



Media release – 7 July 2016

Results confirm scope to disrupt LiB Synthetic Graphite

Metals of Africa Limited (ASX: MTA) (**the Company**) has received compelling test work results regarding the quality and suitability for Lithium Ion Battery (**LiB**) applications of its Montepuez and Balama Central graphite deposits located in the Cabo Delgado Province of Mozambique.

These results confirm that the Company's natural flake graphite from both project locations is suitable for LiB applications and that it exhibits features that allow simple liberation without chemicals due to the simplicity of the underlying metallurgical properties.

Combined, these initial results indicate that the MTA natural graphite is likely to be superior to many of the highest quality synthetic graphites currently available on the market for use by LiB end-users.

MTA considers that natural graphite can be produced at its projects at a fraction of the cost of synthetic graphite due to its high grade deposit and potential low operating costs (refer ASX announcement 10 February 2016), therefore giving it capacity to disrupt and encroach on a LiB market currently dominated by synthetic graphite producers. The graphite currently used in LiB's is a blend of both natural and synthetic spherical graphite.

The next round of LiB studies will be undertaken utilising the Company's US based spherical graphite system, scheduled to commence in late July 2016.

Background

These positive results have been drawn from the range of tests being conducted as part of MTA's ongoing research and product development program conducted in parallel with the progression of the Company's Definitive Feasibility Study.

The Company engaged US based Coulometrics LLC to undertake a series of detailed tests on >96% concentrate samples from MTA's Montepuez and Balama Central projects.

The objective of the testing was to confirm the suitability of the representative samples for use as the anode material in LiB applications. These tests were repeated 3 times to demonstrate repeatability. The test work included sieving the concentrate samples to various sizes (+50, 50x100, 200x400, 400x635 and -635 mesh) (see Table 3 below for mesh/micron size equivalent comparison). These samples were then measured to get flake size distribution, Tap Density, Loss on Ignition (LOI) carbon content, BET Surface area, X-ray diffraction to determine crystallite size, and finally each size fraction was ground and made into lithium ion battery coin cells that were tested to determine capacity for lithium intercalation (refer to Tables 1 and 2 below).

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Outcomes

Both the Balama and Montepuez deposits consist primarily of flake >400 mesh. All flake sizes from the Company’s deposit larger than -635 mesh proved to be well graphitized and consequently provide high capacity for use as LiB anode material. (See below equivalent size mesh and micron in Table 3)

The representative samples present with low impurity levels and show high reversible capacity which makes the graphite ideal for use as the primary anode material in LiB applications.

The purity obtained from all flake sizes is exceptional and consequently the spherical graphite produced from natural graphite is has the potential to replace much of the existing supply of synthetic spherical graphite due to its pricing and environmental advantages.

Next Steps

The Company is taking significant steps to position itself to meet this expected demand for natural spherical graphite and is in active dialogue and due diligence with a number of major LiB end-users. The Company has demonstrated its deposits have simple metallurgy and the ability to derive a high quality (>99%TGC) concentrate without the use of any chemicals, and produce a product that is suitable for LiB applications.

ID#	Flake Size (mesh)	Tap Density (g/cc)	LOI – Ash Content (% carbon)		
			Sample 1	Sample 2	Sample 3
G16-0049	As Received	0.74	98.63	98.86	98.78
	+50	0.71	98.90	99.00	98.97
	50x100	0.68	98.95	98.97	98.96
	100x200	0.60	98.90	98.38	98.90
	200x400	0.48	98.63	98.70	98.66
	400x635	0.30	98.10	98.05	-
	-635	0.28	Not enough -635 material from this sample.		

Table 1: Tap and ash analysis based on 96% concentrate sample

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ID#	Flake Size Ground to -635 mesh	eChem Results		
		Rev. Capacity (mAh/g)	Irrev. Capacity (mAh/g)	First Cycle Efficiency (%)
G16-0047	As Received	366	34.1	91.3
	+50	363	29.6	92.3
	50x100	361	30.5	91.9
	100x200	367	35.2	91.1
	200x400	374	37.6	90.8
	400x635	361	50.2	87.6
	-635	Not enough material available after sieving		

Table 2: Electrochemical data based on 96% concentrate sample (therefore Rev. Capacity will increase when 99.99% concentrate is used – current dilution factor of about 4%).

US Flake Size mesh	Microns
+50	+325
50x100	325 - 150
100x200	150 – 74
200x400	74 – 37
400x635	37-20
-635	20

Table 3: Size Equivalent Comparison

On behalf of Board of Directors Metals of Africa Ltd.

For further information, please contact

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About Metals of Africa Limited

Metals of Africa Limited (ASX: MTA) is a graphite focused exploration company, rapidly progressing towards development. MTA has successfully delineated two world class, high grade graphite resources in Mozambique, East Africa.

The 100% owned Montepuez Resource boasts 61.6Mt at 10.3% TGC, and the nearby Balama Central Resource contains 16.3 Mt at 10.4% TGC (see Table 1 below). The Balama Central Resource was defined in less than one month of drilling, less than 5% of the prospective geology has been tested and both resources remain open in all directions, signifying the potential scale of the projects.

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Table 1:

Montepuez Graphite Project
November 2015 Mineral Resource Estimate (6% TGC Cut-off)

Class	Tonnes	TGC	V ₂ O ₅	Cont. Graphite	Cont. V ₂ O ₅
	Mt	%	%	Mt	Kt
Measured	-	-	-	-	-
Indicated	27.6	10.4	0.23	2.9	62
Inferred	34.1	10.2	0.30	3.5	101
Total	61.6	10.3	0.26	6.3	163

Balama Central Graphite Project
March 2016 Mineral Resource Estimate (6% TGC Cut-off)

Class	Tonnes	TGC	V ₂ O ₅	Cont. Graphite	Cont. V ₂ O ₅
	Mt	%	%	kt	kt
Measured	-	-	-	-	-
Indicated	8.9	9.3	0.16	836	14
Inferred	7.3	11.8	0.27	863	20
Total	16.3	10.4	0.21	1,699	34

MTA has uniquely positioned itself amongst its peers and is now poised to quickly transition into development with an extremely low cost operating profile. MTA prides itself on its environmental best practice policies, zero harm and ongoing positive community development programs.

Metals of Africa is conducting a series of research and development activities and trials in both Australia and Africa in establishing the best process methodology in mineral exploration, mining and processing. This activity is for the benefit of the Company's holdings and in the licensing of intellectual property as a means of bringing these ideas to the market.

Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Ms. Cherie Leeden, who is Managing Director and who holds shares and options in the Company. Ms. Leeden is a Member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person 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. Ms. Leeden consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this report that relates to Exploration Targets and Mineral Resources is based on information compiled by Mr Robert Dennis who is a Member of Australian Institute of Geoscientists and a full time employee of RPM Limited. Mr Dennis 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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Dennis consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

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