ASX ANNOUNCEMENT ASX: GPX

2 February 2017

80% UPGRADE TO HIGH-GRADE GRAPHITE RESOURCE AT CHILALO

Highlights

- **Chilalo's high-grade Mineral Resource has increased by more than 80% to 16.9Mt grading 10.2% Total Graphitic Carbon (TGC), comprised of:**
  - **Indicated Resource of 5.2Mt grading 11.9% TGC for 0.6Mt of contained graphite**
  - **Inferred Resource of 11.7Mt grading 9.4% TGC for 1.1Mt of contained graphite**
- **The total Mineral Resource at Chilalo now stands at 53.5Mt grading 5.6% TGC for 3.0Mt of contained graphite (see Table 1 below). This is approximately double the contained graphite in the 2015 Mineral Resource (25Mt for 1.5Mt of contained graphite)**
- **This upgraded resource includes a newly discovered outcropping horizon only 300m to the north of Shimba with similar widths and grades to the 2015 Mineral Resource**
- **The resource increase is expected to significantly extend mine life and therefore improve project economics**
- **Results confirm the exceptional prospectivity of the Chilalo tenements**

Graphex Mining Limited (**ASX: GPX**) is pleased to report that updated resource modelling following the recently completed 13 hole, 1,365m Reverse Circulation (RC) drilling program has confirmed a substantial increase in the Chilalo Mineral Resource, which is detailed below.

Table 1. Updated Chilalo Mineral Resource and Ore Reserve[1]

Domain	Classification	Tonnes (Mt)	TGC (%)	Contained Graphite (Kt)
High-grade zone	Probable Reserve	4.7	11.0	517
Total ore reserves	**Probable Reserve**	**4.7**	**11.0**	**517**
High-grade zone	Indicated	5.2	11.9	622
High-grade zone	Inferred	11.7	9.4	1,100
Total high-grade resource	**Indicated and Inferred**	**16.9**	**10.2**	**1,722**
Low-grade zone	Inferred	36.6	3.5	1,265
Total resource	**Indicated and Inferred**	**53.5**	**5.6**	**2,987**

1. Mineral Resources are inclusive of Ore Reserves. The Mineral Resource was estimated within constraining wireframe solids using a core high grade domain defined above a nominal 5% TGC cut-off within a surrounding low grade zone defined above a nominal 2% TGC cut-off. The resource is quoted from all classified blocks within these wireframe solids. Differences may occur due to rounding.

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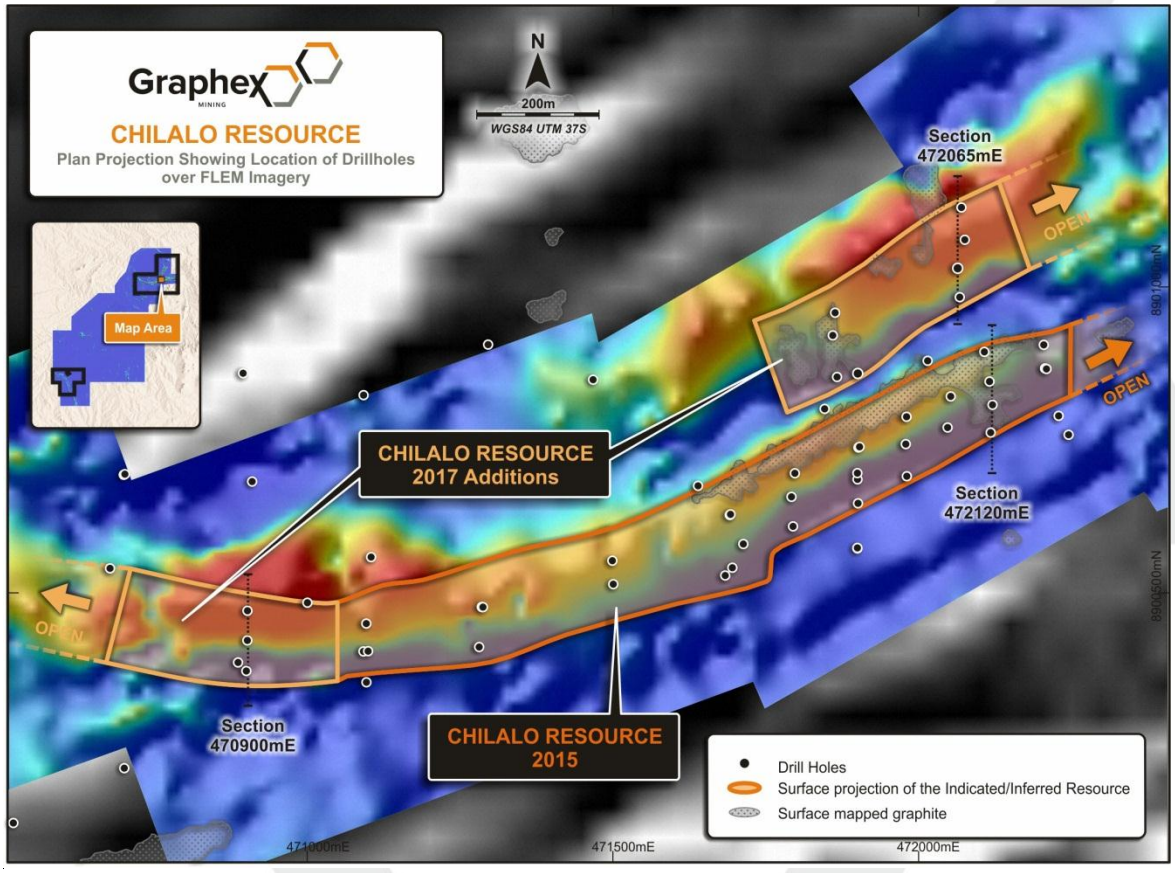
The increase in the Mineral Resource follows the discovery of two new zones of graphite mineralisation located adjacent to the north and south-west of the existing Chilalo Mineral Resource (see Figure 1). One of these is a new and separate zone of graphite mineralisation located approximately 300 metres north and running parallel to the existing Mineral Resource (see Figure 2). The other is located to the south-west (see Figure 3) of the existing Mineral Resource, confirming the continuation of mineralisation along strike. Both new zones remain open along strike.

Graphex Managing Director, Phil Hoskins, commented: "*We are pleased to have delivered such a significant increase in the high-grade Chilalo Mineral Resource and in doing so, further confirmed the outstanding prospectivity of our Chilalo tenements. The increase in the Mineral Resource is expected to extend the mine life and improve the project economics. This is an outstanding result, which combined with our 'markets first' approach to Chilalo's development, is expected to yield an excellent outcome for shareholders. Our Chinese project partners place significant value in the exploration potential at Chilalo and this news will be welcomed by them as we seek to finalise negotiations for offtake and financing.*"

The success of this recent drilling, together with the recently announced identification of four strongly conductive, high-quality drill targets on the Mining Licence area[2], demonstrates the potential for the Chilalo Project to grow well beyond the scope of the initial mining operation proposed in the November 2015 pre-feasibility study.

Figure 1. Chilalo Mineral Resource Plan Projection



2. Since announcing these exploration results on 15 December 2016, Graphex confirms that it is not aware of any new information or data that materially affects the information included in that announcement.

Petrography confirms coarse graphite flake from the new North-East Mineral Resource

Petrographic examination of RC chip samples from the high-grade domain of the North-East Mineral Resource zone has confirmed that it exhibits similar flake graphite dimensions to the 2015 Mineral Resource (Figures 5 and 6). Testwork on the 2015 Mineral Resource confirmed that Chilalo ore is amenable to the production of high-grade graphite concentrates, at coarse flake sizes, using simple flotation processes. Further testwork has shown that Chilalo graphite has exceptional expandability characteristics and it is this combination of coarse flake and outstanding expandability that has led to Chilalo graphite receiving the seal of approval from potential offtakers.

CROSS SECTIONS AND PETROGRAPHIC FIGURES

Figure 2. Chilalo cross section 472065mE (new North-East zone)

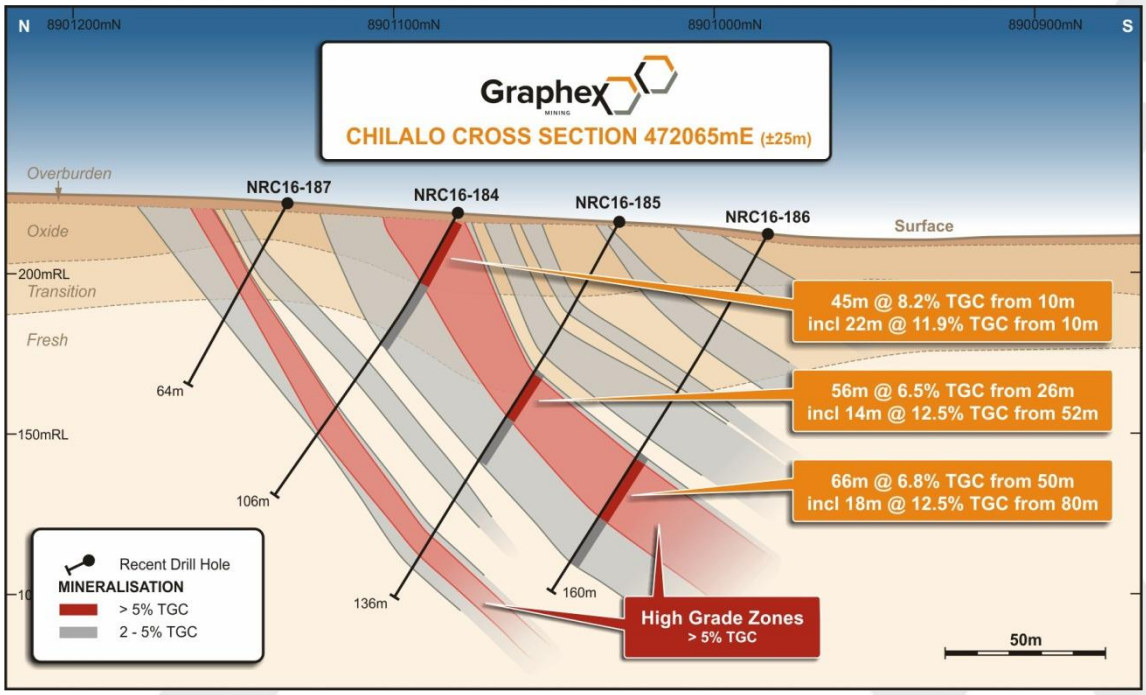


Figure 3. Chilalo cross section 470900mE (South-West zone)

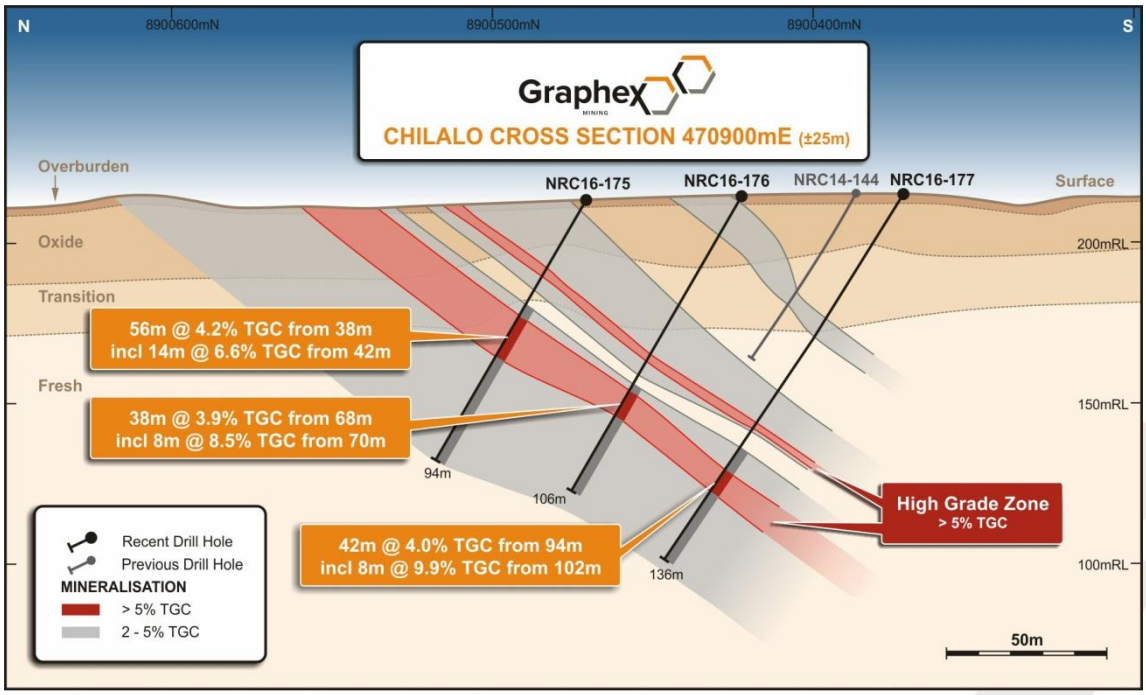
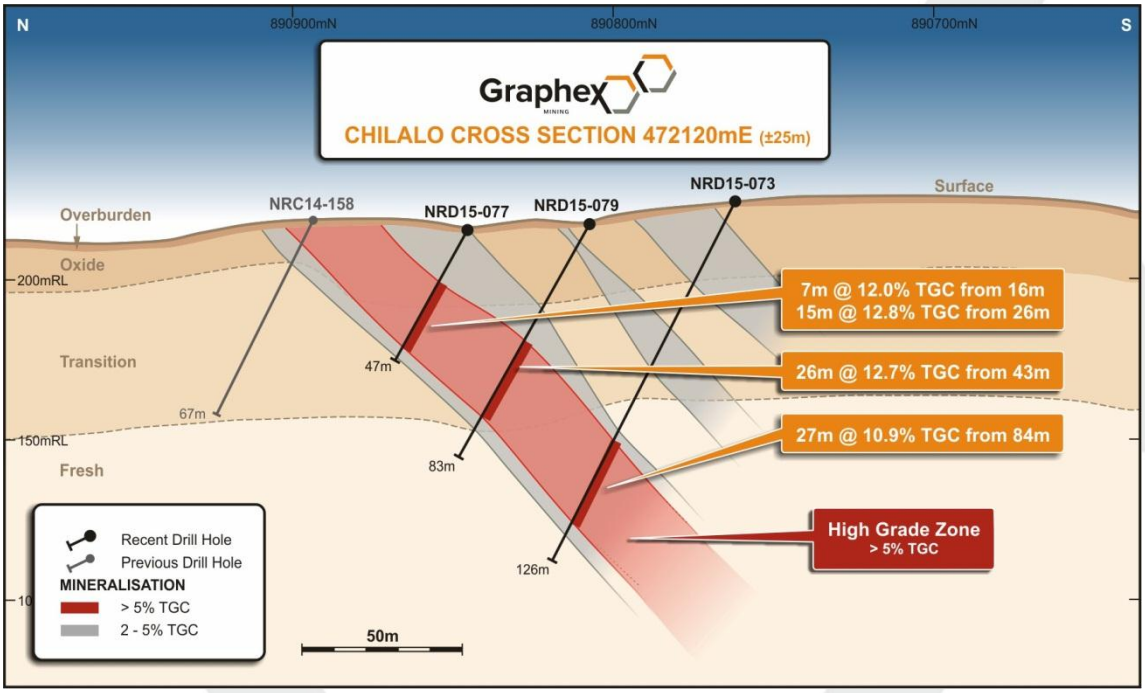
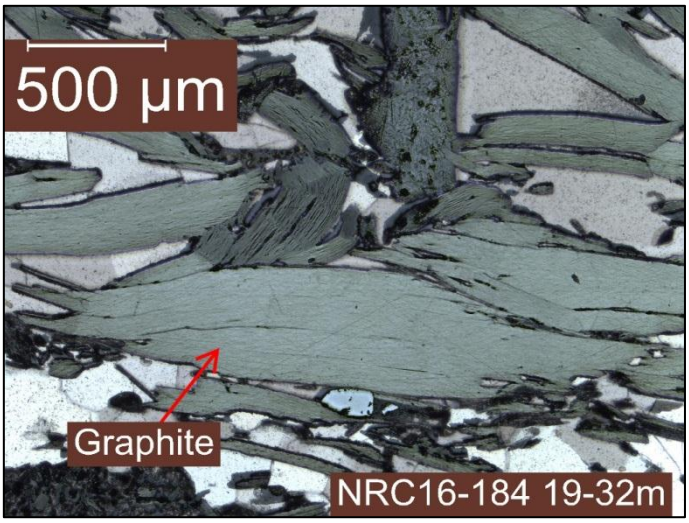
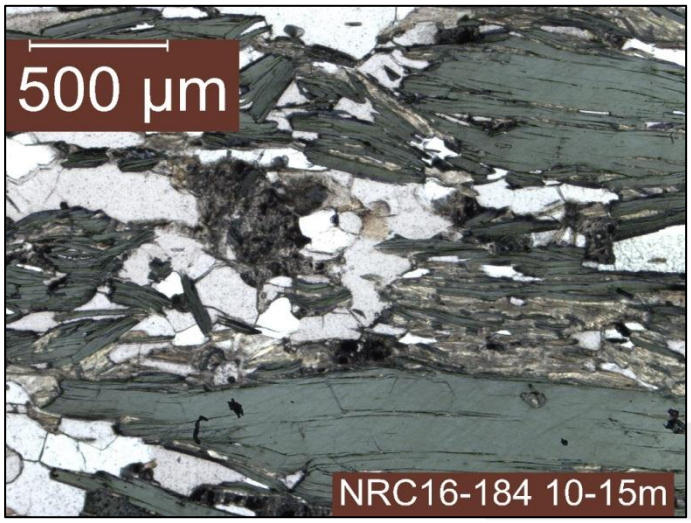


Figure 4. Chilalo cross section 472120mE (2015 Mineral Resource)



Figures 5 and 6. Graphite flakes from the North-East Mineral Resource[3]





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3. Scale bar on photomicrographs = 500 micron (0.5mm). Photos were taken using plane polarised reflected and transmitted light sources. It is cautioned that visual estimates of flake size provide no definitive information regarding the size or purity of liberated graphite flakes that may be extracted by metallurgical processes.

Competent Person's Statement

The information in this announcement that relates to in situ Mineral Resources for Chilalo 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 (**CSA**), an independent consulting company. 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 Edition**). Dr Scogings consents to the inclusion of such information in this announcement in the form and context in which it appears.

The information in this announcement that relates to the Ore Reserve at the Chilalo Project is based on information compiled by Karl van Olden, a Competent Person, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Karl van Olden is employed by CSA. Mr van Olden 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 JORC Code 2012 Edition. Mr van Olden consents to the inclusion of such information in this announcement in the form and context in which it appears.

About Graphex

Graphex Mining Limited is an Australian exploration and development company, dedicated to advancing the world class Chilalo Graphite Project, located in south-east Tanzania. Chilalo is host to a high-grade mineral resource and has demonstrated an ability to produce a premium graphite concentrate with a substantial portion of large and jumbo flake material. Chilalo graphite possesses outstanding expandability characteristics, making it ideally suited to the rapidly growing expandable graphite market.

Graphex's current focus of effort is on securing offtake and financing agreements for the development of Chilalo. In accordance with an existing MOU, Graphex is working closely with CN Docking Joint Investment & Development Co. Ltd, a subsidiary of China National Building Materials and China Gold Group Investment Co. Ltd. on the finalisation of such agreements.

Graphex has an experienced board and management team with specific skills and extensive experience in African based project development, exploration, mining and processing. Tanzania is a stable democracy, with a globally competitive tax and regulatory regime. The Company has a long and well-established presence in Tanzania.

For more information, visit www.graphexmining.com.au.

APPENDIX A. SUMMARY OF ASSAY RESULTS
2016 RC Drilling Program: Chilalo Graphite Project

Hole ID	Hole Type	East / North UTM:WGS84	Azimuth / Dip	Hole Depth (m)	Drilled From	Drilled To	Interval (m)	TGC (%)
NRC16-175	RC	470900 / 8900470	0 / -60	94	20	31	11	4.5
					38	58	20	5.7
					76	86	10	4.6
NRC16-176	RC	470900 8900420	0 / -60	106	56	82	26	5.7
NRC16-177	RC	470900 / 8900370	0 / -60	136	85	112	27	5.0
NRC16-178	RC	471100 8900450	0 / -60	82	22	30	8	6.0
					56	67	11	7.9
NRC16-179	RC	471100 / 8900400	0 / -60	100	50	60	10	7.3
					80	94	14	8.3
NRC16-180	RC	471100 / 8900350	0 / -60	136	84	94	10	7.5
					116	128	12	7.4
NRC16-181	RC	471870 / 8900960	0 / -60	82	20	36	16	5.6
NRC16-182	RC	471870 / 8900920	0 / -69	93	NSR			
NRC16-183	RC	471870 / 8900860	0 / -60	100	NSR			
NRC16-184	RC	472070 / 8901080	0 / -60	106	10	55	45	8.2
					10	32	22	11.9
					78	87	9	9.2
NRC16-185	RC	472070 / 8901030	0 / -54	136	26	82	56	6.4
					52	66	14	12.1
					108	120	12	6.3
NRC16-186	RC	472070 / 8900980	0 / -60	130	50	118	68	6.6
					80	98	18	13.8
					91	96	5	20.3
NRC16-187	RC	472070 / 8901130	0 / -60	64	24	48	24	4.4

APPENDIX B. JORC 2012 TABLE 1 REPORTING

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Reverse Circulation (RC) drilling was used to collect 1 m downhole samples for the laboratory analysis. • Typically, a 1 to 2 kg sample was collected using a cone splitter or during 2016 drilling, a representative 1/8 sample was collected using a three tier riffle splitter. Samples were composited to 2 m numbered and bagged before dispatch to the laboratory and sent for combustion infrared detection (LECO) analyses. All RC samples were submitted for analysis. • HQ diamond core was geologically logged and sampled to corresponding 2m composite RC intervals when twinning an RC hole, otherwise sampling was to geological contacts with nominal sample lengths between 0.25 and 1.5m. • HQ Quarter core samples were collected by diamond blade rock saw, numbered and bagged before dispatch to the laboratory and sent for LECO analyses. All core samples were submitted for analysis. • CRM's and field duplicate samples were regularly included into the sample stream for both RC and diamond to monitor analytical accuracy and sampling precision. • Sampling is guided by IMX Resources' standard operating and QA/QC procedures.
Drilling techniques	• Diamond and RC holes were drilled in a direction to intersect the mineralisation orthogonally. • RC holes were drilled using a 140-146 mm face sampling hammer button bit. • The RC drilling was completed using either a Schramm 450 or UDR 650drill rig with additional booster and auxiliary used as required to keep samples dry and produce identifiable rock chips. • Diamond holes were drilled using HQ diameter (63.5mm) core bit with standard inner tubes to target depth. • The diamond drilling was completed using a conventional wire-line core rig. • Core orientations were measured every drilled run, either 3m or 1.5m. • Downhole directional survey was taken every 30m to ensure target was reached.
Drill sample recovery	• Sample quality and recovery of RC drilling was continuously monitored during drilling to ensure that samples were representative and recoveries maximised. • RC Sample recovery was recorded using sample weights. • Diamond core recoveries in fresh rock are measured in the core trays per drilling run. Diamond core is reconstructed into continuous runs and marked with bottom of hole orientation lines. Depths are checked against depths marked on core blocks. Rock Quality Designation (RQD) is also recorded as part of the geological logging process. • Core recoveries were good – typically >95%. • There is no discernible relationship between sample recovery and TGC grade. Diamond twinning of RC holes has demonstrated a minimal downwards bias in RC TGC grade.
Logging	• Detailed geological logging of RC holes captured various qualitative and quantitative parameters including lithology, mineralisation, colour, texture and sample quality. RC holes were logged at 1m intervals. • Detailed geological logging of diamond holes captured various qualitative and quantitative parameters including lithology, mineralisation, alteration, colour, texture and sample quality. • All diamond core has been geologically and geotechnically logged to a level of detail to support Mineral Resource estimation. • Logging data is collected via rugged laptops. The data is subsequently loaded into a dedicated Datashed database for storage, hosted by a database consultant. • RC Chip and Diamond Core is regularly photographed wet and dry. • All holes drilled have been geologically logged in their entireties.
Sub-sampling	• RC samples were sampled dry and routinely taken at 1 m intervals. This was completed

Criteria	Commentary
techniques and sample preparation	either directly with a 1–2 kg sample retrieved from a regularly cleaned cone splitter or a representative 1/8 sample taken from a regularly cleaned three tier riffle splitter. The remainder of the drilled sample was recovered in a large plastic bags. • RC 1 m samples were then composited into a 2 m sample using a laboratory deck splitter, or where possible sampled to nearest 1m geological boundary. • A small fraction of RC samples returned to the surface wet. These samples were dried prior to sampling. All samples were submitted for assay. • All RC samples were labelled such that they corresponded to remainder samples if further analysis was required. • Core was cut with a diamond blade rock saw into half core and then one half into quarter core. A quarter of the core was sent for assay, a quarter for archive and a half for metallurgical test work. • Samples were stored on site prior to being transported to the laboratory. • All samples were marked with unique sequential numbering to ensure controls against sample loss or omission. • Samples were sorted, dried and weighed at the laboratory where they were then crushed and riffle split to obtain a sub-fraction for pulverisation, in preparation for sample analysis. Generally, QC sample insertion rates are every 20th sample (1 standard, 1 blank, 1 site duplicate). Additionally 1 standard, 1 blank and 1 site duplicate will be inserted for every 20 m of mineralisation intersected. A mineralised zone is a zone greater than 5 m with a visual estimate of more than 5% graphite. Internal dilution of non-mineralisation (up to 5 m) can be included in the mineralised thickness
Quality of assay data and laboratory tests	• All RC and diamond samples were submitted to ALS for both sample preparation and analytical assay. • Samples were sent to the ALS laboratory in Mwanza (Tanzania) for sample preparation. Samples are crushed to>70% passing-2 mm and then pulverised to>85% passing-75 microns. • For all samples a split of the sample is analysed by means of a combustion infrared detection method using a LECO analyser to determine total graphitic carbon (TGC) (ALS Minerals Codes C-IR18). • The majority (97%) of samples have also been assayed for total sulphur by means of a combustion infrared detection method using a LECO analyser (ALS Minerals Code S-IR08). • Laboratory duplicates and standards were also used as quality control measures at different sub-sampling stages. • 76 samples were sent for umpire laboratory testing, with the results validating the accuracy of the primary laboratory assay results. • Examination of all the QA/QC data indicates that the laboratory performance has been satisfactory for both standards, with no failures and acceptable levels of precision and accuracy. • CSA Global is of the opinion that laboratory accuracy and precision has been sufficiently demonstrated to use the drill assay data with a reasonable level of confidence in a MRE.
Verification of sampling and assaying	• Senior Graphex geological personnel supervise the sampling, and alternative personnel verified the sampling locations. External oversight is established with the contracting of an external consultant to regularly assess on site standards and practices to maintain best practice. • Some RC holes have been twinned by diamond drilling core holes to assess the degree of intersection and grade compatibility between the dominant RC samples and the twinned core. • Assay data is loaded directly into the Datashed database which is hosted by and managed by an external database consultancy. • Visual comparisons will be undertaken between the recorded database assays and hard copy records at a rate of 5% of all loaded data. • No adjustments have been made to assay data.

Criteria	Commentary
Location of data points	• Drill hole collar locations have been surveyed to plan location using a handheld GPS with an accuracy of <5 m for easting, northing and elevation coordinates. • Drill hole collars were re-surveyed using a Differential GPS with an accuracy of <5 cm at the end of the program. • Collar surveys are validated against planned coordinates and the topographic surface. • Downhole surveys are conducted during drilling using a Reflex single shot every 30 m. • The primary (only) grid used is UTM WGS84 Zone 37 South datum and projection. • The topographic surface used in resource modelling has been generated from a Differential GPS with an accuracy of <5 cm over the resource.
Data spacing and distribution	• The Shimba deposit has been sampled using RC and diamond core drilling over a number of drilling campaigns, with drilling completed on a nominal 200 m by 200 m grid. • Infill drilling has been completed to a grid of roughly 100 m by 50 m over the high graphite grade zone. • Six pairs of diamond core and RC twinned holes are included in the drilling totals.
Orientation of data in relation to geological structure	• All holes have been orientated to intersect the graphitic mineralisation as close to perpendicular as possible. • From surface mapping of the area and VTEM modelling, the regional foliation dips at angles of between 50 and 60 degrees to the south to south-south-west. The drilling was hence planned at a dip of -60/65 degrees oriented 315 to 360 degrees. • The orientation of drilling is not expected to introduce any sampling bias.
Sample security	• All samples are marked with unique sequential numbering to ensure controls against sample loss or omission. This number was retained during the entire process. • The samples were packed at the drill site and sealed prior to transport to the local field office which has 24 hour security, prior to transport by locked commercial truck carrier to ALS Mwanza. • The laboratory (ALS) ships the sealed samples after preparation, to Brisbane in Australia.
Audits or reviews	• An independent consultant from CSA Global, with expertise in graphite, completed a site visit prior to and upon commencement of drilling to ensure the sampling protocol met best practices to conform to industry standards.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The exploration results in this report are from work carried out on granted prospecting licence PL 6073/2009 which is owned by Warthog Resources Limited, a wholly owned subsidiary of Graphex • Subsequent Mining Licence approval in late 2016 has enveloped the Shimba mineral resource within ML 569/2016, owned by Ngwena Tanzania Limited, whilst the remainder of original PL 6073/2009 now exists within licence application number PL 11516/2016 also held now by Ngwena Tanzania Limited. • The tenements are the subject of a joint venture agreement with MMG Exploration Holdings Limited which hold an interest in the Nachingwea Property of approximately 15%.
Exploration done by other parties	• Exploration has been performed by an incorporated subsidiary company of IMX, Ngwena Tanzania Limited. • Stream sediment surveys carried out historically by BHP were not assayed for the commodity referred to in the announcement.
Geology	• The regional geology is comprised of late Proterozoic Mozambique mobile belt lithologies consisting of mafic to felsic gneisses interlayered with amphibolites and metasedimentary rocks. The mineralisation consists of a series of intercalated graphitic horizons within felsic gneiss (aluminous rich sediments), amphibolites (mafic sourced material) and rarely high purity marble horizons.

Criteria	Commentary
Drill hole Information	• All relevant drill hole information has been previously reported to the ASX. No material changes have occurred to this information since it was originally reported. • All relevant data has been reported.
Data aggregation methods	• Not relevant when reporting Mineral Resources. • No metal equivalent grades have been used.
Relationship between mineralisation widths and intercept lengths	• Not relevant when reporting Mineral Resources.
Diagrams	• Refer to figures within the main body of this report.
Balanced reporting	• Not relevant when reporting Mineral Resources.
Other substantive exploration data	• A VTEM geophysical survey was initially completed over a large portion of the Nachingwea 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 2014 and the Shimba high grade deposit was discovered. • DHEM surveys were carried out on 18 of the reverse circulation (RC) drill holes completed in 2014; nine diamond holes completed in 2015; and 5 RC drill holes completed in 2016. The DHEM survey data were acquired by Graphexs' in house survey crew and equipment. The aim of the DHEM survey campaign was to detect known and off-hole EM responses associated with graphite mineralisation. • FLEM surveys were carried out during the 2015 field season to collect ground EM data over multiple linear conductive graphitic schist horizons identified in the existing versatile time-domain EM (VTEM) survey data. Graphexs' in-house Zonge GGT-10 transmitter, a SmartEM 24 receiver and a Smart Fluxgate 3-component B-Field sensor and personnel were used for the FLEM surveying. • All other meaningful exploration data concerning the Chilalo Project has been reported in previous reports to the ASX. • 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.
Further work	• Extensional drilling to the east to test for strike extent based on surface geology mapping indications and on section to test depth extent. • Figures are provided within the main body of this report.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• 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. • Validation of the data import include checks for overlapping intervals, missing survey data, missing assay data, missing lithological data, and missing collars.
Site visits	• Representatives of the Competent Person (CP) have visited the project on several occasions, most recently in June 2015. The CP's representatives were able to review drilling and sampling procedures, as well as examine the mineralisation occurrence and associated geological features. All samples and geological data were deemed fit for use in the Mineral Resource estimate.
Geological interpretation	• The geology and mineral distribution of the system appears to be reasonably consistent through the core high grade zone. Modelling of the geology of the Chilalo Main deposit has been updated to reflect the results of drilling completed in in 2016. The drilling indicates a strike change in the mineralised units of the Chilalo Main deposit at roughly

Criteria	Commentary
	471280mE as shown in the figures in the main body of this announcement. The 2016 drilling program also tested a geophysical anomaly to the north of the main deposit (Chilalo North East deposit), and has confirmed the existence of graphitic mineralised gneiss units in this location, as shown in the figures in the main body of this announcement. Further drilling is required primarily at the Chilalo North East deposit to more accurately define the geometry and extents of the mineralised units. Any structural influences are not expected to be significant through the core high grade zone of the Chilalo Main deposit, where the drilling and geophysical data have shown good geological and grade continuity. The CP has taken a conservative approach to Mineral Resource classification of the Chilalo Main deposit along strike where continuity of geology and grade has a lower confidence level. • Drill hole intercept logging, assay results, DHEM and FLEM modelling 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 geophysical information. • The extents of the modelled zones are constrained by the information obtained from the drill logging and geophysical data. Alternative interpretations are unlikely to have a significant influence on the global Mineral Resource estimate. • An overburden layer with an average thickness of 4 m has been modelled based on drill logging and is depleted from the model. Graphex geologists have updated weathering logging in drill holes to ensure interpretive consistency across drilling campaigns. This updated weathering data has been provided to CSA Global from which weathering surfaces for base of complete oxidation and top of fresh rock have been generated. • Interpretations of the geological units of the Chilalo Project area have been generated by Graphex geologists. A mineralisation interpretation based on a nominal TGC% cut-off grade of 5% for the core higher grade lenses and a nominal 2% for the surrounding lower grade lenses has been generated by CSA Global and correlated with the geological interpretation reasonably well. • Continuity of geology and grade can be identified and traced between drill holes by visual, geophysical and geochemical characteristics. Additional data is required to more accurately model the effect of any potential structural or other influences on the down dip and strike extents of the defined mineralised geological units. Confidence in the grade and geological continuity is reflected in the Mineral Resource classification.
Dimensions	• In the Chilalo Main deposit the core high grade mineralisation (>5% TGC) interpretation consists of two lenses. The main footwall lens strikes towards 250°, dipping roughly 50° towards 160°, with a strike length of roughly 1.1 km from the north east towards the south west, and a further strike length of roughly 500m, after a strike change to approximately 270° at about 471280mE with a dip roughly 40° towards 180°. The average interpreted depth is approximately 160 m below surface and the true thickness is approximately 25 m for the eastern half and 10 m for the western half. The secondary high grade lens is interpreted to be 1.1 km long in the hangingwall of the western two thirds of the main lens from roughly 471800mE extending to the west. It is interpreted to be between 40 m in depth in the east, and 150 m in depth in the west, and between 2 m and 15 m in true thickness with a similar strike and dip. The low grade mineralisation (>2% TGC) lenses enclose the high grade lenses and are in the hangingwall above them and have similar strike and depth extents over the classified portions of the model. Some of the low grade lenses are interpreted to continue along strike to the west for approximately 800 m, but these portions of the model are not classified due to insufficient data and therefore lower confidence. These lenses are generally about 5 m to 15 m in true thickness. • At the Chilalo North East deposit the core high grade mineralisation (>5% TGC) interpretation consists of two lenses. The larger hangingwall lens strikes towards 240°, dipping roughly 45° towards 150°, with a strike length of roughly 400 m from the north

Criteria	Commentary
	east towards the south west. The average interpreted depth is approximately 150 m below surface and the true thickness is approximately 17 m for the eastern half and 8 m for the western half. The smaller footwall lens has a very similar strike and dip geometry to the hanging wall lens, but extends about 180 m below surface in the east and 100 m below surface in the west. The average true thickness of this lens is roughly 6 m in the east and 7 m in the west. The interpreted low grade mineralisation (>2% TGC) lenses enclose the high grade lenses or are between or in the hangingwall above them. They have similar strike and depth extents to the high grade lenses. The average true thickness of the two larger low grade lenses that enclose the high grade lenses is roughly 40 m in the east to 10 m in the west for the hangingwall lens and the footwall lens is on average about 12 m.
Estimation and modelling techniques	• The mineralisation has been estimated using ordinary kriging (OK). • Two >5% TGC high grade lenses and four >2% low grade lenses were interpreted at the Chilalo Main deposit, with two high grade and five low grade lenses in the Chilalo North East deposit. • Samples were selected within each lens for data analysis. Statistical analysis was completed on each lens to determine if any outlier grades required top-cutting. • 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. The few modestly outlying values were visually assessed and found to reflect true higher grade zones, having some continuity, but which were not large enough to separately model. These areas were checked during the model validation process to verify they did not unduly influence the grade estimation. • An inverse distance to the power 2 (IDS) grade estimate was completed concurrently with the OK estimate in a number of estimation runs with varying parameters. Block model results are compared against each other and the drill hole results to ensure an estimate that best honours the drill sample data is reported. • No mining has yet taken place at these deposits. • No mining assumptions have been made. • Sulphur has been estimated into the model but is not reported. • Interpreted domains are built into a sub-celled block model with a 10 m N by 50 m E by 10 m RL parent block size. Search ellipsoids for each lens have been separately orientated based on their overall geometry. To accommodate the strike change in the interpreted mineralisation lenses in the Chilalo Main deposit additional search ellipsoid orientations have been defined for each affected lens. Sample numbers per block estimate and ellipsoid axial search ranges have been tailored to geometry and data density of each lens to ensure the majority of the model is estimated within the first search pass. The search ellipse is doubled for a second search pass and increased 20 fold for a third search pass to ensure all blocks are estimated. Sample numbers required per block estimate have been reduced with each search pass. • Hard boundaries have been used in the grade estimate between each individual interpreted mineralisation lens. Soft boundaries are used within each lens to accommodate the strike changes and associated adjusted search ellipsoids. • Validation checks included statistical comparison between drill sample grades, the OK estimate and the IDS estimate results for each zone. Visual validation of grade trends along the drill sections was completed and trend plots comparing drill sample grades and model grades for northings, eastings and elevation were completed. These checks show reasonable correlation between estimated block grades and drill sample grades. • No reconciliation data is available as no mining has taken place.
Moisture	• Tonnages have been estimated on a dry, *in situ* basis, and samples were generally dry. No moisture values could be reviewed as these have not been captured, with core samples being dried before density measurements.

Criteria	Commentary
Cut-off parameters	• Visual analysis of the drill assay results demonstrated the higher grade zones interpreted at the nominal lower cut-off grade of 5% TGC corresponds to a natural grade change from lower to higher grade mineralisation. The lower cut-off interpretation of 2% TGC corresponds to natural break in the grade population distribution. Graphex verbally confirmed that early indications from metallurgical testing show that the lower grade material is capable delivering good quality flake material. Since this material is also primarily located in the hangingwall, and it would need to be mined in an open cut to access deeper portions of the higher grade zones, it has been classified as Inferred as it may be possible to economically beneficiate.
Mining factors or assumptions	• 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. • No assumptions regarding minimum mining widths and dilution have been made.
Metallurgical factors or assumptions	• **2015 'Chilalo Main' Mineral Resource:** thirty two quarter-core samples from four boreholes were selected for thin section examination by Townend Mineralogy, mainly to identify weathering zones and to assess graphite flake size and likely liberation characteristics. • Minerals such as jarosite, opaline silica, clays and goethite have replaced Fe-sulphides and silicate minerals to depths of 20 to 30 metres down-hole. This mineral assemblage is interpreted to define the Oxidised Zone. • There is significant weathering / alteration in the high grade graphite domain, resulting particularly in the breakdown of sillimanite to kaolin which occurs to depths of approximately 50 metres down-hole. The occurrence of kaolinised sillimanite (plus Fe sulphides) is interpreted to define the Transitional Zone. • There appears to be two graphite populations in terms of flake width: i) thin flakes generally less than about 100 micron width and up to about 1mm in length, in lithologies with between about 2 and 5% TGC and ii) flakes up to 1mm thick and several mm in length in rocks with more than about 5% graphite. • Metallurgical composites were prepared at SGS laboratory in Perth from diamond drill core, to form representative fresh and transitional ore samples. • The metallurgical composites were crushed to minus 3.35 mm and demonstrate that highest TC grades are in the coarse size fractions greater than about 0.25 mm; • Cleaner flotation test work on fresh and transitional composites using five stages of cleaning produced final graphite concentrates at target grade TGC>94% and up to 95% graphite recovery, maintaining a favourable coarse PSD (40 to 70% of the flakes are >150 micron). • Test work on oxide composites using a standard flotation procedure has demonstrated high graphite recovery. • The preliminary test work program demonstrated that the mineralisation is amenable to the production of high grade graphite concentrates, at coarse flake sizes, using relatively simple flotation processes. • Additional metallurgical testwork on each mineralisation and weathering domain is required to verify and refine the initial findings • **2017 'Chilalo North East' Mineral Resource:** nineteen composite RC chip samples from three boreholes NRC16-181, 184 and 185 were selected for thin section examination by Townend Mineralogy. The objective was to identify weathering zones, to assess graphite flake size and likely liberation characteristics in addition to comparison with the Main Deposit. • It is cautioned that RC chip samples are not expected to be as representative as DD core samples, given that the RC chips exclude fine powders generated by the RC percussion method. • Minerals such as jarosite, opaline silica, clays and goethite have replaced Fe-sulphides and silicate minerals to depths of 15 to 30 metres down-hole. This mineral assemblage is

Criteria	Commentary
	interpreted to define the Oxidised Zone. • The occurrence of partially kaolinised sillimanite and / or feldspars (plus unoxidised Fe-sulphides) is interpreted to define the Transitional Zone which extends to about 30 to 60m downhole. The higher-grade parts of the deposit appear to be more deeply weathered than low grade, or unmineralised lithologies. • There are several graphite populations in terms of flake width: i) thin elongate flakes generally less than about 0.1mm width and up to about 1mm in length, ii) flakes up to about 0.5 mm thick and several mm in length and iii) very small flakes less than about 0.1mm in length especially within felsic porphyroblasts. It is anticipated that the population of very small flakes <0.1mm length may not be recoverable, however as this population does not appear to be significant, this is not expected to materially affect overall metallurgical recoveries. • Graphite flakes observed from the high grade zone of the North East deposit are visually similar to flakes observed from the Main deposit, in terms of shape, size and textural relationships. This suggests that the high grade part of the North East deposit may have similar metallurgical process response to the Main deposit. • One composite from hole NRC16-184 (26-54 m) was prepared on site at Chilalo from RC chips from the Northeast Mineral Resource and were screened to produce two metallurgical composites of minus 0.5 mm and plus 0.5 mm respectively. The samples were submitted to SGS Perth for flotation tests during January 2017. • RC chips are not typically used for flake graphite metallurgical tests, due to the pulverising effect of the RC drill method which reduces flake size. It is considered likely that the use of RC chips would yield a conservative result (with higher fraction of fines) compared with DD samples, therefore should not present a material risk to the classification of the North East deposit as an Inferred Mineral Resource. • The minus 0.5 mm composite was processed 'as received' and the plus 0.5 mm composite was processed after grinding to P80 = 0.71 mm. • Flotation test work using a rougher stage followed by four stages of cleaning produced a final graphite concentrate with >96% TGC and up to 97% recovery for the minus 0.5 mm composite. The grade of the plus 0.5 mm composite has not yet been determined, but is expected during early February 2017. • Additional metallurgical testwork on each mineralisation and weathering domain is recommended to verify and refine the initial findings. It is recommended that testwork be carried out in future on drill core samples, rather than RC samples.
Environmental factors or assumptions	• 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.
Bulk density	• *In situ* dry bulk density values have been applied to the modelled mineralisation based on the average measured values for each of the weathering zones. Of the 1,141 measurements taken that were considered valid for analysis, 12 are in the interpreted overburden zone, 197 fall within the interpreted weathered zone, 559 in the transitional zone and 373 in the fresh zone. • Density measurements have been taken on drill samples from all different lithological types, using water displacement methods. • Weathered material was wax coated prior to immersion, while the non-porous competent rock did not require coating. • It is assumed that use of the average measured density for each of the different weathering zones is an appropriate method of representing the expected bulk density for the deposit.
Classification	• 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.

Criteria	Commentary
	• 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. • Overall the mineralisation trends are reasonably consistent over numerous drill sections. • The Mineral Resource estimate appropriately reflects the view of the Competent Person.
Audits or reviews	• 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.
Discussion of relative accuracy/ confidence	• 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. • The Mineral Resource statement relates to global estimates of *in situ* tonnes and grade.