considered. In this case, the finer size material can be removed to a separate stockpile and the remaining coarser fractions with the higher graphite grade will be a higher concentrate grade and better flake size ratio's resulting in a higher nett basket revenue. (See table 2)

Test 6	Flake Size Ratio +180µ	Concentrate Grade
With -75µ material in con	61.0%	94.0% TGC
Removing -75µ material from con	68.4%	95.1% TGC

Table 2: Size by improvement of current non-optimised results by removing amorphous fraction from concentrate (calculated).

#### Characteristics of Surface Sample (LJMET\_010)

An in-situ surface sample was excavated in close proximity to the Gilbert Arc discovery hole LJRC001. The sample was moderately weathered and was estimated to contain between 20-30% graphite. Assay results returned a grade of 33.3% TGC.



Figure 1. Close-up photograph of surface sample LJMET\_010 indicating macroscopic Jumbo and super Jumbo graphite flakes (Ruler for scale).



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A simple flotation regime carried out on the sample resulted in concentrate grades of 85.7 %TGC with excellent flake size retention of >74% Large, Jumbo and Super Jumbo flakes. Further work is planned to optimize larger flake concentrate recovery while at the same time increasing the concentrate grade.

The implications of these results are that the surface material appears to have a higher ratio of large and jumbo flake material and this is borne out in the petrography where this sample contained an estimated 90% of flakes larger than  $180\mu$ . Since the oxidation halo at The Gilbert Arc site is not deep, significant amounts of near surface and outcrop are available for exploitation. As a result, separate regimes of test work will be carried out for surface and fresh material.

#### **Strategy for Development**

Walkabout intends to fast track the development of a open cut mining operation at Lindi Jumbo to produce high grade, jumbo and large flake concentrate product. The strategy is the early introduction of an end-user market partner which will secure product off-take and clarify operational right-sizing.

A Maiden JORC Inferred Resource has been published 19 January 2016 (See ASX Release 19 January 2016). No material changes to this JORC Inferred Resource have since occurred.

Details of Walkabout Resources' other projects are available at the Company's website, <u>www.wkt.com.au</u>

#### ENDS

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#### **Competent Person Statement**

The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr Allan Mulligan and Mr Andrew Cunningham (Directors of Walkabout Resources Limited). Mr Cunningham is a member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Mr Mulligan is a member of the Australian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and type of deposit under consideration and the typical extraction and evaluation thereof. Both Mr Cunningham and Mr Mulligan consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.