

### ASX ANNOUNCEMENT

#### **28 NOVEMBER 2014**

## **Triton Minerals Ltd**

TON ASX: 99 126 042 215 ABN:

Street address: 278 Barker Road Subiaco Western Australia 6008

**Postal address:** PO Box 1518 West Perth Western Australia 6872

Tel: Fax:

+61 8 6489 2555 +61 8 9388 1252

Email: info@tritonmineralsltd.com.au Web: www.tritonmineralsltd.com.au

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

#### **Project Locations**



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

# NICANDA HILL UPDATE

Further positive drilling and metallurgical results received

#### HIGHLIGHTS

- Multiple drilling intervals exceed 15%TGC
- Upgrades of up to 99.9%C achieved in laboratory test work
- Vanadium grades of up to 0.74% V₂O₅ achieved
- Zinc concentrate grades of up to 7% Zn achieved
- Very low level of impurities confirmed in laboratory test work
- Additional exploration targets discovered by VTEM survey

Triton Minerals Limited (ASX: TON, Triton, Company) is pleased to provide updated metallurgical and drill results on the world's largest graphite and vanadium deposit at Nicanda Hill, in the Balama North project in Mozambique.

Triton Minerals Managing Director Brad Boyle said: "These latest metallurgical and drilling results continue to strengthen Triton's understanding of the diverse range of features of the graphite material contained within the Nicanda Hill resource."

#### SIGNIFICANT ASSAY RESULTS

As previously advised on 21 October 2014, Triton completed its 2014 initial exploratory drilling program at the Nicanda Hill deposit which culminated in the release of a maiden JORC 2012 mineral resource at Nicanda Hill.

In defining the world's largest graphite and vanadium deposit at Nicanda Hill, a total of 46 drill holes, for which assays were available, were used in the mineral resource estimation.



Since the release of the maiden JORC 2012 mineral resource in October and subsequent update on 30 October 2014, the Company is pleased to advise that additional significant drill results for the RC and diamond drill holes completed during the drilling program have been received.

Approximately, 75% of the drill core assays have now been received from the laboratories. Triton confirms a number of drill core intercepts have been in excess of 20% TGC. Table 1 below shows the weighted average graphite carbon of the significant drill result intervals.

Hole ID	East	North	RL	Total Depth (m)	Dip	Azimuth	From (m)	To (m)	Interval (m)	TGC%
GBNC0051	476591	8541494	510	144	-60	125	24.0	86.0	62.0	10.5
GBNC0051						includes	24.0	42.0	18.0	12.1
GBNC0052	476819	8542288	498	82	-60	125	12.0	24.0	12.0	13.7
GBNC0054	477792	8542875	517	144	-60	125	0.0	56.0	56.0	10.6
GBNC0054						includes	0.0	18.0	18.0	14.6
GBNC0054							112.0	120.0	8.0	15.2
GBNC0055	479018	8544709	484	150	-60	125	10.0	76.0	66.0	11.4
GBNC0056	478885	8544560	486	150	-60	125	6.0	32.0	26.0	9.3
GBNC0056							44.0	74.0	30.0	11.3
GBNC0056						includes	58.0	74.0	16.0	14.0
GBND0006	477534	8543028	502	242	-60	125	15.8	57.6	41.9	9.5
GBND0006						includes	15.8	33.9	18.1	12.2
GBND0006							68.8	88.8	20.0	9.4
GBND0006							172.9	191.9	19.0	14.0
GBND0012	477161	8542093	514	153	-60	125	5.8	76.3	70.5	9.8
GBND0012						includes	15.9	44.2	28.3	12.5
GBND0023	478139	8543370	574	272	-60	125	3.5	23.2	19.7	11.0
GBND0023							40.4	65.6	25.2	15.7
									incom	plete
GBND0030	478818	8544381	501	188	-60	125	2.5	40.1	37.6	10.3
GBND0030							22.0	39.0	17.0	11.4
GBND0030							58.8	67.3	8.5	19.2
GBND0031	478844	8544811	475	327	-60	125	195.2	228.0	32.9	16.6
GBND0032	478796	8544607	482	255	-60	125	2.6	28.8	26.2	13.2
GBND0032							46.0	57.1	11.1	12.1
GBND0032							91.1	112.2	21.1	11.7
GBND0032							152.5	166.0	13.5	15.6

Table 1. Significant graphite intersects in the RC and diamond drilling at Nicanda Hill deposit.

As anticipated, higher grade material is now confirmed consistently along strike either at or near surface within the Nicanda Hill deposit. With these additional results the morphology, location and characteristics of the >15%TGC material is becoming better understood. Future drilling will be targeted to improve the extents and classification of these higher grade graphite zones.



The delineation of the graphite zones in excess of 15% TGC, will assist in the selective mining of higher grade areas, which is likely to improve the overall economics of the already robust and commercially viable Nicanda Hill graphite deposit.

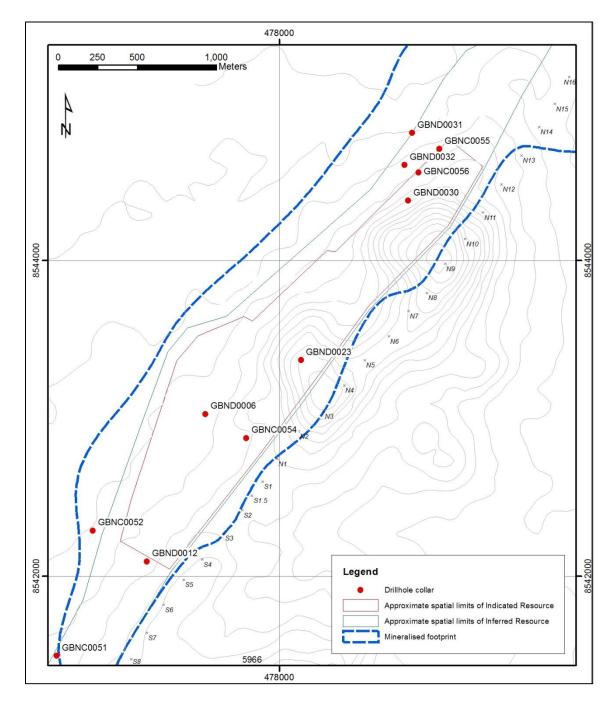


Figure 1. Plan showing significant drilling results at Nicanda Hill on License 5966



#### METALLURGICAL RESULTS

#### **OVERVIEW**

Triton has received additional information relating to its initial metallurgical test work undertaken by ALS Laboratories (Adelaide) and acquired from a limited number of preliminary samples taken from a single location within the Nicanda Hill deposit.

The latest results have again confirmed that the Nicanda Hill graphite ore, through standard flotation methods, is readily able to produce graphite concentrates which assay from **95.8%TGC to 97.3%TGC**.

The entire database of initial metallurgical test work results will form the basis and framework of a more detailed metallurgical review of a broader range of samples that have been obtained from multiple sites across the mineralised footprint.

The results from the on-going metallurgical program, currently being undertaken by Mintek (Johannesburg), will be incorporated into the forthcoming feasibility program. This new program will include variability metallurgical testing to identify and confirm larger areas of near-surface large flake graphite material and to verify the methodology for the optimisation in the recovery of the various graphite flake sizes.

#### **IMPURITIES SHOWN TO BE INSIGNIFICANT**

The metallurgical results confirm that 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.

### HIGH PURITY (99.9%) GRAPHITE PRODUCED IN LABORATORY TESTING

The metallurgical tests have found that **Triton is able to upgrade the graphite concentrate up to 99.9%C** using simple chemical wash.

To upgrade graphite flotation concentrate, samples were digested in 20% solution of hydrochloric acid (HCl) at 20% solids (w/w) for 4 hours at 80°C in a water bath to remove carbonate and iron oxides. The residue was then thoroughly washed to remove all acid and leached in 8% solution of hydrofluoric acid (HF) at 20% solids (w/w) for 4 hours at 90°C to remove silicates. The final residue was thoroughly washed, dried and assayed for graphitic carbon.

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 very low due to the very high grade of the graphite concentrate and the low levels of the impurities which can be readily removed.



#### **VANADIUM & ZINC RECOVERY**

Metallurgical test work to date shows that both **vanadium and zinc are present at significant levels in the process tailings** after the flotation and separation of the graphite concentrate from the ore. Also of note is the presence of other base metals, including titanium, in the tailings.

In the initial testing vanadium was readily upgraded through a standard flotation of graphite tailings to produce vanadium concentrate with grades up to  $0.74\% V_2O_5$ .

A **zinc concentrate assaying 7%** was also produced from the graphite tail through simple flotation process.

Further metallurgical investigations are required in order to optimise flotation conditions and improve both vanadium and zinc recoveries so that they may be further upgraded. Accordingly, the vanadium and zinc potential of the Nicanda Hill resource is still to be fully understood.

Should the vanadium and zinc be found to be upgradable from the tailings as a saleable concentrate, this would have a major positive impact on the overall economics and profitability of a potential mine at Nicanda Hill.

#### **GRAPHITE PRODUCTS**

The latest results contained within this announcement confirm that high purity graphite in excess of **99%TGC** can be readily achieved. Together with the positive independent Scoping Study report, announced on 26 November 2014, the **high quality nature** of the Nicanda material enables Triton to further review options and conduct additional research into the potential uses of the Nicanda Hill graphite.

As previously announced, some of the options being considered by Triton include: **Expandable Graphite** (insulation foam, soft foams, mattresses, carpets, textiles, coatings, plastic foils, rubber products, Pipe closing systems, fire retardants, graphite foil), **Micronised Graphite Powder** (photovoltaic, high temperature furnaces, lamp carbon, lubricants, carbon brushes), **Spherical Graphite** (anodes in lithium ion batteries) and **Recarburisation** (steel making and iron casting).

#### **NEW EXPLORATION TARGETS**

Airborne geophysical (VTEM) surveys have now been completed over the Ancuabe and Balama South project licenses. An additional survey was completed on a previously un-surveyed portions of the Balama North project located to the west of the Nicanda Hill and Cobra Plains deposits.

Whilst the majority of the survey data is still being processed and finalised, Triton is pleased to confirm that new large and significant conductive responses (typical of high grade graphite mineralisation) have been identified in the southern and western portions of Licenses 5966 and 5365.

Target area P1 (Figure 2) is particularly significant as it appears to form a satellite mineralized body along strike from and along the same trend as the Nicanda Hill deposit. These additional targets offer Triton the opportunity to test for additional near-surface high grade graphite (>15%TGC) and with possibly different mineralogical characteristics to provide even more variety in the type of graphite concentrates that can be produced to cater for differing customers' requirements. The new anomalies will become priority targets for the Company in future drilling programs.



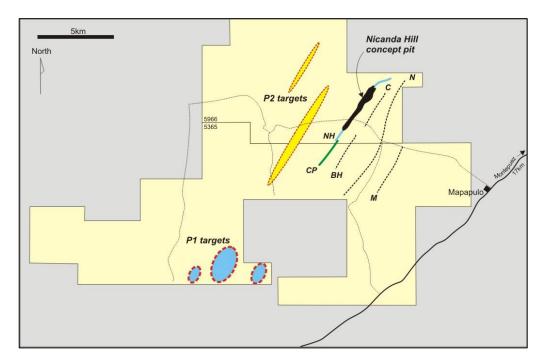


Figure 2. Overview of the new anomaly on License 5365 identified by the recent VTEM survey.



Figure 3. Helicopter at Triton Exploration Base preparing to undertake airborne geophysical surveys at Balama North



### CONCLUSIONS

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

The Scoping Study results announced on 26 November 2014, highlight that Nicanda Hill graphite deposit is commercially viable, base-case operation comprising shallow open pit/ conventional crushing-grinding- deposit flotation production – **low technical risk.** 

Initial metallurgical test work confirms:

- High purity graphite concentrate of **94-97%TGC** may be produced on site through simple flotation
- Exceptional purity of **99.9%C** achievable from graphite concentrate
- Vanadium and zinc occur as credits and may be recovered as a concentrate without difficulty
- Vanadium concentrate grades of up to 0.74% V<sub>2</sub>O<sub>5</sub> achieved to date
- Zinc concentrate grades of up to **7%Zn** achieved to date

Triton notes these latest drill and metallurgical results are subsequent to those incorporated in the Mineral Resource estimate and the Scoping Study results. They reflect the on-going commitment by the Company to rapidly refine and improve the overall economics and profitability of the proposed graphite mine at Nicanda Hill, including the vanadium and zinc potential, and to complete the feasibility studies on the project as soon as practicable.

Nicanda Hill has the potential to become the **world's lowest cost and most reliable producer of high quality flake graphite.** 

Finally, the identification of further exploration targets suggest that this current multi-element resource at Nicanda Hill could be potentially supplemented by additional high quality near-surface graphite material.

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: <u>mbrady@tritonmineralsltd.com.au</u>

#### **Competent Person's Statement**

The information in this report that relates to Exploration Results on Balama North 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 Balama North project is extracted from the reports entitled ASX Release "Balama North Project Update" created 5 March 2014, ASX Release "Positive Metallurgical Results For Nicanda Hill" created 16 September 2014, ASX Release "Further Positive Drilling Results From Nicanda Hill" created 9 October 2014, ASX Release "Nicanda Hill Maiden Jorc Resource – 1.457 Billion Tonnes At 10.7%TGC And 0.27% V<sub>2</sub>O<sub>5</sub>", created 21 October 2014, ASX Release "Solid Drilling Results Continue At Nicanda Hill" dated 30 October 2014, ASX Release "Nicanda Hill Scoping Study", dated 26 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**

Balama North Project (Licence 5966 & 5365) Operated under Agreement between Triton Minerals and Grafex Lda. Information pertaining to drill data.

JORC Table 1 - Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary			
Sampling techniques	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.	The Nicanda Hill prospect is located on the Balama North Project. The new drill results included in this report were obtained from Reverse Circulation (RC) and Diamond drilling. The nominal hole spacing of the current program is 100m x 400m. Diamond drill holes will be interspersed within the planned drill grid to provide qualitative information on structure and physical properties of the mineralization. Holes were drilled -60 degrees towards UTM south east to optimal intersect the mineralised zones.			
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Drillhole locations were picked up by differential GPS (with nominal error of +- 0.5 metres) and reported using the World Geodetic System (1984 Spheroid and Datum; Zone 37 South). Downhole surveys of the RC and Diamond holes were measured using a Reflex single shot downhole survey tool. Th collar surveys were validated with the use of a compass and inclinometer. RC samples have been collected using a riffle splitter to obtair a 1/8 <sup>th</sup> sample, which is split and combined to produce 2m composite samples. Efforts are taken to keep the RC drill sample material dry during drilling to avoid any bias. Wet samples are dried before riffle splitting and recorded to monitored results for bias.			
	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	Reverse circulation drilling was used to obtain 1m samples collected in a large bag and passed through a 3-tier riffle splitter to generate 1/8 <sup>th</sup> samples (approximately 3kg) contained in a labelled calico bag and the residual 7/8 <sup>th</sup> is retained at the drill site in the large bag. Where wet samples are encountered, the 3kg sample is allowed to dry before passing through the second stage (50:50) riffle splitter described below. The 3kg RC samples are split using a 50:50 splitter with one half combined with the half split of the next consecutive 1m sample to produce a 2m composite sample. This sample will be pulverised (total prep) by the lab to produce a sub sample for assaying. In addition, select RC samples will be submitted for multi-element analysis (55 elements) by sodium peroxide fusion with an ICP-AES finish. The diamond drill core samples are prepared as quarter core using diamond impregnated blade core saw. Samples generally are defined on the basis of geological contacts and range in drillhole intersections of 1.5 to 3m, with most approximately 2m.			
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. 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).	The reverse circulation drill rig uses a 5.5 inch size hammer. Hole depths range up to a maximum depth of 222m (rig capability limit). The diamond drill holes are drilled with a PQ core size collar (typically around 30m deep) and HQ3 (61.1mm diameter) core size to the end of hole. Core is oriented using the Reflex ACTII tool.			



Criteria	JORC Code explanation	Commentary		
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	The condition and a qualitative estimate of RC sample recov was determined through visual inspection of the 1m sample bags and recorded at the time of sampling. A hard copy and digital copy of the sampling log is maintained for data verification. Generally drill core recovery is above 95% below the base of oxidation. Core recovery is measured and compared directly with drill depths to determine sample recoveries.		
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Diamond core is reconstructed into continuous runs on an angle iron cradle for orientation marking. Depths are checked against the depth given on the core blocks and rod counts are routinely carried out by the drillers. RC samples were visually checked for recovery, moisture and contamination. Water entrainment into the sample is minimized through the use of additional high pressure air supply down hole. Wet samples are recorded as these generally have lower sample recovery.		
	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.	Comparisons of RC and Diamond drill sample material on the neighboring Cobra Plains deposit showed no statistically significant bias associated with the RC drill technique. Extensive diamond drilling will be carried out as part of this program to confirm the QAQC parameters of the sample material. Similar statistical assessments of the sample result bias will be undertaken for the current drill program.		
Logging	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.	Geological logging is carried out on holes 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. Geotechnical logging is carried out on all diamond drillholes f recovery, RQD and number of defects (per interval). Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is store in the structure table of the database. 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 logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging of RC and Diamond drill holes includes recording lithology, mineralogy, mineralisation, weathering, colour and other features of the samples. RC Chip trays and diamond co trays are photographed. Geological descriptions of the miner volume abundances and assemblages are semi-quantitative.		
	The total length and percentage of the relevant intersections logged	All drillholes are logged in full.		
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	Diamond core (HQ3) will be cut into quarter core onsite using diamond impregnated blade on a brick saw. Quarter core samples generally 2 metres or less in core length will be submitted to the lab labelled with a single sample name. Eac approximately 2m sample will be crushed and a 300g split wi be taken. For pulverisation. Samples are generally defined according to geological unit boundaries. A batch of duplicate samples to sampled quartered core will 1 submitted to the same lab to investigate if any statistical bias associated with the quarter compared to half core. The result of this study will be used to determine the appropriate samp methodology for future drill holes.		



Criteria	JORC Code explanation	Commentary			
	lf non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples are collected on the rig using two riffle splitters. The majority of samples are dry. Two metre composite samples are generated by taking the 1m samples from the drill cyclone into a large bag and passing this material through a 3- tier riffle splitter to generate $1/8^{th}$ samples (approximately 3kg) contained in a labelled calico bag and the residual $7/8^{th}$ is retained at the drill site in the large bag. The 3kg RC samples will be split using a 50:50 splitter to and one half is to be combined with the half split of the consecutive 1m sample, producing a 2m composite sample. were generated for drilled intersections with visible graphite (>0.5% graphite). Where wet samples are encountered, the 3kg sample produced from the $1/8^{th}$ splitter is left to dry before passing through the 50:50 splitter. The typical composite sample size is 3 to 4kg.			
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The sample preparation of the diamond core samples follows industry best practice in sample preparation involving oven drying (105°C), coarse crushing of the diamond core sample down to ~2 mm, split (500g) and pulverizing to a grind size of 85% passing 75 micron. The sample preparation for RC samples is identical, without the coarse crush stage.			
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Field QC procedures involve the use of two certified reference material assay standards, along with certified blanks, and insertion of field duplicates. Certified standards are inserted at a rate of 1 in 25 (DD, RC and rock chip samples), duplicates were inserted at a rate of 1 in 20 and blanks are inserted at a rate of 1 in 50. QAQC samples are submitted with the rock chip samples.			
	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.	Field duplicates are taken on 2m composites for RC, using a riffle splitter. Field duplicates are taken as quarter core splits for diamond core.			
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The drill sample sizes are considered to be appropriate to correctly represent mineralisation at the Balama North project based on the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and percent value assay ranges for the primary elements.			
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	The analytical techniques to be used to analyse all samples for Graphitic Carbon, Total Sulphur, and Total Carbon on a Leco Combustion Infrared Detection instrument. Detection limits for these analyses are considered appropriate for the reported assay grades. In addition, selected drill 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.			
	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.	No geophysical tools were used to determine any element concentrations.			



Criteria	JORC Code explanation	Commentary			
	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.	The RC and diamond core samples are submitted to the lab with blind certified standards (4 per 100 samples), blanks (2 per 100 samples) and field duplicates (5 per 100 samples). These QAQC samples represent 11% of the unknown samples analysed. Twinned RC and diamond holes provided a means of evaluating any bias associated with sampling and drill technique. From the Cobra Plains drilling, field duplicate datasets showed strong correlation coefficients (0.92 for the diamond samples and 0.98 for RC samples), indicating good repeatability of grades between paired samples. Sample preparation checks for fineness will be carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing 75 micron was being attained. Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, and repeats as part of their in house procedures. Repeat analysis for samples reveals that precision of samples is within acceptable limits. A selection of the 1/8th riffle split samples will be submitted for umpire assays to SGS and an independent laboratory as independent checks of the assay results. Umpire laboratory campaigns using other laboratories is yet to be undertaken.			
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Carl Young of Model Earth Geological Global Services, a consultant for Triton, has visually verified the geological observations of most of the reported RC and Diamond drill holes. The geological of all drill chips and core is undertaken b trained geological staff on site.			
	The use of twinned holes.	Three RC holes were twinned with diamond holes at the neighboring Cobra Plains deposit to investigate sample bias related to the RC drill and sampling methods. The mineralisation zones within the holes show a reasonable correlation. Though the grade graphs suggest that the diamond holes are reporting higher graphitic carbon grades than the RC holes.			
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	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 digi database. Secured electronic print files have been provided the Company for verification purposes.			
	Discuss any adjustment to assay data.	No adjustments or calibrations are made to any assay data.			
Location of data points	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.	Collar locations for all GNBC and GBND holes were surveyed with a differential GPS. The drillholes with the prefix TMB (drilled in 2013) were surveyed by hand-held GPS (nominal error of 5 metres). Drill holes were oriented at the collar using sighting pegs installed with the use of a magnetic compass and GPS. The dip of all R holes is recorded for the collar only and no downhole surveys were taken. The dip and azimuth of all DD holes is measured by the drll company using a Reflex singleshot downhole survey tool. Readings were taken at the completion of the hole at an interval spacing of 30 m on the diamond holes, and at the collar and end of hole on the RC holes. Stated accuracy of the			
		tool is is $+1^{0}$ . Downhole survey measurements considered to be poor qualitate coded as 'Priority 2' and are e excluded from the drill location calculations.			



Criteria	JORC Code explanation	Commentary		
	Quality and adequacy of topographic control.	Topographic surface for drill section is based on the differential GPS coordinates for the drill holes.		
Data spacing and distribution	Data spacing for reporting of Exploration Results.	The nominal drillhole spacing is 100 m on drill lines spaced 400m apart. The drill lines have a bearing of 120° (UTM grid northeast).		
	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.	The current data spacing and distribution is insufficient for the purpose of estimating a mineral resources for Nicanda Hill prospect. On completion of the current drill program and the receipt of all necessary data, the Company will undertake an estimation of the resource for the Nicanda Hill prospect.		
	Whether sample compositing has been applied.	Samples have been composited to a maximum of two metres for RC samples. Most diamond core samples are taken as approximately 2m lengths of quarter core, with few samples of upto 3m in length of core for zones of low graphite. Diamond core sample breaks corresponding to geological boundaries.		
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The deposit is drilled towards the south east (magnetic grid) are 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. Near continuous sampling of all geological units bearing graphite is routinely undertaken.		
	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.	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.		
Sample security	The measures taken to ensure sample security.	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.		
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	A QAQC review of the sampling data from the drill holes at Cobra Plains was carried out by Optiro as part of the resource estimate for the Cobra Plains deposit. This deposit is located to the southeast of Nicanda Hill. The Cobra Plains database was considered by Optiro to be of sufficient quality to carry out that resource estimation. No reviews or audits of sampling techniques were undertaken by Optiro or any other external consultant. The QAQC samples inserted with the reported RC chip samples returned values within the expected value ranges. On this basis, the reported drill assay results are considered representative and suitable for assessing the graphite grades of the intersected graphite mineralisation.		



Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	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 Cobra Plains Deposit and the Nicanda Hill Prospect are located wholly within Exploration Licences EL5365 and EL5966 respectively within the Cabo Delgado Province of Mozambique. Both 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 60% 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
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	No previous systematic exploration has been undertaken at the Cobra Plains or the Nicanda Hill Prospects of the Balama North Project. The Company has acquired the data from an airborne electromagnetic survey that covers Licences 5966 and 5365. 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.
Geology	Deposit type, geological setting and style of mineralisation.	The Cobra Plains 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. Graphite mineralisation outcrops at surface and has been intersection at down hole depths of up to 428.55m below surface. Graphitic mineralisation is interprete to be continuous between the Cobra Plains and the Nicanda Hill Prospects of the Balama North Deposit, based on the interpretation of the airborne electromagnetic survey data and drill results. Occurrences of vanadium mineralisation noted in the samples is thought to be associated with quartz muscovite <u>+</u> roscoelite schists.
Drill hole Information	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: • 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.	Refer to Appendix 4 below

# JORC Table 1 - Section 2 Reporting Of Exploration Results



Criteria	JORC Code explanation	Commentary		
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No top cut applied Minimum composite width = 6m Maximum internal dilution = 2m Weighted average grades calculated using the Surpac High Grade reporting function using the above parameters		
	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 significant weighted average graphite carbon (GrC) intersections reported were calculated as core-length weighted assay intercepts. The intersection calculations were made applying a maximum internal dilution of 2m for material below the GrC cutoff grade and a minimum composite width o 2m. Significant intercepts are reported at cutoff grade of 10% GrC.		
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	V2O5 is calculated from V% using a factor of 1.786		
Relationship between mineralisation widths and intercept lengths	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 (e.g. 'down hole length, true width not known').	The graphite schists and tonalite gneiss units dip moderately northwest based on outcrop exposures and measured structure in the oriented diamond drill holes. All GNBC drill holes are inclined -60° to the southeast to intersect the mineralised zones approximately orthogonal to the interpreted dip and strike of the geological boundaries. The reported intersections are considered to be near to true intercept widths.		
Diagrams	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.	Refer to Figure 1 to 4 in the body of the text.		
Balanced reporting	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.	Assays for all drill holes except GBNC0003 and the upper part of GBNC005 are outstanding.		
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Selected core samples from all diamond drill holes are measured for bulk densities. This, and additional data from future drill holes will be used to estimate average densities for rock types. Multi element assaying was conducted on selected zones in the diamond drill holes TMBD0005 and TMBD006. Geotechnical logging is routinely carried out on all diamond drillholes for recovery, RQD and number of defects (per interval). Information on structure type, dip, dip direction, alpha angle, beta angle, texture, shape, roughness and fill material is stored in the structure table of the database. Regional scale mapping has been carried out in the area to identify outcrop of graphitic material. This mapping is ongoing.		
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive	Further drill testing using reverse circulation and diamond drilling is underway on the Nicanda Hill prospect to determine the grade continuity and width of the graphitic units. Exploration activities resumed in April 2014.		



# **APPENDIX 2**

**Table 1.** Drill Holes used for the Mineral Resource estimation at Nicanda Hill on License 5966 in the Balama North project.

Hole_id	x	У	Z	max_depth	Azimuth	Dip	hole_type
GBNC0001	477882	8542824	523	72	125	-60	RC
GBNC0002	477694	8542701	514	114	125	-60	RC
GBNC0003	477628	8542973	506	153	125	-60	RC
GBNC0004	477719	8543151	506	124	125	-60	RC
GBNC0005	477548	8543251	496	222	125	-60	RC
GBNC0006	477460	8543298	494	150	125	-60	RC
GBNC0007	477367	8543354	491	108	125	-60	RC
GBNC0008	477784	8542657	517	86	125	-60	RC
GBNC0009	477518	8542801	505	150	125	-60	RC
GBNC0010	477431	8542854	502	291.32	125	-60	RC/DD
GBNC0011	477346	8542902	498	118	125	-60	RC
GBNC0012	477259	8542957	497	90	125	-60	RC
GBNC0013	477447	8543077	499	150	125	-60	RC
GBNC0014	477358	8543125	495	150	125	-60	RC
GBNC0015	477274	8543183	492	150	125	-60	RC
GBNC0016	477290	8543413	489	150	125	-60	RC
GBNC0017	477980	8543001	535	125	125	-60	RC
GBNC0018	477625	8542499	518	90	125	-60	RC
GBNC0019	477490	8542361	518	100	125	-60	RC
GBNC0020	477238	8542511	506	150	125	-60	RC
GBNC0021	476972	8542660	496	150	125	-60	RC
GBNC0022	477147	8542560	502	150	125	-60	RC
GBNC0023	477061	8542608	498	108	125	-60	RC
GBNC0024	477249	8542044	522	82	125	-60	RC
GBNC0025	477076	8542138	510	84	125	-60	RC
GBNC0026	477788	8543572	495	150	125	-60	RC
GBNC0027	477702	8543625	489	114	125	-60	RC
GBNC0028	478041	8543894	491	150	125	-60	RC
GBNC0029	478207	8543794	500	150	125	-60	RC
GBNC0030	477951	8543941	487	150	125	-60	RC
GBNC0031	478383	8543693	507	150	125	-60	RC
GBNC0032	479199	8544610	499	102	125	-60	RC
GBNC0033	479111	8544658	494	150	125	-60	RC
GBNC0034	478936	8544761	479	186	125	-60	RC
GBNC0035	478739	8544412	490	200	125	-60	RC
GBNC0036	478548	8544291	490	150	125	-60	RC
GBNC0037	478215	8544017	491	150	125	-60	RC
GBNC0038	478379	8543898	500	192	125	-60	RC
GBNC0039	478308	8543972	495	150	125	-60	RC
GBNC0040	479396	8544956	477	150	125	-60	RC
GBNC0041	479224	8545056	472	162	125	-60	RC
GBNC0042	479048	8545154	466	138	125	-60	RC
GBNC0043	476904	8542236	501	165	125	-60	RC
GBNC0044	477007	8541717	520	110	125	-60	RC
GBNC0045	476919	8541764	515	170	125	-60	RC
GBNC0046	476784	8541838	507	216	125	-60	RC



Hole_id	x	У	Z	max_depth	Azimuth	Dip	hole_type
GBNC0047	476852	8541343	523	102	125	-60	RC
GBNC0048	476475	8541097	513	218	125	-60	RC
GBNC0049	476392	8541148	510	156	125	-60	RC
GBNC0050	476684	8541441	513	200	125	-60	RC
GBNC0051	476591	8541494	510	144	125	-60	RC
GBNC0053	476732	8542339	494	42	125	-60	RC
GBNC0054	477792	8542875	517	144	125	-60	RC
GBNC0055	479018	8544709	484	150	125	-60	RC
GBNC0056	478885	8544560	486	150	125	-60	RC
GBNC0057	479116	8544880	478	150	125	-60	RC
GBNC0058	479312	8545002	476	150	125	-60	RC
GBNC0059	479508	8545350	469	150	125	-60	RC
GBNC0060	479593	8545298	471	149	125	-60	RC
GBND0001	477632	8543201	501	372.65	125	-60	DD
GBND0002	477608	8542754	509	184.81	125	-60	DD
GBND0003	477536	8542681	515	155.6	125	-60	DD
GBND0004	477621	8542632	513	161.65	125	-60	DD
GBND0005	477170	8543003	494	428.55	125	-60	DD
GBND0006	477534	8543028	502	242.48	125	-60	DD
GBND0007	477709	8542583	519	113.44	125	-60	DD
GBND0008	477550	8542559	513	134.52	125	-60	DD
GBND0009	477469	8542606	509	200.43	125	-60	DD
GBND0010	477319	8542458	510	185.5	125	-60	DD
GBND0011	477403	8542407	513	152.5	125	-60	DD
GBND0012	477161	8542093	514	152.58	125	-60	DD
GBND0013	477671	8542897	511	210.94	125	-60	DD
GBND0014	476992	8542186	504	206.63	125	-60	DD
GBND0015	476846	8541809	510	176.53	125	-60	DD
GBND0016	476767	8541387	518	152.44	125	-60	DD
GBND0017	478116	8543846	495	278.59	125	-60	DD
GBND0018	476564	8541049	515	152.43	125	-60	DD
GBND0019	478289	8543742	503	206.56	125	-60	DD
GBND0020	478481	8543868	506	153.88	125	-60	DD
GBND0021	478564	8543819	513	140.42	125	-60	DD
GBND0022	477875	8543523	502	301.34	125	-60	DD
GBND0023	478139	8543370	574	272.33	125	-60	DD
GBND0024	478174	8543288	582	92.53	125	-60	DD
GBND0025	478004	8543439	537	248.39	125	-60	DD
GBND0026	478629	8544249	503	266.63	125	-60	DD
GBND0027	478721	8544169	550	166.74	125	-60	DD
GBND0028	478752	8544047	579	161.53	125	-60	DD
GBND0029	478935	8544285	558	110.63	125	-60	DD
GBND0030	478818	8544381	501	188.4	125	-60	DD
GBND0031	478844	8544811	475	326.53	125	-60	DD
GBND0032	478796	8544607	482	254.63	125	-60	DD
GBND0034	479132	8545108	469	275.53	125	-60	DD
GBND0035	477714	8543546	494	467.5	125	-60	DD
TMBD0005	477888	8543045	530	176.54	125	-60	DD
TMBD0006	477784	8543168	510	185.62	125	-60	DD