

## Triton Minerals Ltd

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

### Project Locations



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

## TRITON MOZAMBIQUE GRAPHITE (TMG) IS EXPANDABLE

**Triton Minerals Ltd** (ASX: TON, **Triton** or **Company**) is pleased to confirm initial material testing completed by an independent facility located in Asia, has confirmed that Triton's Mozambique Graphite (TMG) can be expanded up to 1,000 times.

Triton Minerals' Managing Director & CEO Brad Boyle said: *"These are very exciting results for Triton as not all graphite can be expanded. The unique physical and thermal properties of expanded graphite enjoys a continued strong market demand and a premium price is paid by end users."*

*This style of graphite is readily converted into a number of graphite products, including graphite paper and graphite foil that is subsequently used in either high temperature applications or insulation for electronic devices. These results confirm the high quality nature, versatility and economic importance of TMG and Triton expects the expanded graphite will be used in many of the graphite sectors. "*



**Figure 1.** Image of the TMG in expanded form (width of photo is 20cm)

## WHAT IS EXPANDED GRAPHITE

Not all graphite is expandable. However, if the graphite possesses the required physical properties the graphite is normally expanded by immersing the natural flake graphite concentrate, usually at a grade of 95% to 99% TGC, in a bath of chromic acid, then concentrated sulfuric acid, which forces apart the crystal lattice planes, thus expanding or increasing the flake graphite surface area from 500 to 1,000 times in size. Subject to quality the expanded graphite sells for up to **US\$3,500** per tonne.

The expanded graphite is used to produce flexible graphite sheets and foils which are subsequently used for manufacturing high-performance gasket material for high-temperature use, packaging and other sealing materials in critical applications of high pressure environments.

The expanded graphite can also be used to create a compound to insulate molten metal in a ladle or red-hot steel ingots and decrease heat loss, or as a fire-stop which is fitted around a fire door or in sheet metal collars surrounding plastic pipe (during a fire, the graphite expands and chars to resist fire penetration and spread).

After being made into graphite foil, the foil is machined and assembled into the bipolar plates in fuel cells. Graphite foil is also a major component of heat sinks for laptop computers which keeps them cool while saving weight. Graphite foil laminate is also used in valve packings or made into gaskets.

Expanded graphite is an extremely valuable and highly sought after material and is a critical component in battery market. Company research has found subject to the quality and thickness, the expanded graphite foil can sell for up to **US\$50,000** per tonne.



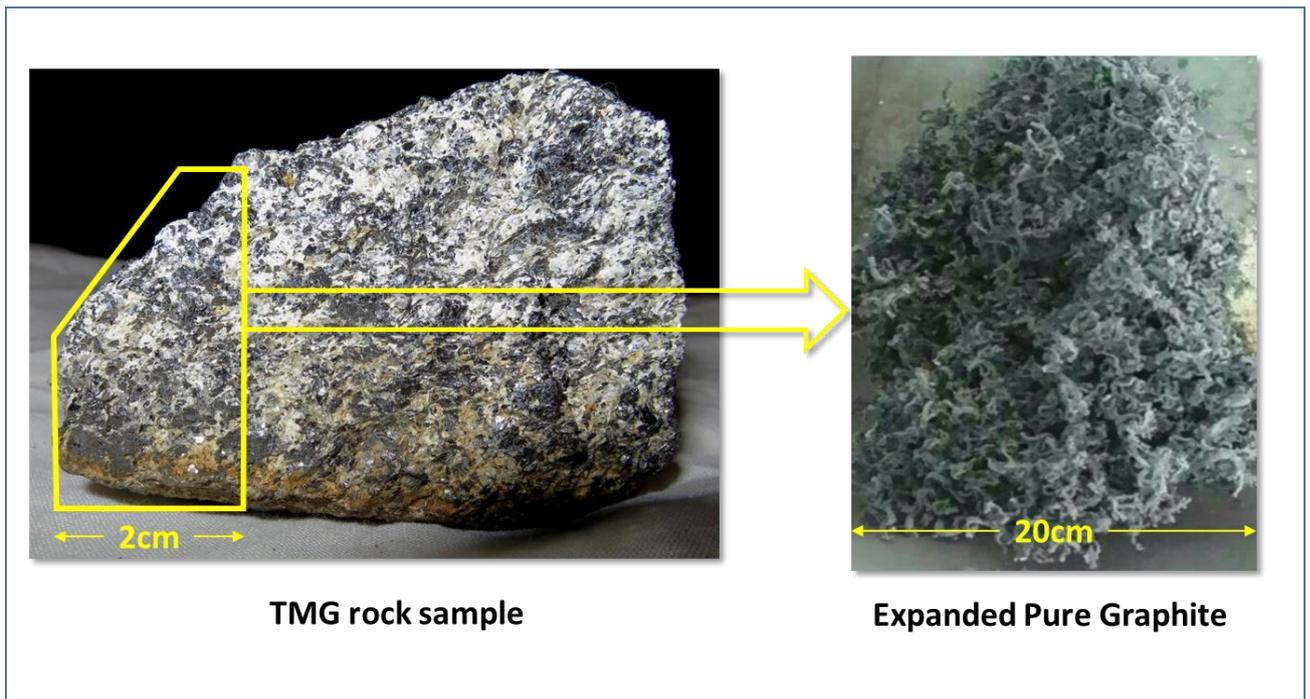
**Figure 2.** Image of Graphite Foil made from expanded graphite (Sourced. SGL Group, <http://www.sglgroup.com>)

### GRAPHITE EXPANSION TESTS

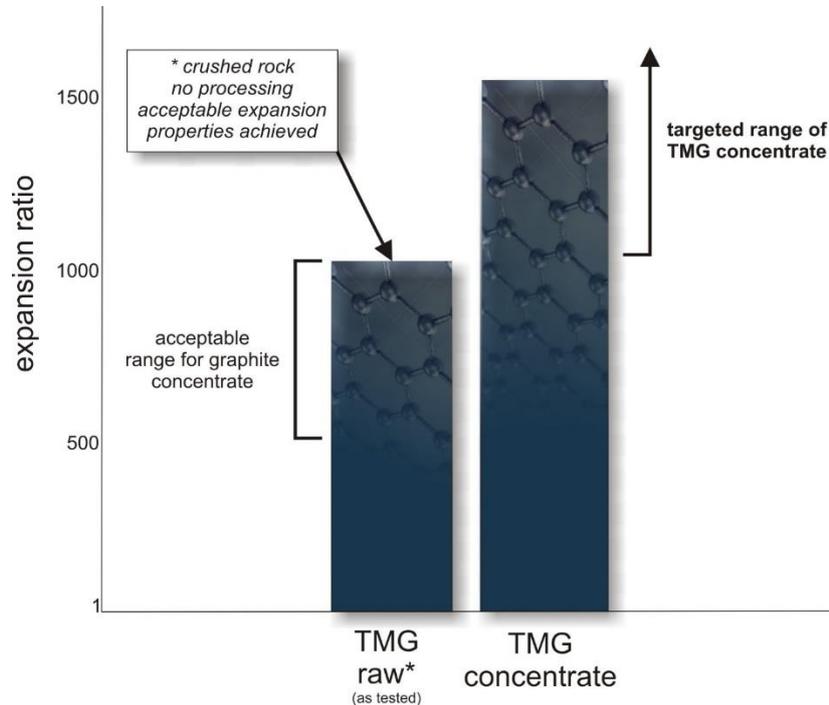
Triton confirms that the tests conducted by the independent facility located in Asia, on an **unprocessed graphitic rock sample** confirms that TMG has exceptional expandability properties with the surface area of the graphitic material being expanded up to **1,000 times**.

Based on these encouraging results, Triton expects that once the Company has processed the TMG into a high grade concentrate of about 95% TGC, the surface area of the graphite material should increase to over **1,500 times** in size, well above the graphite market average (refer to Figure 4 below)

Figure 3 below shows the strong response of the TMG, as the test used a very small portion of raw graphitic ore (highlight in yellow in the left image below) during the expansion testing. The results of the expansion tests (right image) were extremely successful, increasing the surface area of the flake graphite dramatically.



**Figure 3.** Example of raw TMG rock sample that was converted into expanded graphite.



**Figure 4.** Chart showing market expectations for expandability of processed graphite concentrate and strong expansion rates obtained with the raw TMG ore.

These results once again confirm the high quality nature of TMG and Triton expects that its expanded graphite will be in great demand by many end users from across the globe.

## CONCLUSIONS

The results from the initial expansion tests have confirmed the high quality nature, expandability and market leading potential of TMG concentrate. Even without being processed, raw TGM was expanded up to 1,000 times.

Triton expects a strong continued demand for the expanded graphite material, as new and commercially significant applications are being found every day for this material.

Triton is working towards establishing TMG as a new global graphite-industry benchmark, 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**  
**Triton Minerals Ltd**

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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](http://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.