

## Triton Minerals Ltd

ASX: TON  
ABN: 99 126 042 215

Street address:  
Ground Floor  
Unit 1  
256 Stirling Highway  
Claremont  
Western Australia 6010

Postal address:  
PO Box 1518  
West Perth  
Western Australia 6872

Tel: +61 8 6489 2555  
Fax: +61 8 9388 1252

Email:  
[info@tritonmineralsltd.com.au](mailto:info@tritonmineralsltd.com.au)

Web:  
[www.tritonmineralsltd.com.au](http://www.tritonmineralsltd.com.au)

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



Holder of the world's largest known.

## TRITON MOZAMBIQUE DEVELOPMENT STRATEGY

### HIGHLIGHTS

#### MOZAMBIQUE

- Internal economic study underscores advantages of in-country manufacture of enhanced TMG products
- Study supports the establishment of spherical and enhanced graphite products factories at Nicanda Hill
- In-country manufacturing will earn development and tax incentives from Mozambique Government

#### METALLURGY

- Flotation testing produces graphite concentrate at 99% TGC from Nicanda Hill
- TMG product range expanded

Triton Minerals Limited (ASX: TON, Triton or Company) is pleased to provide an update on the Mozambique development strategy of Triton's projects and operations.

Triton's CEO & Managing Director Brad Boyle said: "The recent confirmation that TMG can produce a wide range of high quality graphite products, including a full range of high grade flake graphite concentrates, graphite composite material, graphite sheets and foils, spherical graphite and graphene, places Triton in a unique position to supply a broad and diverse market base.

Triton currently has the largest known graphite deposit in the world which provides longevity and certainty of supply. The high quality nature of the TMG products and the strong support of the Mozambique Government will allow Triton to rapidly advance all the projects and operations.

Triton is focused on an in-country value-adding strategy as it is the logical step to utilise the established and future infrastructure, maximising the value of TMG products before selling and transporting them elsewhere.

Finally, Triton's strategy aligns with the new fiscal and mining regimes of the Mozambique government and provides the Company the advantage of obtaining a number of development incentives and rebates which are associated with in-country value adding."

## NICANDA HILL INTERNAL ECONOMIC ASSESSMENT

A concept-level internal economic assessment, undertaken by the Company to establish the parameters for the Definitive Feasibility Study (DFS) financial modelling, has confirmed the economic robustness of Triton's strategy of producing and exporting high-value graphite products directly from its integrated Nicanda Hill operations in Mozambique.

Triton believes some of the key benefits of value-adding of the TMG products on site at Nicanda Hill include the use of established mine infrastructure, power and water.

These combined benefits would help to reduce capital and operating costs for the joint venture project and the in-country value adding process is aligned with the current objectives of the Mozambique fiscal and mining regimes.

Triton's internal modelling shows that, while the export of graphite concentrate alone can be very profitable in ideal future market circumstances, the financial returns from in-country value adding, by contrast, provides for a more rapid return on investment and vastly increased profit margins in the near (1-2 year) term, by a factor up to 5 to 10 times, in the corresponding graphite market conditions.

Triton has confirmed that the production and export of high value products, such as graphite composite material, graphite sheets and foils, spherical graphite and possibility graphene, which are currently in high demand in the broader and larger energy storage and electronics markets offers the Company the opportunity to enjoy stronger financial returns several quantum higher than the export of graphite concentrates alone.

Additional benefits of this strategy include:

- Significant tax and import/export incentives that are not available to mining-only operations.
- Integrated DFS financial modelling will include mine-gate concentrate production costs rather than FOB costs.
- Integrated DFS financial modelling will incorporate value-added sales prices which can be greater than US\$2,500/tonne for expanded graphite, US\$6,000/tonne for composite graphite material and up to US\$50,000/tonne for graphite foils (for which Triton will share propriety and patented technology to produce).
- Longevity and certainty of supply from the world's largest known high grade graphite deposit to fulfil 20 year (2 million tonnes) binding off take with Yichang Xincheng Graphite Co., Ltd (YXGC) of graphite concentrate, for both expanded and composite graphite products.
- Binding joint venture agreements with YXGC to produce composite graphite products generates an internal supply demand for the TMG which is both independent and not reliant on the broader global graphite market.
- Ability to produce a high quality, competitively-priced, full range of flake graphite concentrate grades and sizes that can be customised for end user requirements.
- Ability to produce high quality enhanced graphite products that can be customised for end user requirements.

- Ability to produce competitively-priced spherical graphite on site at production levels that can be customised to suit market requirements and demand.
- Wastage of concentrate in processes, such as spherical graphite production, can be as high as 50%. By producing spherical graphite on-site, only the high-value product will be transported to clients. The costs of transporting concentrate destined for off-shore spherical graphite production, of which up to half will be discarded as waste, are thus avoided.
- The waste component from spherical graphite production at Nicanda Hill will be re-cycled into high-value composite graphite products, so that all components of TMG are used.
- The current Nicanda Hill DUAT application will incorporate the spherical and enhanced graphite products factory facilities, such that a separate DUAT application will not be required.
- The current Environment Impact Assessment (EIA) application will incorporate the factory facilities at Nicanda Hill.
- The factories and concentrator will share the same energy and water sources, thus avoiding duplication of capital and operating costs.
- Superior infrastructure and access compared to peers, including close proximity to regional capital of Montepuez (<20km to project), mains power, water and telecommunications, a new sealed public road within 8km of the Nicanda Hill deposit, directly connecting to Pemba and Nacala port facilities.

### TMG PRODUCTS

Triton is rapidly becoming a market leader by positioning itself to produce from two superior quality projects – from the world’s largest known high grade graphite deposit at Nicanda Hill and from the renowned Ancuabe area which is known for the world’s best quality and flake graphite distribution. Triton aims to produce high quality graphite concentrates in a full range of flake sizes and to produce broad range of enhanced graphite products (Figure 1).

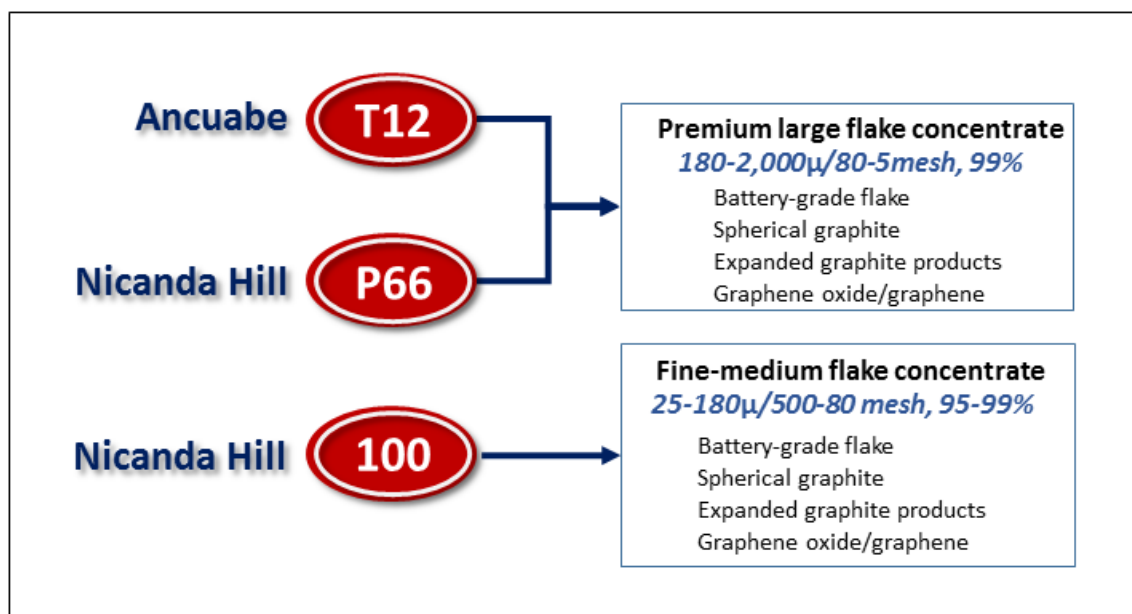


Figure 1. Overview of the currently targeted TMG product range, flake sizes and graphite applications

These two world class graphite projects are complemented by the newly discovered P66 zone at the Balama North project. TMG is located in northern Mozambique and is unique as the graphite readily liberates to very high purities through traditional flotation methods.

Triton confirms the bulk sample test work being undertaken at SGS Lakefield, Perth on standard Nicanda Hill graphite material (100) has achieved high recovery and purity results. The latest test results have confirmed the Nicanda Hill graphite concentrate can be readily upgraded to **99%** purity through simple flotation.

Both Nicanda Hill and Ancuabe graphite materials have achieved the highest levels of quality and purity without the need for chemical leaching, thus reducing the overall production costs and increasing TMG product options.

The demonstrated high quality of the TMG means Triton has the flexibility to customise and produce a broad range of graphite concentrates and enhanced products for a diverse global market, as shown in Figure 2 below.



Figure 2: TMG product range

## CONCLUSIONS

TMG is unique and provides Triton the ability to produce a wide range of high quality graphite products, including a full range of high grade flake graphite concentrates with purities of up to 99% TGC, graphite composite material, graphite sheets and foils, spherical graphite and graphene, to cater for a globally diverse range of end users.

The high quality nature of the TMG products and low technical risk combined with the strong support of the Mozambique Government allows Triton to focus on rapidly advancing all the projects and operations in Mozambique, with a particular focus on in-country value adding and premium quality flake concentrates. This strategy aligns with the fiscal and mining regimes of the Mozambique Government and offers the Company the advantage of obtaining a number of development incentives and financial rebates.

Triton's business model that embraces the in-country value adding to create spherical and enhanced graphite products at Nicanda Hill, in conjunction with the production of graphite concentrates, is considered to be the most logical and more economically sound path forward, as it provides for greater flexibility to customise products and the ability to utilise the established and future infrastructure, thus maximising the value of the TMG products.

As a result of the encouraging recent results with TMG products, Triton is now reviewing options to expand the scope of the current DFS to include the P66 zone, the vertical integrated facilities at Nicanda Hill and subject to further exploration success, potentially include the Ancuabe project.

Triton continues to establish TMG as the 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 **premium quality flake graphite**.

Regards



**Brad Boyle**  
**CEO & Managing Director**  
**Triton Minerals Ltd**

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

**Vision**

Led by a highly experienced Board and Management team, Triton's primary vision is to grow shareholders value through discovery and development of graphite, gold and other precious, base and industrial minerals deposits. Further, Triton will explore vertical integration opportunities to supplement its core business and to create valued revenue streams to ultimately benefit Triton's shareholders.

**TMG and beyond**

Triton hopes to establish Triton Mozambique graphite, produced from its Mozambique graphite projects (TMG) as the 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.

*Triton hopes to establish Triton Mozambique graphite, produced from its Mozambique graphite projects (TMG) as the global graphite-industry benchmark.*

Triton is also actively pursuing vertical integration opportunities to be involved in all aspects of the graphite supply chain, which Triton believes will add significant value to the Company and its shareholders in the long term.

**For further information, please contact:**

**Brad Boyle**

CEO & Managing Director

Tel: + 61 8 6489 2555

Email: [bboyle@tritonmineralsltd.com.au](mailto:bboyle@tritonmineralsltd.com.au)

**Competent Person's Statement**

The information in this report that relates to Exploration Results on the Balama North, Ancuabe and Balama South Projects is based on, and fairly represents, information and supporting documentation prepared by Mr. Alfred Gillman, who is a Fellow of Australian Institute of Mining and Metallurgy (CP Geol). Mr. Gillman is an Executive Director of the Company. Mr. Gillman 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 Mineral Resources and Ore Reserves (the JORC Code)'. Mr. Gillman consents to the inclusion in this report the exploration results and the supporting information in the form and context as it appears.

**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

Balama North project (includes License 5966) operated under Agreement between Triton Minerals and Grafex Lda. Information pertaining to field mapping and sample collection data and assay results.

### JORC Table 1 - Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<i>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	The Nicanda Hill prospect is located on the Balama North Project. Bulk samples were collected from a number of pits from across the deposit to ensure that the samples that were collected were in situ ie. to avoid contamination and smearing of samples.
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used</i>	Bulk samples were collected from a number of pits from across the deposit to ensure that the samples that were collected were in situ ie. to avoid contamination and smearing of samples.
	<i>Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information</i>	Bulk samples were collected from a number of pits from across the deposit to ensure that the samples that were collected were in situ ie. to avoid contamination and smearing of samples
	<b>Logging</b>	Geological logging is carried out on each for the full mineral assemblage that can be identified in hand specimen, in addition to texture, structure and estimates of graphite flake content and size. The mineralogy, textures and structures are recorded by the geologist into a digital data file at the drill site, which are regularly submitted to the Perth office for compilation and validation.
	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Logging of rock samples includes recording lithology, mineralogy, mineralisation, weathering, colour and other features of the samples. Geological descriptions of the mineral volume abundances and assemblages are semi-quantitative.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	All drillholes associated with the graphite deposit at Nicanda Hill are logged in full.
	The total length and percentage of the relevant intersections logged	
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	n/a
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Rock samples aggregated into single sample for assay
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The nature, quality of costean sampling is considered appropriate and normal practice
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Bulk samples were collected from a number of pits from across the deposit to ensure that the samples that were collected were in situ ie. to avoid contamination and smearing of samples

Criteria	JORC Code explanation	Commentary
	<i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i>	Bulk samples were collected from a number of pits from across the deposit to ensure that the samples that were collected were in situ ie. to avoid contamination and smearing of samples. No field duplicates were taken.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	Sample sizes are considered adequate
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	The analytical techniques used to analyse all samples for Graphitic Carbon, Total Sulphur, and Total Carbon is on a Leco Combustion Infrared Detection instrument. Detection limits for these analyses are considered appropriate for the reported assay grades. In addition, selected samples will be analysed for multi-element abundances using a fused disc digested in a four acid digest with ICP/OES or ICP/MS finish The acids used are hydrofluoric, nitric, perchloric and hydrochloric acids, suitable for silica based samples. The method approaches total dissolution of most minerals.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	No geophysical tools were used to determine any element concentrations.
	<i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i>	Not considered necessary for costean and bulk samples due to large size and representative nature of sampling.
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Mr S. Plunkett, a consultant for Triton, has visually verified the geological observations of the reported results. All sampling is undertaken by trained geological staff on site.
	<i>The use of twinned holes.</i>	Not applicable
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Sample information is recorded at the time of sampling in electronic and hard copy form. Assay data is received from SGS in electronic form and compiled into the Company's digital database. Secured electronic print files have been provided to the Company for verification purposes.
	<i>Discuss any adjustment to assay data.</i>	No adjustments or calibrations are made to any assay data.
<b>Location of data points</b>	<i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	Collar locations for all sample points and costean location were surveyed with a differential GPS.
	<i>Specification of the grid system used.</i>	The grid system for Balama North Project area is World Geodetic System (1984 Spheroid and Datum; Zone 37 South). A local mine grid has been established which 35 degrees west of true north.
	<i>Quality and adequacy of topographic control.</i>	Topographic surface is based on the differential GPS coordinates of surrounding drill holes.
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	Costean sample spacing of 2m
	<i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i>	The current data spacing and distribution is insufficient for the purpose of estimating a mineral resources for Nicanda Hill prospect.
	<i>Whether sample compositing has been applied.</i>	Bulk samples were collected from a number of pits from across the deposit to ensure that the samples that were collected were in situ ie. to avoid contamination and smearing of samples.



Criteria	JORC Code explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	The deposit is drilled towards the south east (magnetic grid) at approximately -60° to intersect the mineralised zones approximately orthogonal to the interpreted dip and strike of the geological units. Several characteristic geological units have been delineated in several drill holes giving a higher degree of confidence in the attitude and orientation of the graphite mineralisation.
	<i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	Local increased graphite abundances are observed proximal to small-scale folding and thin tonalite veins. The orientation of these folds and veins is generally parallel to the attitude of the graphitic schist and mineralisation. Thus, the current drilling is not expected to produce any biased samples.
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	Chain of custody is managed by Triton. Samples are stored at a secure yard on the project prior to shipping to SGS in South Africa. Any visible signs of tampering of the samples are reported by the lab. A chain of custody has been maintained for the shipment of the samples to South Africa.
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	Not considered necessary at this stage for a single costean or single bulk sample

**JORC Table 1 - Section 2 Reporting Of Exploration Results**

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The Nicanda Hill Prospect are located wholly within Exploration Licences EL5365 and EL5966 respectively within the Cabo Delgado Province of Mozambique. All licences are held by Grafex Limitada (Grafex), a Mozambican registered company. Triton Minerals entered into a Joint Venture (JV) agreement in December 2012 with Grafex to earn up to an 80% interest in Grafex's portfolio of graphite projects. In late 2013 Triton increased their holding in the projects to 80% by taking a direct equity interest in Grafex. EL5365 is valid until 29/10/2017 and EL5966 is valid until 19/06/2018.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	All statutory approvals have been acquired to conduct exploration and Triton Minerals has established a good working relationship with local stakeholders
<b>Exploration done by other parties</b>		No previous systematic exploration has been undertaken at the Nicanda Hill Prospect. The Company has acquired the data from an airborne electromagnetic survey that covers Licences 5966 and 5365.
	Acknowledgment and appraisal of exploration by other parties.	This data has been reprocessed and interpreted with some results included in this release. Small scale exploratory pits dug for ruby and/or graphite exploration have been identified. Data or reports disclosing the results of this work have not been located.
<b>Geology</b>	Deposit type, geological setting and style of mineralisation.	The graphite deposit is hosted within Neoproterozoic rocks of the Xixano Complex in north-eastern Mozambique. The Xixano complex is composed dominantly of mafic to intermediate orthogneiss with intercalations of paragneiss, meta-arkose, quartzite, tremolite-rich marble and graphitic schist. Graphite mineralisation is hosted within fine grained graphitic schists underlain and overlain by felsic gneiss rock types. Mineralisation occurs as series of multiple stacked tabular northeast-southwest striking lodes moderately dipping to the northwest.