

Triton Minerals Ltd

ASX: TON
ABN: 99 126 042 215

Street address:
278 Barker Road
Subiaco
Western Australia 6008

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
Web:
www.tritonmineralsltd.com.au

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

Project Locations



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

MARKET LEADING FLOTATION RESULTS

ANCUABE PROJECT - MOZAMBIQUE



- Outstanding flotation results continue to demonstrate Ancuabe as a global leader for graphite flake size distribution
- **72%** of the graphite material is classified as jumbo flake size, **>300µm** (+50 mesh)
- Flotation results show **92.1%** of the graphite flakes in the samples were larger than 150µm (+100 mesh)
- Using a cut off of **425µm**, **98.9%** of the graphite flakes are **>212µm** (+80 mesh)
- Graphite is readily liberated by crushing, grinding, rougher and cleaner flotation, with no additional regrind required - excellent jumbo flake preservation with simple, low-cost processing demonstrated
- Ongoing tests being completed to optimise grade and milling circuit.

Triton Minerals Limited (ASX: TON, **Triton** or **Company**) is pleased to confirm receipt of the latest assays and flake size distribution results for the Ancuabe project.

Triton Minerals' Managing Director & CEO Brad Boyle said: *"These latest outcomes reaffirm the previous results that the Ancuabe project contains world-leading graphite grades and flake distributions."*

Triton is extremely encouraged by these outstanding metallurgical and flotation results as it appears the flake distribution are up there with the best, if not the best in the world, based of published results.

As previously stated these results support the concurrent advancement of the Ancuabe project and we are looking forward to undertaking the upcoming drilling program at Ancuabe. These quite extraordinary results bode well for Triton establishing a new global benchmark through TMG for the highest quality graphite products.

Further, Ancuabe may allow Triton the ability to provide greater flexibility in the range of TMG products, for a wide range of clients, this would place Triton in a unique and superior position in comparison to its peers."

FLOTATION RESULTS RECOVERS JUMBO GRAPHITE FLAKES

Triton is pleased to announce that the latest metallurgical test work program from the Ancuabe Graphite Project in Mozambique, undertaken at the Mintek Laboratories in Johannesburg, continues to produce encouraging results. The material used for this test work was derived from a representative 100kg composited reconnaissance sample of outcropping graphite mineralisation averaging 14%TGC.

The results confirm the high value potential of the Ancuabe project, with high graphite grades of up to 24%TGC obtained in certain coarse size fractions and the majority of the graphite flake sizes contained within the jumbo and super jumbo flake range. Graphite concentrate produced in this flake size range can attract sales prices in excess of US\$2,000 per tonne.

The objectives of the testing was to achieve a graphite grade of >90% while maintaining maximum flake size, refer to Figure 1 below.

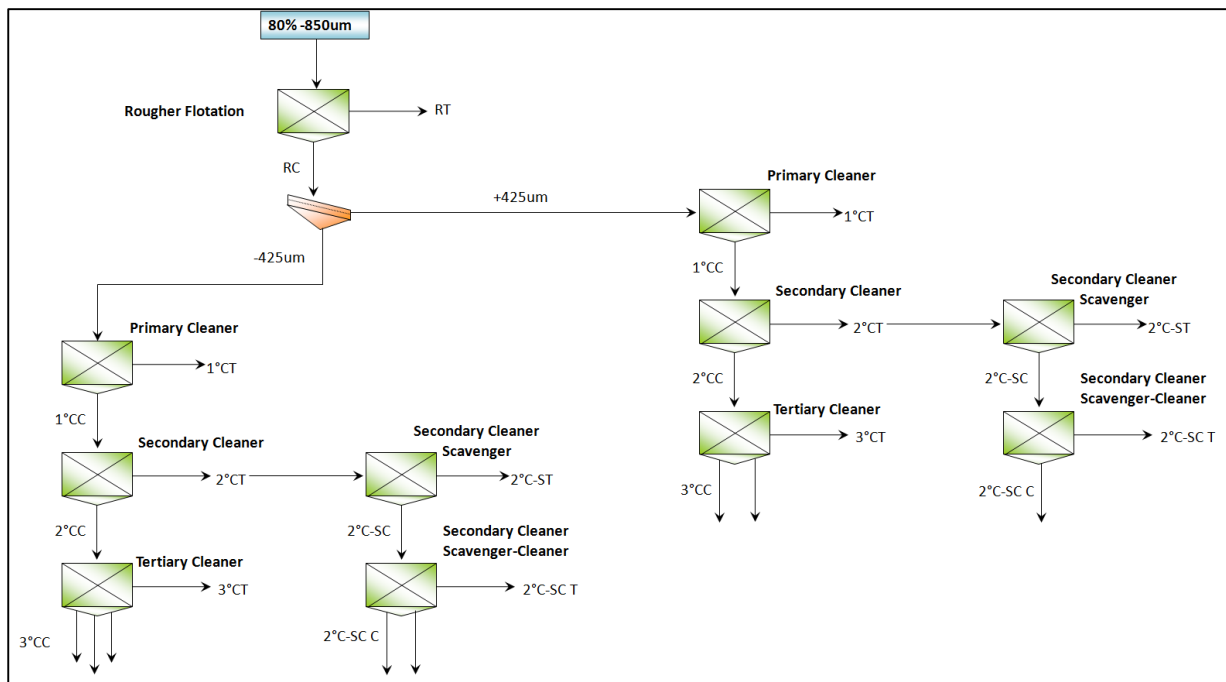


Figure 1. Mintek flotation flow chart for Test 5.

As previously announced by Triton on 29 April 2015, the preliminary metallurgical tests confirmed grades of up to 98.7% TGC, after only 4 cleaner stages after a single bead mill regrind has very positive implications for potential downstream economics of processing the Ancuabe graphite ore.

The latest flotation results continue to demonstrate the strong presence and recovery of jumbo graphite flakes, and including graphite flakes in excess of 3mm being identified during the flotation process.



Figure 2. Flotation chamber at Mintek showing the manual recovering the graphite flake concentrate

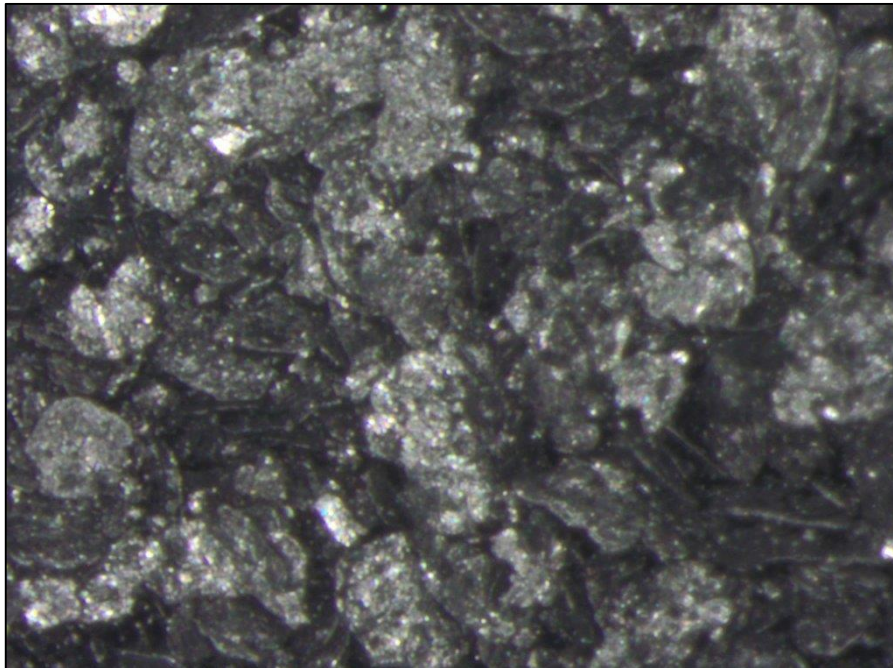


Figure 3. Microscopic images of the large and jumbo flakes in the graphite concentrate

The latest Mintek flotation tests continue to confirm the outstanding graphite flake size distribution, with results of **92.1%** of the graphitic flakes in the samples were larger than 150µm including:

Flake Size	Sieve Size		Discrete Mass (%)
	(microns)	Mesh	
Jumbo	>300	+50	71.7
Large	212-300	+80 to -50	12.7
Medium	150-212	+100 to -80	7.7
Fine-Medium	<150	-100	7.9
Total			100
%TGC			91.6
Recovery			89.5
Yield			15.4

Table 1. Key Flotation Test Results – Average grade, recovery, yield and flake size distribution of composite rock bulk sample from Ancuabe

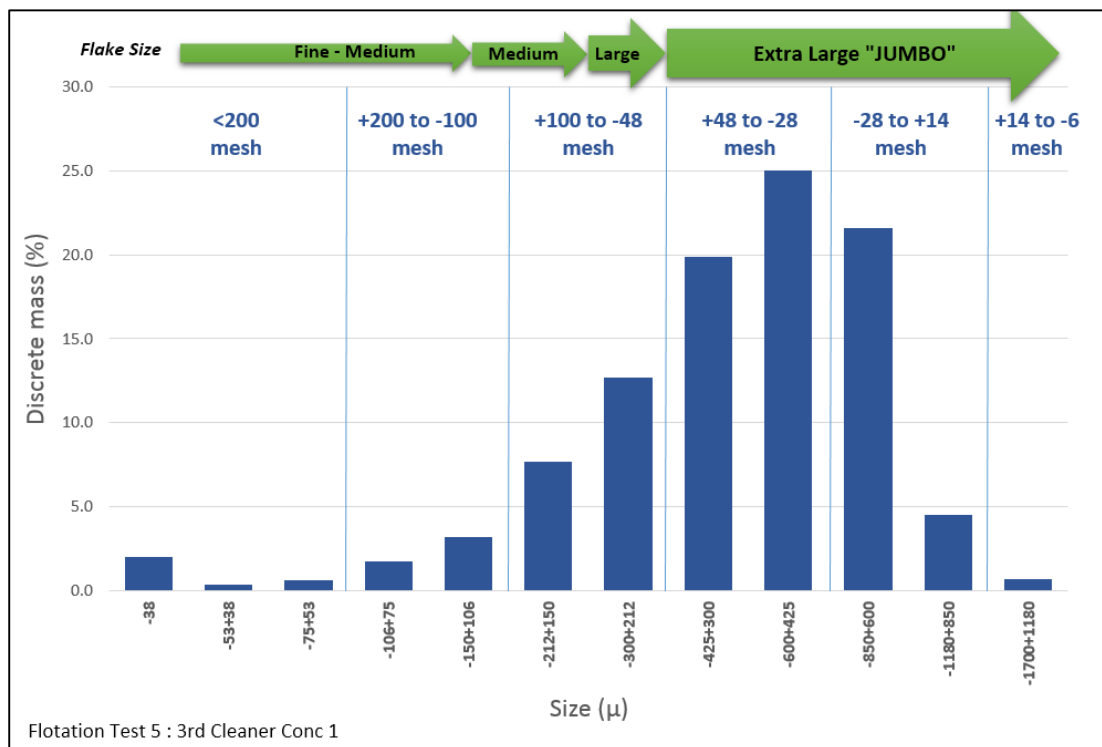


Figure 4. Graph of graphite concentrate flake size distribution

The results show only a small portion, less than 8%, of the sample is smaller than 150µm, showing the **superior quality** of the Ancuabe graphite flake distribution. This means that Triton could establish a new benchmark in graphite quality and thus obtain a premium sale price for the graphitic material.

These results support Triton's views that Ancuabe may allow the Company greater flexibility in the range of TMG products, for a wide range of clients, thus placing Triton in an extremely unique and superior position in comparison to its peers.

Triton has completed a series of flotation tests on the Ancuabe graphitic material with the aim of refining the graphite flake recovery and flake preservation processes.

Triton notes when referring to flotation process outlined in Figure 1 above, that at the 3rd cleaner stage of the +425µm process **99.2%** of the graphite material was above **150µm**. Such results give Triton potential for optionality in the manner in which various coarse flake fractions are either directly marketed or customised within the TMG product range.

These results give a strong indication that the large and jumbo flakes can be readily separated and recovered during the process, providing Triton the option to selectively target particular graphite flake sizes, which is likely to have positive economic implications when processing the Ancuabe graphite material.

Flake Size	Sieve Size		Discrete Mass (%)
	(microns)	Mesh	Test 5
Jumbo	>300	+50	97.4
Large	212-300	+80 to -50	1.5
Medium	150-212	+100 to -80	0.3
Fine-Medium	<150	-100	0.8
Total			100

Table 2. Results from flotation Test 5, 3rd Cleaner Conc 1 (+425µm) on the Ancuabe graphite sample

The confirmation of the very large size fractions of high graphite grade recovered from flotation is consistent with the mineralogical observations and is considered an extremely positive result for Triton.



Figure 5. Sample of graphite concentrate from Ancuabe at 98% TGC.

The very high graphite grades were obtained through the standard methods of crushing, grinding, rougher and cleaner flotation, without the need to complete a regrind of the graphite concentrate and demonstrates how readily the graphite flakes can be separated during the flotation process, which are strong indicators of the high quality nature of the Ancuabe project.

The reduced processing requirements during the graphite flotation will likely have a positive impact for Triton reducing the time and energy needed to complete the process.

Ongoing optimisation of the metallurgical process is expected to further enhance the quality of the final product concentrate and reduce production costs. The Company is also reviewing options to see if the graphite concentrate can be further upgraded using supplementary treatments.

Triton considers these updated results to be very encouraging and these flotation tests confirm the majority of the graphite can be liberated cleanly from the surrounding gangue material during the initial crushing, without the need for additional processing. The Company is optimistic of further encouraging results with the completion of additional metallurgical test work.

BEST FLAKE DISTRIBUTION IN THE GRAPHITE SECTOR

By world standards, Triton's Ancuabe material compares favorably when benchmarked against various other graphite deposits. Figure 6, shows a graphical representation of the main flake size categories and the characteristic flake distribution for each deposit within these categories.

Most significantly, is the dominant proportion of recovered large flakes sizes at the Ancuabe project, with over 92% at >100 mesh (150µm).

Triton considers that these metallurgical results confirm that Ancuabe has the potential to become a market leading graphite project. Analysis of publicly released information from peer graphite companies shows that the Ancuabe graphite has the best flake size distribution in the world and the largest majority of jumbo and super jumbo graphite flakes, with 92.1% of the graphite flakes are than larger than 150µm (+80 mesh) and 84.4% larger than 212µm.

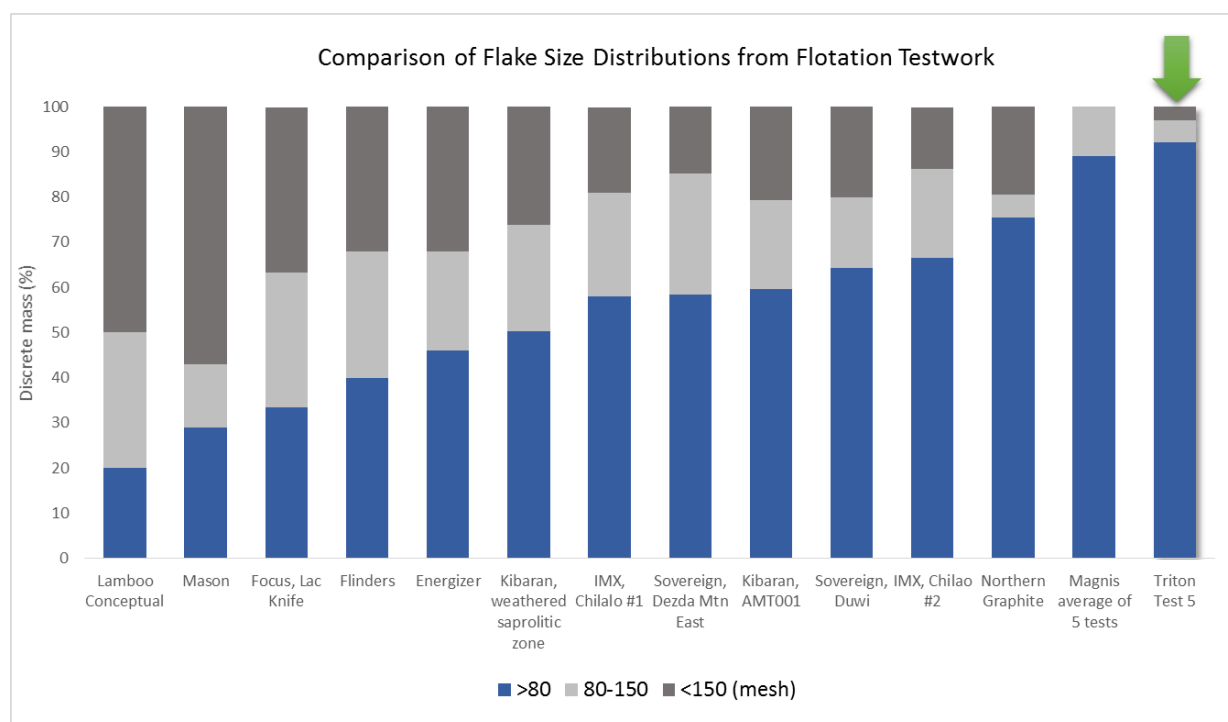


Figure 6. Comparison of flake size distributions from various selected published sources

Note: Excepting Triton, there may be a minor error in some categories shown above due to the various styles of reporting with respect to flake size ranges and thus this graph should only be used for approximate comparative purposes.

These outstanding results were obtained through a minimal series of crushing, grinding, rougher and cleaner flotation, without the need to complete a regrind of the graphite concentrate. The reduced processing requirements during the graphite flotation will likely have a positive impact for Triton reducing the time and energy needed to complete the process. A yield, or mass pull, of only 15.4% essentially means that less material needs to be processed to produce a specific amount of concentrate.

Ongoing optimisation of the metallurgical process is expected to further enhance the quality of the final product concentrate. The Company is conducting further tests to explore options to reduce energy requirements in the milling circuit, which could further reduce future operating costs.

CONCLUSIONS

The latest metallurgical results from Ancuabe confirms the very high quality nature of the Ancuabe graphite project and signify positive implications for potential downstream economics.

Should the upcoming drilling program help Triton to demonstrate economic quantities of large and jumbo flake graphite at Ancuabe, it could complement the TMG products range and provide the Company with the potential to produce large volumes of high grade (high value) graphite in the full range of flake sizes, thereby accommodating a wider range of end-user requirements.

Regards



Brad Boyle
CEO & Managing Director
Triton Minerals Ltd

For further information, please contact:

Brad Boyle

CEO & Managing Director

Tel: + 61 8 6489 2555

Email: bboyle@tritonmineralsltd.com.au

Michael Brady

General Counsel & Company Secretary

Tel: + 61 8 6489 2555

Email: mbrady@tritonmineralsltd.com.au

Competent Person's Statement

The information in this report that relates to Exploration Results on the Ancuabe Project 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 a Non-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.

The information in this announcement that relates to Exploration Results on the Ancuabe Project is extracted from the reports entitled ASX Release "Extraordinary Metallurgical Results - Ancuabe Project", created 29 April 2015 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

Ancuabe Project (includes License 5336) operated under Agreement between Triton Minerals and Grafex Lda.
Information pertaining to field mapping and sample collection data.

JORC Table 1

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> At the Ancuabe Project - samples were taken from in situ outcrop Outcrops approximately 50m in extent. Samples of approx. 100kg in weight. The Company has taken all care to ensure no material containing carbon is incorporated into the samples. All samples are individually labelled and accompanied by sample tickets, and documented in two separate catalogues.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> No drilling was undertaken, thus not applicable.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> No drilling was undertaken, thus not applicable.
Logging	<ul style="list-style-type: none"> 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> The geology of each surface sample is recorded by a geologist with the location recorded using a DGPS unit. This data is qualitative and contains some components of semi-quantitative estimates of mineral abundances. These data files are regularly submitted to the Perth office for compilation and validation.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> • <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> • <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> • <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> • <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> • <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> • <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> • No preparation of the sample was undertaken except for the removal of soil and other organic material. • Quality control measures employed include the use of certified lab inserted graphite standards • Laboratory internal standards and repeat analyses will also be included in each analytical batch.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <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> • <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> • The samples were analysed by SGS Laboratories, South Africa. Sample preparation included drying (105°C), crush, split (500g) and pulverizing such that 85% of the sample is 75 micron or less in size. A split of the sample was analysed using a LECO Analyser to determine Total carbon and sulphur content, and carbon in graphite content. • The detection limits and precision for the carbon and sulphur analyses are considered to be adequate for the purpose of resource estimations in the future. The results of the laboratory inserted standards, blanks and sample repeats demonstrate the accuracy and precision of total carbon, graphite carbon, and sulphur abundances is satisfactory.
Verification of sampling and assaying	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • No field duplicates were included in this small sample batch. • Sample information is recorded at the time of sampling in electronic and hard copy form. • The assay data has been supplied in electronic form to be compiled into the Companies digital database. Secured electronic print files have been supplied for verification purposes.
Location of data points	<ul style="list-style-type: none"> • <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i> • <i>Specification of the grid system used.</i> • <i>Quality and adequacy of topographic control.</i> 	<ul style="list-style-type: none"> • A DGPS was used to locate the surface samples (nominal error of 5 cm) and reported using the World Geodetic System (1984 Spheroid and Datum; Zone 37 South).
Data spacing	<ul style="list-style-type: none"> • <i>Data spacing for reporting of Exploration Results.</i> 	<ul style="list-style-type: none"> • The representatively of the grab samples can

Criteria	JORC Code explanation	Commentary
and distribution	<ul style="list-style-type: none"> 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. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> not be assessed given the lack of continuous outcrop in these areas. These samples are only indicative results of the local geology and no claim to the volume or extent of this sample material is made. The dump sampling is considered to be representative
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. 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. 	<ul style="list-style-type: none"> Not applicable due to the minimal continuous outcrop. Not applicable to dump sampling
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> The samples were stored in a secure yard (DHL Pemba) until shipment from Mozambique to South Africa.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> No audits of the sampling techniques have been undertaken to date.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> 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 security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> Licences 5966 and 5336 are held 100% by Grafex Lda, a company registered in Mozambique. Triton Minerals Ltd currently hold an 80% equity interest in Grafex and is moving to acquire the whole of Grafex by Feb 2016. Licence 5966 is valid until 19/06/2018, Licence 5336 is valid until 30/05/2018. All statutory approvals have been acquired to conduct exploration and Triton Minerals has established a good working relationship with local stakeholders.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Apart from Triton reconnaissance mapping in 2013, there has been no prior work on the Ancuabe tenements.
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The intended goal is to obtain coarse flake graphite disseminated in gneiss or schist of an

Criteria	JORC Code explanation	Commentary
		unknown geometry or size.
Drill hole Information	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> No drilling undertaken, thus not applicable
Data aggregation methods	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> At Ancuabe - no data aggregation has been applied in the reported results. The results of all samples collected in this program on Licence 5336.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	<ul style="list-style-type: none"> The true width or geometry of the graphite bearing rocks that the surface samples were taken from could not be established. Additional exploration is required.
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> See Figure 2.
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> The results of all samples collected in this Ancuabe program on Licence 5336.
Other substantive exploration	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical 	<ul style="list-style-type: none"> Not applicable

Criteria	JORC Code explanation	Commentary
data	<i>survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
Further work	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Further mapping and possibly drilling is anticipated to take place later in 2015 at Ancuabe.