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**ASX Code: TON**

**17 May 2016**

## ASX Announcement

### Maiden Inferred Mineral Resource Estimate for the Ancuabe Project

#### Key Points

- Maiden Inferred Mineral Resource estimate completed for the Ancuabe T12 deposit.
- Inferred Mineral Resource of 14.9Mt grading 5.4% Total Graphitic Carbon (TGC) for 798,000t of contained graphite.
- On the basis of analysis from Hole IVD001, the following general observations can be made of the Ancuabe mineralisation, with further analysis to follow as work on the project progresses:
  - More than 80% of liberated flakes bigger than 150 micron.
  - More than 50% of liberated flakes are Extra Large (Jumbo) or bigger (>300 micron).
  - Overall concentrate grade 98.6% Total Carbon (TC).
- Potential extensions over unexplored VTEM conductor to the northwest.
- Potential to define high grade lenses within existing mineralised wireframes.

Triton Minerals Ltd [Administrators Appointed] (ASX:TON) ('Triton' or the 'Company') is pleased to announce the development of its Ancuabe Graphite Project in northern Mozambique has taken a major step forward with the completion of a maiden Inferred Mineral Resource, reported in accordance with the JORC<sup>1</sup> Code 2012.

The Mineral Resource estimate for the Ancuabe T12 deposit, comprises 14.9 million tonnes (Mt) grading 5.4% Total Graphitic Carbon (TGC), for 798,000 tonnes of contained graphite.

The results for the Ancuabe T12 Mineral Resource estimate are set out in Table 1 below. Drill-hole information and reporting in accordance with JORC 2012 Table 1 are included as Appendices to this announcement.

**Table 1:** Inferred Mineral Resource estimate for Ancuabe Target 12

Classification	Weathering State	Million Tonnes	TGC %	Contained Graphite ('000s t)
Inferred	Oxide	1.2	5.2	61
	Transitional	1.2	5.3	63
	Fresh	12.5	5.4	674
	<b>Grand Total</b>	<b>14.9</b>	<b>5.4</b>	<b>798</b>

*Note: The Mineral Resource was estimated within constraining wireframe solids defined above a nominal 3% TGC cut-off. The Mineral Resource is reported from all blocks within these wireframe solids. Differences may occur due to rounding.*

The nominal 3% cut-off reflects a natural geological cut-off which is visually distinguishable in drill core. This cut-off is further supported by statistical analysis of the grade population distribution of the total dataset. There is

<sup>1</sup> Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC).



a high grade sub-population above roughly 8% TGC cut-off within the interpreted mineralisation wireframes. Further exploration data will be required to accurately delineate and estimate this population.

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

The information in this announcement that relates to in situ Mineral Resources for Ancuabe T12 is based on information compiled by Mr. Grant Louw under the direction and supervision of Dr Andrew Scogings, who are both full-time employees of CSA Global Pty Ltd and as consultants to Triton. Dr Scogings takes overall responsibility for the report. Dr Scogings is a Member of both the Australian Institute of Geoscientists and Australasian Institute of Mining and Metallurgy and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012<sup>1</sup>) Dr Scogings consents to the inclusion of such information in this announcement in the form and context in which it appears.

### **ASX LR 5.8.1 Summary:**

- The following summary presents a fair and balanced representation of the information contained within JORC Table 1 (sections 1-3), attached as Appendix 2:
- The Ancuabe T12 target occurs within gneissic rocks of tonalitic composition that are deformed and characterised by sub-horizontal fold axes. Graphite mineralisation occurs in layers within the tonalitic gneiss at T12.
- Samples were obtained from reverse circulation (RC) and diamond (DD) drilling, using 1m composites. Quality of drilling and assaying was of an acceptable standard, commensurate with the Inferred classification of the current estimate.
- The estimate was classified as Inferred on the basis of surface mapping, geophysical information, drill hole sample assay results, drill hole logging and a combination of measured and assigned density values. Roughly 21% of the interpreted mineralisation is considered to be extrapolated.
- Graphitic carbon was analysed at Intertek using their C73/CSA method which removes  $\text{CaCO}_3$  (carbonate minerals) by HCl digestion, removes volatile organic carbon by heating to 420°C after which graphitic carbon is analysed by infrared spectrometry to measure the remaining carbon.
- Grade estimation was completed using inverse distance squared estimation, and checked using ordinary kriging estimation.
- The Inferred Resources were estimated within constraining wireframe solids using a nominal 3% TGC cut-off. The resource is quoted from all classified blocks within these wireframe solids.
- In keeping with the Inferred classification, the likelihood of eventual economic extraction was considered in terms of assuming open pit mining; and consideration was given to product specification with regards purity and flake size distribution, in addition to TGC and tonnages of graphite as an industrial mineral.

### **Location, Geology and Exploration**

The Ancuabe Project is located in northern Mozambique close to the port of Pemba on the Indian Ocean shoreline (Figure 1). The project is located within Triton's licences 5305, 5934, 5336, 5380 and 6357, surrounding the AMG Graphit Kropfmühl (GK) Ancuabe Mine. The GK Ancuabe mine was operated by Kenmare in the 1990s, but has been dormant since 1998. GK has announced plans to reopen the Ancuabe graphite mine in Mozambique in 2016 (AMG, 2015).

Triton identified several electromagnetic targets, of which T12 is the most promising so far drilled. T12 is located in license 5336 about 10 km northeast of the GK mine (Figure 2). Drill collar locations are illustrated in Figure 2.

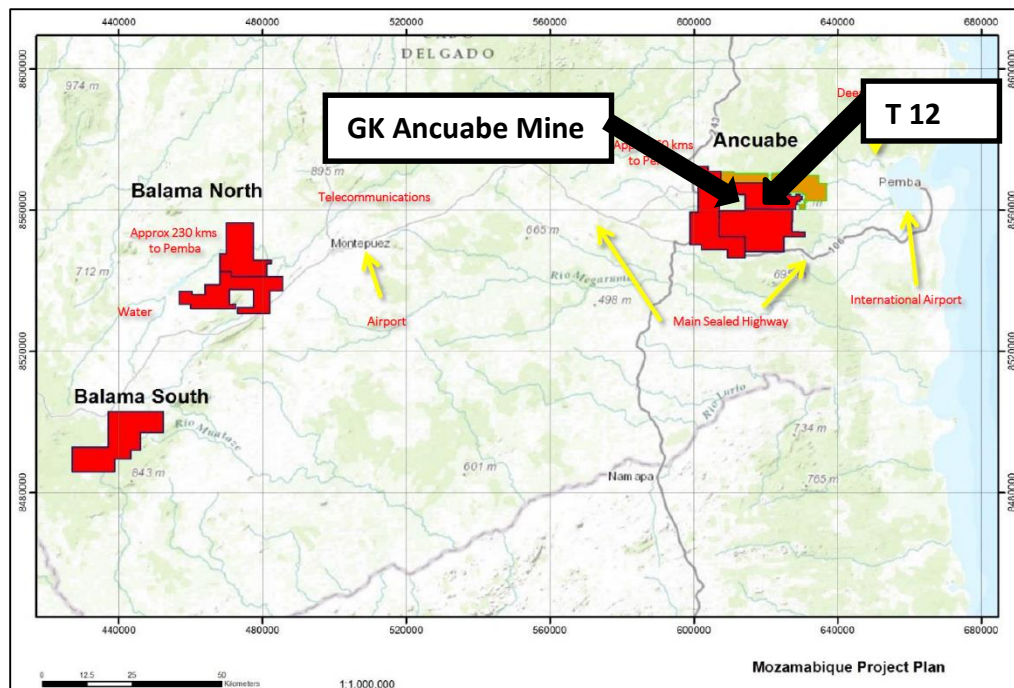


Figure 1: Location of Triton's projects in northern Mozambique showing GK's Ancuabe Mine and T12

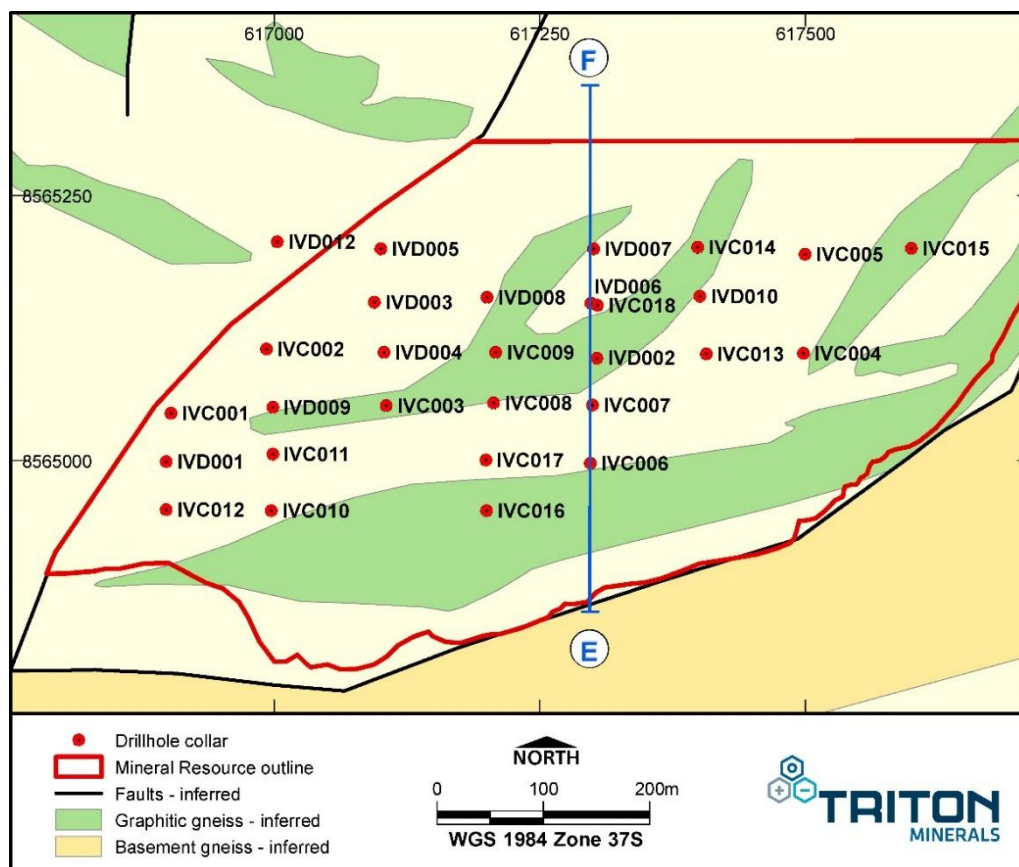


Figure 2: Ancuabe T12 Drill collar location plan, and section line E-F as detailed in Figure 8  
Please see Appendix 1 for drill collar coordinates





Figure 1: Shallow plunging fold within gneiss at the east of T12 (Ford, 2015<sup>Error! Bookmark not defined.</sup>)

A VTEM geophysical survey completed over the general Ancuabe Project area revealed a number of electromagnetic (EM) targets, of which several were drilled and confirmed to host graphite mineralisation of varying thickness and grade. Target T12 is the most promising target drilled to date.

The Ancuabe T12 target occurs within gneissic rocks of tonalitic composition that are deformed and characterised by sub-horizontal fold axes (Figure 3). The Ancuabe area is characterised by a pronounced gneissic foliation which dips shallowly (10-40 degrees) with occasional localised steeper dips (50-80 degrees); such a shallow foliation is considered to be consistent with the interpreted thrust related tectonics of the area.

Graphite mineralisation (Figure 4 and Figure 3) at T12 occurs as several layers up to about 20 m thickness within a 50m-100m thick package of tonalitic gneisses. The graphitic package is generally underlain by a distinctive dark grey amphibolite which is a useful marker for correlating geology between drill holes. The amphibolite is in turn underlain by a unit described as basement gneiss.

Fault zones were identified in drill core and additional work is required to understand whether the fault zones cause any significant displacement of the mineralised zones (Ford, 2015<sup>2</sup>). Steep dipping metamorphic fabric (Figure 4) was also noted in several drill holes. Localised faulting can result in remobilisation of the graphite along slickenside structures, which results in a significant reduction in grain size.

The combination of folding, faulting and intrusion by granitic material may lead to some difficulties with correlation of rocks types (and the graphite mineralisation) between boreholes. Any interpretation of geological and grade envelopes will need to carefully consider these structural influences.

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<sup>2</sup> Report on Mapping and Drill Core Review – On behalf of Triton Minerals Limited's Ancuabe Project, Cabo Delgado Province, Mozambique, September 2015, By Andrew Ford BSc.(Hons.), Member AusIMM, Exploration Consultant, Rubicon Resources Limited 27 October 2015



The T12 deposit comprises a number of tabular zones that dip at about 15 to 20 degrees in a north-north-westerly direction and which are interpreted to outcrop on the southern and eastern ends of a low ridge (Figure 6, Figure 7 and Figure 6).

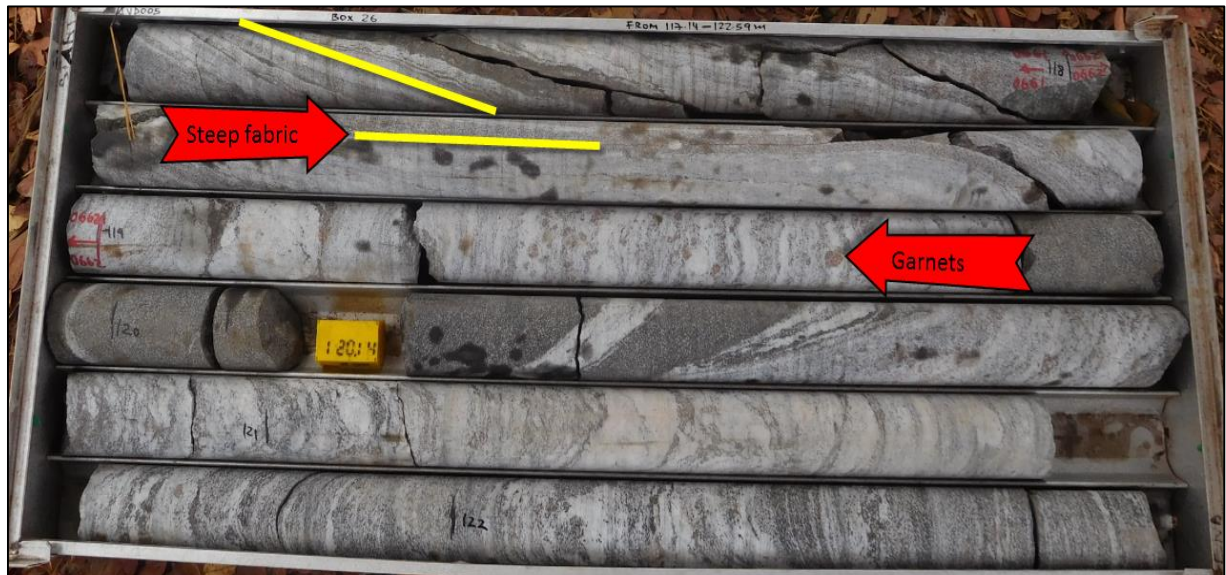


Figure 2: Steep-dipping graphitic mineralisation above garnetiferous footwall gneiss and amphibolite



Figure 3: Graphitic gneiss mineralisation in drill core from IVD005



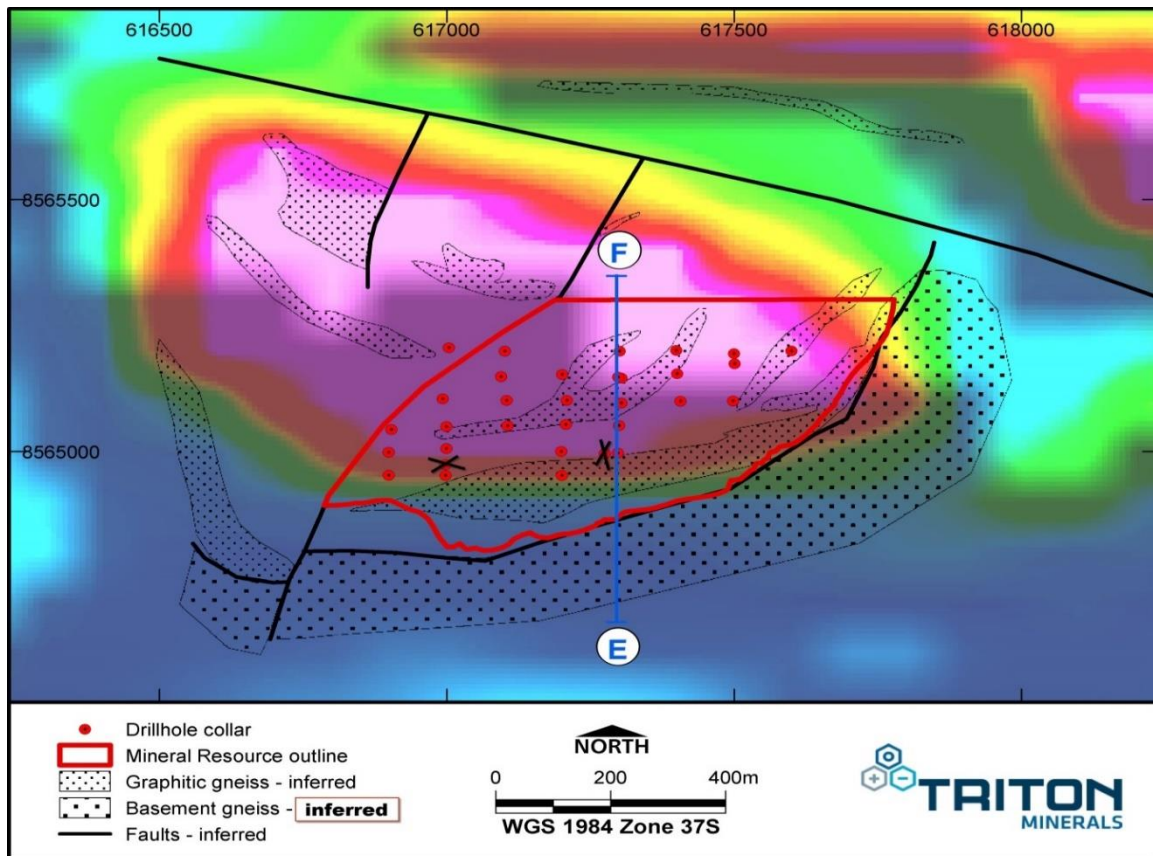


Figure 4: Map of Ancuabe T12 showing collar locations, inferred surface geology. Mineral Resource outline overlain on VTEM map. The VTEM anomaly to the northwest has not yet been explored by drilling

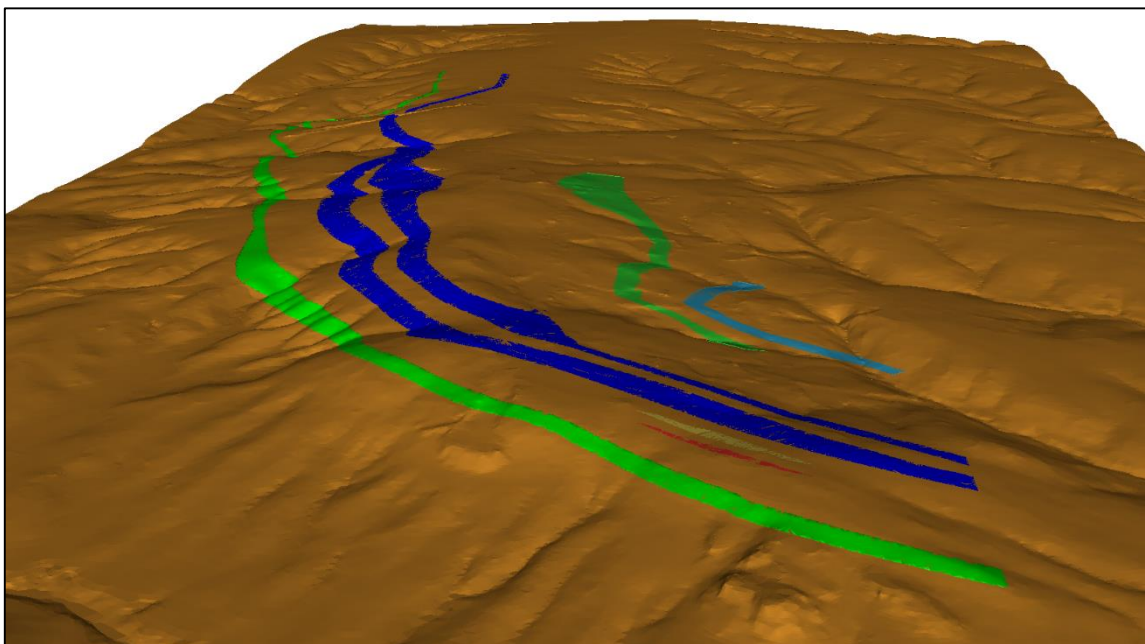


Figure 5: Oblique view towards the west showing modelled T12 graphite outcrops and topography

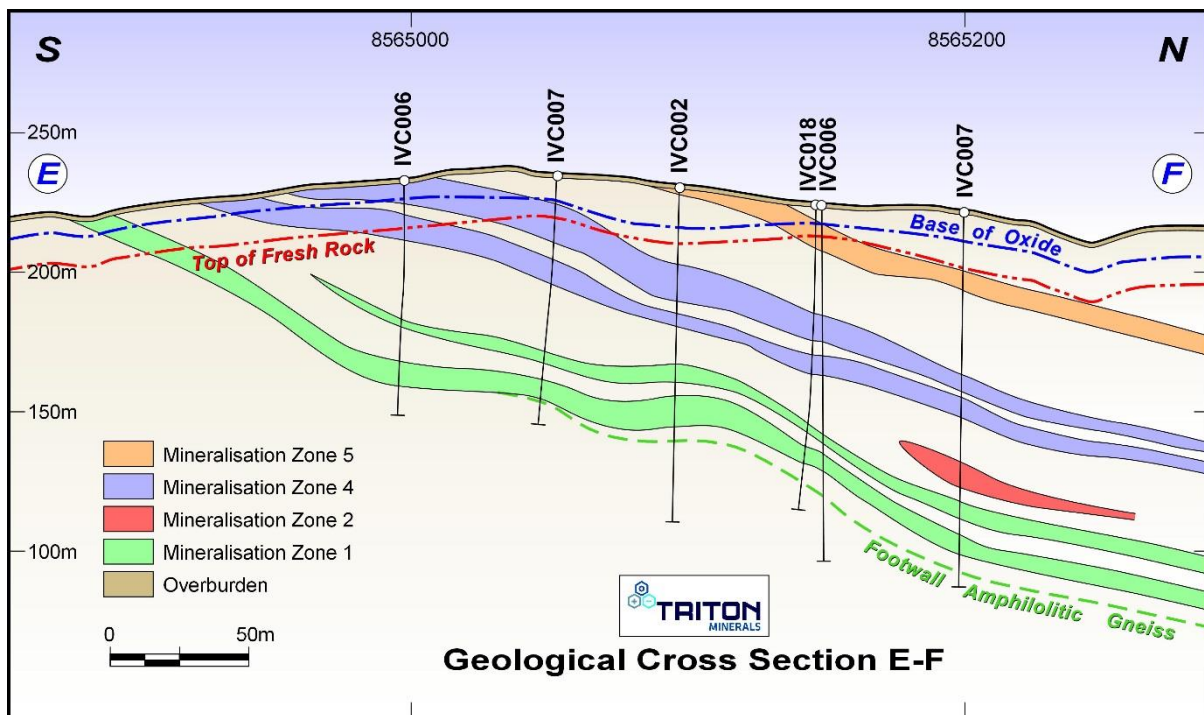


Figure 6: Cross section E-F looking west through the Ancuabe T12 deposit

## Mineral Resource Estimate

The MRE is based upon data obtained from 30 drill holes (Appendix 1) which were completed in 2015, of which 29 intersected the interpreted mineralisation. Drill lines are spaced 100m apart and intersections down dip are separated by approximately 50m. The modelling was extended to between 100m and 140m depth below surface.

The mineralisation wireframes were modelled using a nominal lower cut-off grade of 3 % TGC. The model is reported from all classified estimated blocks within the >3% TGC mineralisation domains in accordance with the guidelines of the 2012 JORC<sup>1</sup> Code. This cut-off reflects a visually distinct occurrence of graphite reflecting a natural geological cut-off. This cut-off is further supported by statistical analysis of the grade population distribution of the total dataset. There is a high grade sub-population above an approximate 8% TGC cut-off within the interpreted mineralisation wireframes. More data will be required to accurately delineate and estimate this population.

A topographic surface was generated from the provided LIDAR survey contours. This surface was found to be roughly 3m above the surveyed drill collar locations. The contours were dropped 3m and the drill collar points included in the data to generate the final topographic surface used in the MRE modelling.

The mineralisation wireframes (Figure 7 and Figure 8) were modelled by joining polygons based upon geological knowledge of the deposit, derived from drillhole logs, core photographs, assay results and surface mapping. Two weathering profile surfaces representing the base of complete oxidation and top of fresh rock have been generated (Figure 8) based on drillhole lithological logging information, core photographs and total sulphur assay results. An overburden surface wireframe was generated by dropping the topographic surface by 2m in elevation matching the average not sampled barren overburden depth in the drillholes.

A block model was constructed using Datamine Studio software with a parent cell size of 50m E by 25m N by 5m RL. Drill hole sample assay results were subjected to detailed statistical and spatial (variography) analysis. The variogram models generated in the spatial analysis were not considered sufficiently robust for use in a reportable



MRE. For this reason, the 1m composited sample grades for TGC were interpolated into the block model using inverse distance to the power of two weighting (IDS) with Ordinary Kriging (OK) used as a check estimate for validation purposes.

Density values were assigned to the different weathering states of the waste and interpreted mineralisation in the block model. The values assigned are based on a combination of the analysis of the density measurements taken that were considered to be of sufficient quality for use in an MRE, and research into and experience with reasonable density values for similar material types. The model was validated visually, graphically and statistically.

The modelled extents of mineralisation at Ancuabe T12 are extrapolated beyond the nominal spacing limits of the drill hole sampling data. To the south east and west there are natural limits to the mineralisation in the form of interpreted faults (Figure 6). To the north the limit of the modelling has been applied at a nominal 100m past the last drill section information. This equates to a depth below surface in the north, for the interpreted mineralisation, of between 100m and 140m. This depth below surface is assumed to be close to the limits of economically viable extraction for this mineralisation. Approximately 20% of the interpreted mineralisation is considered to be extrapolated.

### Classification and JORC Code 2012 Clause 49

Mineral Resource tonnes and TGC are key metrics for assessing flake graphite projects, however these projects also require attributes such as product flake size and product purity to be evaluated. This is because flake size distribution and carbon content are parameters that drive the value in a graphite project, with the larger and purer flakes typically being more valuable. Flake graphite is defined primarily according to size distribution, with a number of terms such as small, medium and large defined in the marketplace (Table 2)

Table 2: Typical graphite flake size and market terminology

Sizing	Market terminology
>300 µm (+48 Mesh)	Extra-Large or 'Jumbo' Flake
>180 µm (-48 to +80 Mesh)	Large Flake
>150 µm (-80 to +100 Mesh)	Medium Flake
>75 µm (-100 to +200 Mesh)	Small Flake
<75 µm (-200 Mesh) 80-85%C	Fine Flake

Note: 1 mm = 1000 microns (µm)

Clause 49 of the JORC Code 2012 requires that minerals such as graphite that are produced and sold according to product specifications to be reported “*in terms of the mineral or minerals on which the project is to be based and must include the specification of those minerals*”. Therefore, graphite Mineral Resources must be reported at least in terms of purity and flake size distribution, in addition to TGC and tonnages.

Triton commissioned petrographic studies and preliminary flotation test work of a graphitic intersection in drill hole IVD001. The petrographic study by Townend Mineralogy demonstrated that the graphitic gneiss is coarse grained and consists mainly of quartz, feldspar, mica and graphite. The gangue minerals are generally discrete and not significantly intergrown with graphite, which has important implications for graphite liberation characteristics (Figure 9 and Figure 10). It is cautioned that petrography indicates the *in situ* size of graphite flakes, which may not reflect the final size after crushing, milling, re-grind and flotation stages of an extractive metallurgical process such as typically used for flake graphite production.

The flotation test work, based on a standard graphite process flowsheet developed by Independent Metallurgical Operations' (IMO) Perth Laboratory, showed that approximately 85% of the liberated flakes were larger than 150 micron and more than 50% of the liberated flakes were Jumbo or larger (>300 micron). The final overall concentrate grade was 98.6% Total Carbon (TC) and a recovery better than 90% (Table 3 and Figure 11).

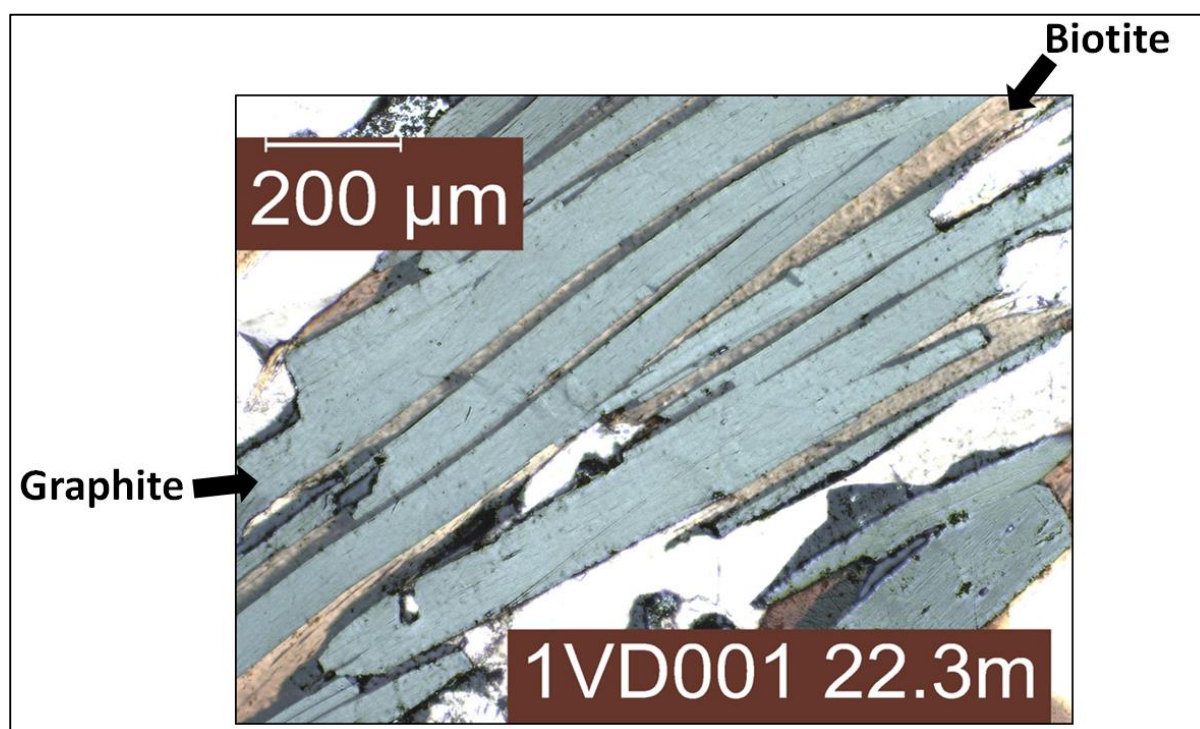




*Table 3: Metallurgical results for IVD001 composite drill core sample*

Size fraction (micron)	Mass retained %	Cumulative mass retained %	Total Carbon %	LOI %
+500	16.0%	16.0%	98.20	98.67
+300	36.7%	52.7%	99.80	98.83
+180	26.0%	78.6%	98.30	98.92
+150	6.23%	84.9%	97.90	98.66
+106	6.8%	91.6%	97.40	99.20
+75	3.56%	95.2%	96.10	98.38
-75	4.80%	100.0%	96.10	98.38
Total / Calc Head	100.0%		98.56	98.80

It is noted that the process testing has not been optimised and that it was conducted on a low-grade drill sample from the western end of the deposit, which may not be representative of high-grade areas to the east. However, it is considered that this preliminary data, in conjunction with drill core observations from the remainder of the deposit, supports the classification of the Ancuabe T12 deposit as an Inferred Industrial Mineral Resource.



*Figure 7: IVD001 22.3 m. Graphite flakes up to 1 mm long interleaved with biotite*

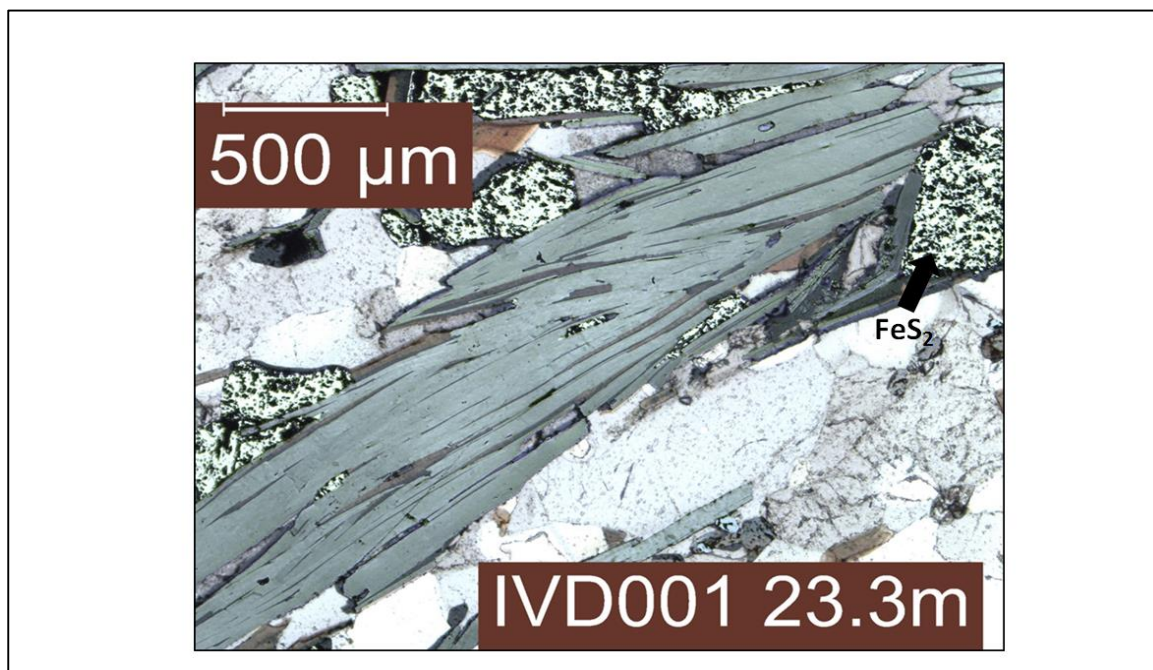


Figure 8: IVD001 23.3 m. Graphite flake in excess of 1 mm in length and up to 0.5 mm thick with associated quartz, feldspar, mica and pyrrhotite

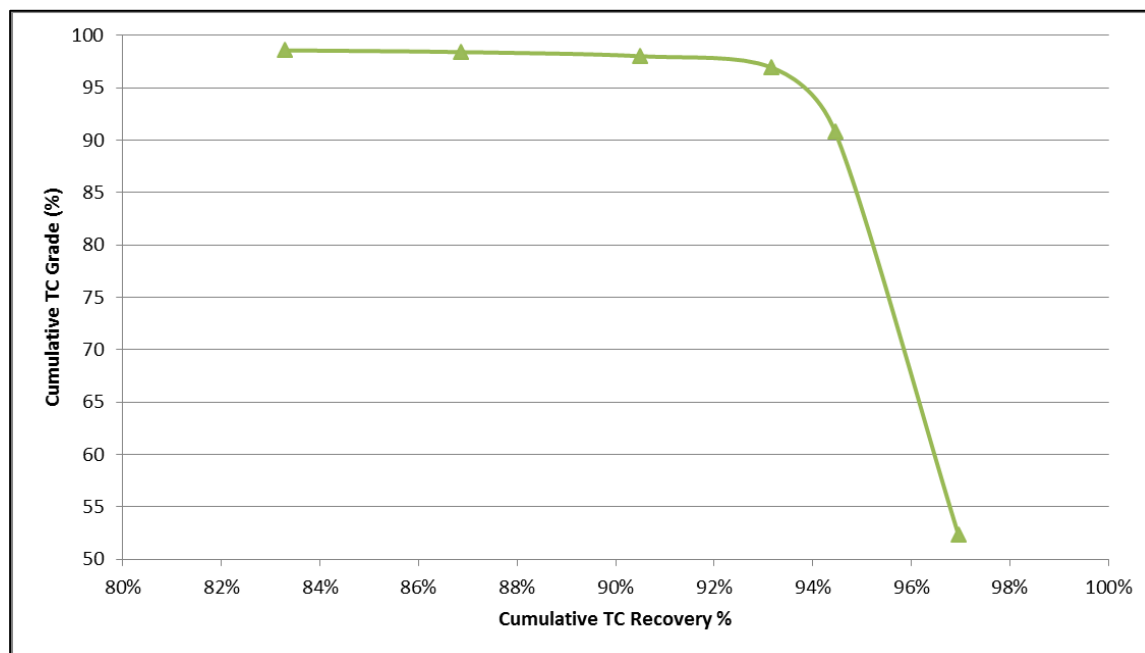


Figure 9: Recovery versus grade curve for IVD001 composite drill core sample



## Appendix 1

### *Ancuabe T12 drill collar coordinates*

Hole ID	X	Y	Z	Final Depth	Type
IVC001	616903.4	8565044.8	230.6	145	RC
IVC002	616993.0	8565105.2	223.7	109	RC
IVC003	617105.8	8565052.0	230.3	80	RC
IVC004	617498.5	8565101.1	224.7	101	RC
IVC005	617499.8	8565194.7	214.8	121	RC
IVC006	617297.8	8564997.7	233.9	85	RC
IVC007	617299.8	8565052.5	235.9	91	RC
IVC008	617207.1	8565054.4	230.6	100	RC
IVC009	617208.8	8565102.0	226.7	110	RC
IVC010	616997.8	8564953.1	231.6	79	RC
IVC011	616999.1	8565006.2	232.7	75	RC
IVC012	616898.6	8564953.7	232.7	74	RC
IVC013	617406.7	8565100.5	228.5	82	RC
IVC014	617399.0	8565201.3	217.1	125	RC
IVC015	617599.8	8565200.2	215.5	100	RC
IVC016	617200.5	8564953.1	229.8	75	RC
IVC017	617199.5	8565000.7	232.7	81	RC
IVC018	617304.3	8565146.1	224.8	110	RC
IVD001	616898.8	8564999.2	233.3	120.7	DD
IVD002	617303.9	8565096.8	233.1	123.01	DD
IVD003	617094.7	8565149.3	225.5	130.1	DD
IVD004	617103.9	8565102.0	227.9	89.4	DD
IVD005	617100.8	8565199.4	225.7	135.14	DD
IVD006	617298.1	8565148.4	224.8	128.58	DD
IVD007	617300.7	8565199.4	222.3	135.1	DD
IVD008	617200.8	8565153.7	224.7	119.6	DD
IVD009	616999.1	8565050.4	228.9	95.94	DD
IVD010	617400.9	8565155.1	220.9	119.94	DD
IVD011	617500.7	8565174.5	216.2	111.09	DD
IVD012	617003.3	8565206.3	216.2	122.75	DD





## Appendix 2: JORC<sup>1</sup> Table 1 (Sections 1, 2, 3)

### Section 1 Sampling Techniques and Data

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>The Ancuabe T12 prospect is located within the Ancuabe Project. The drill results used for the MRE were obtained from Reverse Circulation (RC) and Diamond (DD) drilling. The nominal hole spacing is 100m x 50m. Diamond drill holes are interspersed within the RC drill grid to provide qualitative information on structure and physical properties of the mineralization. Holes are drilled mostly vertical with one diamond hole inclined at -60 degrees towards UTM south east to optimally intersect the mineralised zones. 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. The collar surveys were validated with the use of a compass and inclinometer.</li> <li>RC drilling was used to obtain 1m samples collected in a large bag and passed through a 3-tier riffle splitter to generate 1/8th samples (approximately 3kg) contained in a labelled calico bag and the residual 7/8th is retained at the drill site in the large bag. 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. In addition, select RC samples is submitted for multi-element analysis (55 elements) by sodium peroxide fusion with an ICP-AES finish.</li> <li>The DD 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 1.5m to 3m, with most approximately 2m.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>The RC drill rig uses a 5.5 inch size hammer. Hole depths range up to a maximum depth of 145m.</li> <li>The diamond drillholes are drilled with a PQ core size collar (typically around 30 m deep) and HQ3 (61.1 mm diameter) core size to the end of hole. Core is oriented using the Reflex ACTII tool. Hole depths range up to a maximum depth of 135m.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>The condition and a qualitative estimate of RC sample recovery 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.</li> <li>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.</li> <li>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.</li> <li>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. Comparisons of RC and Diamond drill sample material on the showed no statistically significant bias associated with the RC drill technique.</li> </ul>



Criteria	Commentary
	Extensive diamond drilling is carried out as part of this program to confirm the QAQC parameters of the sample material. Similar statistical assessments of the sample result bias is undertaken for the current drill program.
<b>Logging</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Geotechnical logging is 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.</li> <li>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. 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 core trays are photographed. Geological descriptions of the mineral volume abundances and assemblages are semi-quantitative.</li> <li>All drillholes are logged in full.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>Diamond core (HQ3) is cut into quarter core onsite using a diamond impregnated blade on a brick saw. Quarter core samples generally 1 metre or less in core length are submitted to the lab labelled with a single sample name. Each approximately 1m sample is crushed and a 300g split is taken for pulverisation. Samples are generally defined according to geological unit boundaries.</li> <li>A batch of duplicate samples to sampled quartered core is submitted to the same lab to investigate if any statistical bias is associated with the quarter compared to half core. The results of this study is used to determine the appropriate sample methodology for future drill holes.</li> <li>RC samples are collected on the rig. 1m samples from the drill cyclone are collected into a large bag and passed through a 3-tier riffle splitter to generate 1/8th samples (approximately 3kg) contained in a labelled calico bag and the residual 7/8th is retained at the drill site in the large bag. The majority of samples are dry.</li> <li>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 ~2mm, 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.</li> <li>Field QC procedures involve the use of two certified reference material assay standards, along with certified blanks, and insertion of field duplicates.</li> <li>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.</li> <li>Field duplicates are taken on 1m composites for RC, using a riffle splitter. Field duplicates are taken as quarter core splits for diamond core.</li> <li>The drill sample sizes are considered to be appropriate to correctly represent mineralisation at the Ancuabe project based on the style of mineralisation, the thickness and consistency of the intersections, the sampling methodology and</li> </ul>



Criteria	Commentary
	percent value assay ranges for the primary elements.
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>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.</li> <li>In addition, selected drill samples are 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.</li> <li>No geophysical tools were used to determine any element concentrations.</li> <li>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.</li> <li>Sample preparation checks for fineness is carried out by the laboratory as part of their internal procedures to ensure the grind size of 85% passing 75 micron was being attained.</li> <li>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.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>Mr Simon Plunkett, of Terra Geological Services and a consultant to the Company, has visually verified the geological observations of most of the reported RC and Diamond drillholes. The geological of all drill chips and core is undertaken by trained geological staff on site.</li> <li>One RC hole was twinned to investigate sample bias related to the RC drill and sampling methods.</li> <li>Sample information is recorded at the time of sampling in electronic and hard copy form. Assay data is received from Intertek/Genalysis in electronic form and compiled into the Company's digital database. Secured electronic print files have been provided to the Company for verification purposes.</li> <li>No adjustments or calibrations are made to any assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Collar locations for all IVD and IVC holes were surveyed with a differential GPS.</li> <li>The dip of all RC holes is recorded for the collar only and no downhole surveys were taken.</li> <li>The dip and azimuth of all DD holes is measured by the drill company using a Reflex singleshoot downhole survey tool. Readings were taken at the completion of the hole at an interval spacing of 30m on the diamond holes, and at the collar and end of hole on the RC holes. Stated accuracy of the tool is <math>\pm 10</math>.</li> <li>Downhole survey measurements considered to be poor quality are coded as 'Priority 2' and are excluded from the drill location calculations. The grid system for the Ancyabe Project area is World Geodetic System (1984 Spheroid and Datum; Zone 37 South).</li> <li>Topographic surface for drill section is based on LIDAR data obtained in 2015.</li> </ul>





Criteria	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>The nominal drillhole spacing 50m on drill lines spaced 100m apart. The drill lines have a bearing of 180° (UTM grid northeast).</li> <li>The current data spacing and distribution is sufficient for the purpose of estimating a mineral resources for Ancuabe prospect.</li> <li>Samples have been collected at 1 metre for RC samples. Most diamond core samples are taken as approximately 1m lengths of quarter core, with few samples of up to 2m in length of core for zones of low graphite. Diamond core sample breaks corresponding to geological boundaries.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>The deposit is mostly drilled vertically. The interpreted dip of the geological units is on average 20° towards 340° with the strike roughly 70°. The geological units at the T12 deposit appear to be affected by gentle folding and are limited in extent by faulting. 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.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>Chain of custody is managed by Triton. Samples are stored at a secure yard on the project prior to shipping to Intertek (Perth). 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 Australia.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>A QAQC review of the sampling data from the drill holes at was carried out by Maxwells as part of their routine QAQC procedures. The database is considered by Triton to be of sufficient quality to carry out that resource estimation at the appropriate time. A review of sampling techniques was undertaken by Jorvick Resources Ltd – an independent resource consulting firm.</li> <li>The QAQC samples for returned results from the Ancuabe T12 deposit have returned values within the expected value ranges. On this basis, the drill assay results are considered representative and suitable for assessing the graphite grades of the intersected graphite mineralisation.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>The Ancuabe T12 Prospect is located wholly within Exploration Licence 5336 within the Cabo Delgado Province of Mozambique. The licence is 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 2014 Triton increased their holding in the projects to 80% by taking a direct equity interest in Grafex.</li> <li>All statutory approvals have been acquired to conduct exploration and Triton Minerals has established a good working relationship with local stakeholders.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>No previous systematic exploration has been undertaken at the Ancuabe Prospect. The Company has acquired the data from an airborne electromagnetic survey that covers the Ancuabe project.</li> <li>This data has been reprocessed and interpreted. 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.</li> </ul>



Criteria	Commentary
<b>Geology</b>	<ul style="list-style-type: none"> <li>The Ancuabe tenements are underlain mainly by rocks of the Proterozoic Meluco Complex to the north that comprise granitic to tonalitic gneiss and, to the south, by rocks of the Lalamo Complex that comprise mainly biotite gneiss.</li> <li>The eastern portions of 6357L are underlain by Cretaceous sediments belonging to the Pemba Formation.</li> <li>The Meluco Complex consists of orthogneisses mainly of granitic to granodioritic composition, with tonalitic rocks as a subordinate component. The geophysical data on the two large dome structures show a rather irregular, folded pattern in contrast to the supracrustal rocks in the surrounding Lalamo Complex, which have a very banded pattern that seems to wrap around the Meluco Complex.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>All relevant drill hole information has previously been reported to the ASX. No material changes have occurred to this information since it was originally reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>Not relevant when reporting Mineral Resources.</li> <li>No metal equivalent grades have been used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>Not relevant when reporting Mineral Resources.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Refer to figures within the main body of this report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Not relevant when reporting Mineral Resources.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Selected core samples from all DD drillholes are measured for bulk densities. This, and additional data from future drillholes is used to estimate average densities for rock types.</li> <li>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.</li> <li>Regional scale mapping has been carried out in the area to identify outcrop of graphitic material. This mapping is ongoing.</li> <li>A VTEM geophysical survey was initially completed over the Ancuabe property. It identified numerous anomalies which were likely to be associated with graphite mineralisation. Based on the VTEM data a number of the identified targets were drilled in 2015 and the Ancuabe T12 deposit was discovered.</li> <li>All other meaningful exploration data concerning the Ancuabe has been reported in previous reports to the ASX.</li> <li>No other exploration data is considered material in the context of the Mineral Resource estimate which has been prepared. All relevant data has been described in Section 1 and Section 3 of JORC Table 1.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>Further drill testing using reverse circulation and diamond drilling is planned on the Ancuabe prospect to determine the grade continuity and width of the graphitic units.</li> </ul>



### Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>Data used in the Mineral Resource estimate is sourced from a database export. Relevant tables from the data base are exported to MS Excel format and converted to csv format for import into Datamine Studio 3 software.</li> <li>Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars.</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>A representatives of the Competent Person (CP) visited the project for two days in April 2016. The CP's representatives were able to examine the mineralisation occurrence and associated geological features. The geological data was deemed fit for use in the Mineral Resource estimate.</li> </ul>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>The geology and mineral distribution of the system appears to be reasonably consistent though affected by folding, with thicker zones of mineralised material in the eastern half of the deposit thinning to the west. Data density is currently not sufficient to define potential structural influences along strike where the mineralisation thins and modelling will need to be refined as more data is collected. Any structural influences are not expected to significantly alter the volume of mineralised material interpreted.</li> <li>A footwall unit consisting of amphibolitic gneiss has been recognised in the drill logging. The surface of this layer has been modelled to provide a basis for understanding the geometry of the overlying graphite mineralisation hosting gneissic units.</li> <li>Drillhole intercept logging, assay results, the footwall amphibolitic gneiss and geological mapping have formed the basis for the mineralisation domain interpretation. Assumptions have been made on the depth and strike extents of the mineralisation based on drilling and mapping information. Approximately 21% of the modelled mineralisation zones can be considered to be extrapolated</li> <li>The extents of the modelled zones are constrained by the information obtained from the drill logging and field mapping. The extents of the modelled mineralised zones are constrained to the east, south and west by interpreted faults. Alternative interpretations are unlikely to have a significant influence on the global Mineral Resource estimate.</li> <li>An overburden layer with an average thickness of 2m has been modelled based on drill logging and is depleted from the model.</li> <li>Graphite mineralised gneiss lenses have been interpreted based on a lower TGC cut-off grade of 3%, with 7 individual mineralisation lenses being modelled.</li> <li>A number of higher grade mineralisation zones with a lower cut-off grade of roughly 7% TGC were recognised, but not interpreted at this time due to the pending assay results that are required to reasonably accurately interpret their grade continuity extents and geometry.</li> <li>Continuity of geology and grade can be identified and traced between drill holes by visual and geochemical characteristics. The effect of any potential structural or other influences have not yet been modelled as more data is required. Confidence in the grade and geological continuity is reflected in the Mineral Resource classification.</li> </ul>





Criteria	Commentary
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>The interpreted mineralisation zones (&gt;3% TGC) consist of 7 individual lenses. Approximately 90% of the mineralisation is contained in two major lenses that range between a minimum of 2m up to a maximum of about 20m in true thickness. The mineralisation roughly strikes towards 70° , dipping on average 18° towards 340° although all lenses are affected by fairly gently folding in all directions. The strike extent is roughly 1,000m and across strike width is roughly 400m. The mineralisation outcrops in the south and east and is interpreted up to a maximum depth of about 150m below surface in the north. The combined thickness of the mineralisation zones is greatest in the eastern half (~25m to 50m) of the deposit thinning to the west (~10m to 20m).</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>Inverse distance squared (IDS) was the selected interpolation method, with OK used as a check estimate. Grade estimation was carried out at the parent cell scale, with sub-blocks assigned parent block values. Grade estimation was carried out using hard boundaries between each of the seven interpreted mineralisation lens using the MINZON code. Estimation was not separated by weathering state as the grade population distributions and grades for the different states were very similar.</li> <li>Statistical analysis to check grade population distributions using histograms, probability plots and summary statistics and the co-efficient of variation, was completed on each lens for the estimated element. The checks showed there were no significant outlier grades in the interpreted cut-off grade lenses.</li> <li>No mining has yet taken place at these deposits.</li> <li>No mining assumptions have been made.</li> <li>Sulphur has been estimated into the model, as sulphide minerals have the potential to generate acid mine drainage, and affect the metallurgical processes for recovering the graphite. The available metallurgical testing indicates that the sulphide minerals do not present any issues in recovering the graphite. Due to the lack of available assay results for samples in the oxide and transition zones the sulphur estimate has been completed in each mineralisation domain using the same parameters as the TGC and not separated by weathering domain. Therefore, the sulphur estimate is not considered to be sufficiently accurate to allow reporting of the results, rather it is included in the model at this stage for indicative purposes and is primarily of use in the fresh zones.</li> <li>A volume block model was constructed in Datamine constrained by the topography, mineralisation zones, weathering surfaces, overburden surface and model limiting wireframes. Analysis of the drill spacing shows that the nominal average drill section spacing is 100m with drill holes nominally between 50m apart on each section over a majority of the modelled area.</li> <li>Based on the sample spacing, a parent block size of 50m E by 25m N by 5m RL or nominally half the average section spacing was selected for the initial model. Sub-cells down to 2.5m E by 2.5m N by 2.5m RL were used to honour the geometric shapes of the modelled mineralisation.</li> <li>The search ellipse orientations were defined based on the overall geometry of each lens. The search ellipse was doubled for the second search volume and then increased 20 fold for the third search volume to ensure all blocks found sufficient samples to be estimated. The search ellipse dimensions are designed to ensure that the majority of blocks were estimated in the first search volume. The final dimensions were selected after several iterations of grade interpolation were run</li> </ul>



Criteria	Commentary
	<p>followed by validation of the output models. Differences in the output models were relatively minor and the current ellipse dimensions demonstrated the best interpolation based on the model validations. A minimum of 8 and a maximum of 12 samples were used to estimate each parent block for the all zones except MINZON 6. These numbers were reduced for the second and third search volumes. A maximum number of 3 or 5 samples per drill hole were allowed depending on the number of drill holes intersecting each lens and the number of samples in those intervals. Cell discretisation was 5 E by 5 N by 5 Z and no octant based searching was utilised.</p> <ul style="list-style-type: none"> <li>Model validation was carried out visually, graphically and statistically to ensure that the block model grade reasonably represents the drill hole data. Cross sections, long sections and plan views were initially examined visually to ensure that the model TGC grades honour the local composite drill hole grade trends. These visual checks confirm the model reflects the trends of grades in the drill holes.</li> <li>Statistical comparison of the mean drillhole grades with the block model grade shows reasonably similar mean grades. The OK check estimate shows similar grades to the IDS model adding confidence that the grade estimate has performed well. The model grades and drill grades were then plotted on histograms and probability plots to compare the grade population distributions. This showed reasonably similar distributions with the expected smoothing effect from the estimation taken into account.</li> <li>Swath or trend plots were generated to compare drill hole and block model with TGC% grades compared at 100m E, 50m N and 10m RL intervals. The trend plots generally demonstrate reasonable spatial correlation between the model estimate and drill hole grades after consideration of drill coverage, volume variance effects and expected smoothing.</li> <li>No reconciliation data is available as no mining has taken place.</li> </ul>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>Tonnages have been estimated on a dry, <i>in situ</i> basis. No moisture values could be reviewed as these have not been captured.</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>Visual analysis of the drill assay results demonstrated that the lower cut-off interpretation of 3% TGC corresponds to natural break in the grade population distribution. Analysis of the drill core photography compared to the assay grade results indicate that graphite mineralisation zones become visually easily recognisable at roughly 3% TGC.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>It has been assumed that these deposits will be amenable to open cut mining methods and are economic to exploit to the depths currently modelled using the cut-off grade applied.</li> <li>No assumptions regarding minimum mining widths and dilution have been made.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>Five quarter-core samples from one borehole were selected for thin section examination in April 2016 by Townend Mineralogy, mainly to assess graphite flake size and likely liberation characteristics.</li> <li>The petrographic study demonstrated that the Ancuabe T12 samples from IVD001 are coarse grained and consist mainly of quartz, feldspar, mica and graphite.</li> <li>The gangue minerals e.g. sulphides, mica, quartz and feldspar are generally discrete and not significantly intergrown with graphite, which has important</li> </ul>



Criteria	Commentary
	<p>positive implications for graphite liberation characteristics.</p> <ul style="list-style-type: none"> <li>• A composite of fresh (unoxidised) graphite mineralisation were tested in April 2016 by IMO Laboratory in Perth from diamond drill core from hole IVD001. The primary objective of the metallurgical test work was to demonstrate in principle that flake graphite of marketable quality could be liberated from Ancuabe T12 drill core. However, the only suitable sample available at short notice was a low-grade intersection from drill hole IVD001, situated on the westernmost drill line of the deposit.</li> <li>• The metallurgical composites were crushed to &gt;80% passing 710 micron and were processed using IMO's standard graphite flowsheet (rougher stage, three regrind stages and five cleaner flotation stages).</li> <li>• The head grade was 2.7 % TGC, which is low grade compared with other drill intersections</li> <li>• This process flowsheet produced a final graphite concentrate at &gt;90% graphite recovery, maintaining a favourable coarse PSD (85% of the flakes are &gt;150 micron; 53% greater than 300 micron).</li> <li>• The final concentrate grade was 98.8% Carbon, with highest purities of 98% to 99% carbon in the &gt;180 micron fractions.</li> <li>• The preliminary test work program demonstrated that the T12 mineralisation from IVD001 is amenable to the production of high grade graphite concentrates, at coarse flake sizes, using relatively simple flotation processes. This is notwithstanding that the testing was conducted on a low-grade drill sample from the western end of the deposit, which may not be representative of high-grade areas to the east. There is risk that the high grade intersections may process differently from the low grade intersections.</li> <li>• Additional metallurgical test work on each mineralisation and weathering domain is therefore required to verify and refine the initial findings</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>• No assumptions regarding waste and process residue disposal options have been made. It is assumed that such disposal will not present a significant hurdle to exploitation of the deposit and that any disposal and potential environmental impacts would be correctly managed as required under the regulatory permitting conditions.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• Density measurements have been taken on drill samples from all different lithological types, using water displacement and weight in water methods.</li> <li>• No samples were wax coated prior to immersion; however, the non-porous competent fresh rock probably would not require coating.</li> <li>• Analysis of samples from the oxide and transition zone found they were not representative of the zones and representative samples from these zones would require sealing through wax coating or similar method. Samples from these zones were measured using the water displacement method and the measurement scale used for the displaced water was overly coarse. The water added data, which had a finer measurement scale, was not always used in the overall density calculation. The density measurement available for the oxide and transition zones were therefore not considered accurate and representative enough for use in an MRE. Dry bulk density values based on experience and research into similar material types are allocated to oxide and transitional materials and this is assumed to be an appropriate method of representing the expected bulk density for these materials</li> </ul>





Criteria	Commentary
	<p>in the deposit.</p> <ul style="list-style-type: none"> <li>Analysis of the samples from the fresh zone showed they have been measured by weight in water method, and they appear reasonably representative of the fresh rock. They appear to be sufficiently non porous and competent to not require coating prior to immersion. The mean density value for mineralised material is slightly lower than unmineralised material in line with expectation due to the relatively low density of graphite. It is assumed that use of the mean measured density of mineralised fresh rock is an appropriate method of representing the expected bulk density for the deposit.</li> <li>Analysis of density measurements revealed no correlation with TGC grade, hence regression equations were not used to assign density in the block model. Detailed statistical analysis of the measurement results was completed for the weight in water fresh rock samples.</li> <li>The mean density for the mineralised samples was 2.7 t/m<sup>3</sup> and this value is applied to the model for fresh mineralised materials. Since the oxide and transition zone measurements are not considered suitable for use, density values have been assigned to the mineralisation in these zones based on CSA Global's experience and research into similar material types. These are 1.9 t/m<sup>3</sup> for overburden, 2.2 t/m<sup>3</sup> for oxide and 2.5 t/m<sup>3</sup> for transitional zones.</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>Classification of the Mineral Resource estimates was carried out taking into account the level of geological understanding of the deposit, quality of samples, density data and drill hole spacing.</li> <li>The Mineral Resource estimate has been classified in accordance with the JORC Code, 2012 Edition using a qualitative approach. All factors that have been considered have been adequately communicated in Section 1 and Section 3 of this Table.</li> <li>Overall the mineralisation trends are reasonably consistent over the drill sections.</li> <li>The Mineral Resource estimate appropriately reflects the view of the Competent Person.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>Internal audits were completed by CSA Global which verified the technical inputs, methodology, parameters and results of the estimate. No external audits have been undertaken.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</li> <li>The Mineral Resource statement relates to global estimates of <i>in situ</i> tonnes and grade.</li> </ul>

Ends.