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Projects: Mozambique
Balama North Graphite-Vanadium
Ancuabe Graphite
Balama South Graphite



Holder of the world's largest known combined graphite-vanadium resource.

MOZAMBIQUE GRAPHITE CONCENTRATE MARKET RESEARCH

Triton Minerals Ltd (ASX: TON, Triton or **Company**) is pleased to announce that graphite market research completed by Independent Metallurgical Operations (“IMO”) has confirmed that Triton’s Mozambique graphite concentrate is suitable for use in a diverse range of graphite products.

Triton Minerals’ Managing Director & CEO Brad Boyle said: *“IMO’s research results demonstrate the suitability of Triton’s Mozambique Graphite (“TMG”) concentrate in nearly all main sectors of the graphite market.*

Further test work is now being conducted to establish the detailed technical specifications of the TMG concentrate, to help Triton determine which of these sectors to target further.”

As recently announced by Triton, IMO has been engaged to complete an independent study on the physical properties and specifications of the TMG concentrate.

This work will enable Triton to better understand and target the range of applications for the TMG, and thus enabling Triton to refine and better cater for potential client’s needs.

As a result of the initial review IMO has confirmed that the graphite market is broken into five main sectors, including:

- Battery Market (includes Off-grid Energy Storage, EV’s)
- Specialty Graphite Market
- Steel & Refractory
- Lubricants Automotive & Electrical
- Specialty & Other Graphite Market

Further research by the Company confirms the demand in the Battery Market continues to grow, as new methods and technology is applied to create more efficient batteries for the energy storage systems and electric vehicles. Some examples of the battery uses are shown in Appendix 1 below.

These main sectors comprise several sub-sectors, each with specific graphite requirements. A more detailed overview about the graphite granularity and grade specifications for these sub-sectors are contained in Appendix 2 (attached).

As previously announced by Triton, initial metallurgical test work undertaken by ALS Laboratories (Adelaide) confirmed that the TMG ore, through standard flotation methods, is readily able to produce graphite concentrates which assay from **95.8%TGC to 97.3%TGC**.

Further, the metallurgical results confirm the graphitic concentrate produced through the standard flotation methods contain low levels of impurities, which means the graphite is liberating cleanly from the graphitic ore.

The tests verify low levels of volatiles and impurities. The impurities are mainly silica in the form quartz followed by anorthite and muscovite, which can be readily separated without having any detrimental impact on the quality of the graphite concentrate.

These flotation tests produced graphite concentrates with a weighted average purity of **97.1%TGC, 2.7% Ash and 0.2% Volatiles**, without the need for chemical treatment.

Metallurgical tests have also confirmed that **the graphite concentrate can be upgraded to 99.9%C** using simple chemical wash. Leaching is a very effective method to remove gangue minerals from graphite concentrate without flake size reduction. The amount of consumables required for the purification process is low due to the very high grade of the graphite concentrate and the low levels of the impurities which can be readily removed.

Based on the metallurgical and mineralogical test results to date, the applications for which the TMG concentrate is suitable, according to the independent IMO study, include the following:

- **Dry Cell, Lead Acid and Alkaline Batteries**
- **Lithium Ion, Spherical Graphite and Fuel Cells**
- Refractory Crucibles
- Foundry Core and Mould Wash
- Gaskets
- Lubricants and Releasing Agents
- Brake Linings
- Carbon Brushes
- Powder Metallurgy
- Graphite Powders
- Polymer Additives
- Conductive Polymers and Plastics

Based on the positive metallurgical recovery results, high purity levels and the extraordinary quality of the TMG achieved to date, Triton believes that, with further testing and analysis, the Company will be able to expand the list of suitable graphite applications to encompass all of the graphite sectors and potentially a full range of the graphite sub-sectors.

CONCLUSIONS

Triton controls the largest known graphite-vanadium deposit in the world at the Nicanda Hill.

Metallurgical test work on the Mozambique graphite confirms Triton can produce high purity graphite concentrate of between **95 and 97%TGC** through simple and relatively inexpensive flotation recovery methods, with low levels of volatiles and impurities and is readily upgradeable to a purity of **99.9%TGC**.

The IMO research verifies the versatility of the TMG and its suitability across a number of the graphite sectors. Triton believes that these results continue to reaffirm the high quality of the Mozambique graphite and that they will assist Triton in its ability to accommodate the material requirement of the broader and expanding graphite market.

Triton is working towards creating a new graphite industry benchmark with TMG, by aiming to offer the **world's lowest cost and most diversified graphite product range, together with the longevity of a reliable supply of high quality flake graphite.**

Regards



Brad Boyle
Managing Director & CEO
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Competent Person's Statement

The information in this announcement that relates to Exploration Results on Balama North project is extracted from the reports entitled ASX Release "Nicanda Hill Update" created 28 November 2014 and is available to view on www.tritonmineralsltd.com.au. The reports were issued in accordance with the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not necessarily limited to, statements concerning Triton Minerals Limited's planned exploration program and other statements that are not historic facts. When used in this document, the words such as "could", "plan", "estimate" "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Although Triton Minerals Limited believes that its expectations reflected in these are reasonable, such statements involve risks and uncertainties, and no assurance can be given that actual results will be consistent with these forward-looking statements.

APPENDIX 1.



Figure 1. Example of Domestic Energy Storage System (Zen Energy Systems, Australia) (Sourced from Sydney Morning Herald <http://www.smh.com.au/business/carbon-economy/energy-firm-claims-battery-storage-breakthrough-20121010-27dc0.html> and <http://www.zenenergy.com.au/home/energy-storage>)



Figure 2. Example of Lithium Ion Battery for electronic device (Sourced: Telegraph 21, <http://www.telegraph21.com/5-steps-extended-lithium-ion-battery-life>)



Figure 3. Example of a rapid charge electric vehicle. (Source: <http://borderlessnewsandviews.com/2014/01/top-5-reasons-why-you-should-consider-an-electric-car>)

APPENDIX 2: Graphite Granularity and Grade Specifications

Sector	Application	TGC%		Ash%		Size(µm)		Anticipated Suitability	
		Lower	Upper	Lower	Upper	Lower	Upper	Nicanda Hill	Ancuabe
Battery Market									
	Dry Cell Batteries	88	90			1	106	✓	✓
	Alkaline Batteries	90	99.9			5	75	✓	✓
	Lead Acid Batteries	90	95			5	58	✓	✓
	Lithium Ion Batteries*	99	99.9			25	48	✓	✓
	Spherical Graphite*	99.9	99.99			1	48	✓	✓
	Fuel Cells*	99.9	99.99			40	150	✓	✓
Specialty Graphite Market									
	Powder Metallurgy	95	99			10	50	✓	✓
	Polymer Additives	50	85			5	15	✓	✓
	Conductive Polymers & Plastics*	99	99.99			3	38	✓	✓
	Graphite Powder	85	99.99			3	38	✓	✓
Steel & Refractory									
	Refractories	85	90	2	10	150	710	✓	✓
	Crucibles	85	90	2	10	75	150	✓	✓
	Expanded Graphite	90	98			200	1700	✓	✓
	Foundry Additives	40	70			53	75	✓	✓
	Core & Mould Washes	70	90			1	75	✓	✓
	Recarburising Steel*	98	99			1	5	✓	✓

Lubricants Automotive & Electrical									
	Lubricants & Releasing Agents	95	99			25	300	✓	✓
	Brake & Clutch Linings	95	98			1	75	✓	✓
	Bearings	90	93			150	500	✓	✓
	Gaskets	80	99.9			40	300	✓	✓
	Carbon Brushes	95	99	0.5	1	1	53	✓	✓
	Electrical	93	95			150	500	✓	✓
Specialty & Other Graphite Market									
	Expanded Graphite*	98	99.9			150	550	✓	✓
	Graphite Foil	85	99.5	0.5	2	150	300	✓	✓
	Graphite Ropes & Packaging	85	94			100	150	✓	✓
	Graphite Extruded Parts	85	94			150	300	✓	✓
	Graphite Blocks	85	94			58	100	✓	✓
	Pencils	95	97			150	300	✓	✓
	Construction & Building Materials*	98	99			300	600		✓
	Nuclear Reactor Industry	93	95	0.05	0.2	150	300	✓	✓

Note: * The graphite concentrate obtained via flotation may require additional refining in order to achieve the purity level required.