

6 October 2016

NEW ZONE OF GRAPHITE MINERALISATION IDENTIFIED FROM RECENTLY COMPLETED DRILLING

INCREASE IN MINERAL RESOURCE EXPECTED

Highlights

- Reverse Circulation (RC) drilling program in and around the Shimba deposit now completed with 12 holes for 1,331m
 - Visual inspection indicates high-grade graphite mineralisation intersected in all holes
 - Visual inspection of one target indicates a new zone of mineralisation has delivered widths greater than 45m. Visually, this new zone looks similar to the Shimba deposit.
 - Assay results due in November, expected to lead to an increase in the high-grade resource
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Graphex Mining Limited (ASX: GPX) is pleased to report that the RC drilling program at the Chilalo Graphite Project has now been completed, with all holes having intersected high-grade graphite mineralisation (see Figure 1).

The program was designed to test two key targets, one to the south-west and the other to the north-east of the Shimba deposit (see Figure 2), with the objective of increasing the existing high-grade resource. These targets outcrop at surface, are within 200m from Shimba and are interpreted to be the same mineralised horizon as Shimba, initially identified via a Fixed Loop Electromagnetic (FLEM) survey.

Geological logging has confirmed that all holes drilled to date have intersected high-grade graphite mineralisation, confirming the modelling generated by the FLEM survey. Of particular note, are holes NRC16-184, NRC-185 and NRC-186 (see Figure 3) where visual inspection indicates the width of mineralisation to be approximately 45m (note widths of the existing resource vary between 10m and 30m). The mineralisation looks similar to the existing high-grade Shimba deposit.

Managing Director, Phil Hoskins commented: *"The visual results from the recently completed RC drilling program are very encouraging and increase our confidence that Shimba is larger than initially thought. Once the assay results have been received, we will commence the resource modelling work which we believe will increase the high-grade resource at Shimba. We have still barely scratched the surface of the graphite prospectivity at the broader Chilalo area, having drilled only 4km of the 54km of strike identified by our geophysics."*

Assays from the drilling program are expected to be available in November, at which time resource modelling work will be carried out.

The existing high-grade mineral resource at Shimba stands at:

- Indicated Resource of 5.1 Mt grading 11.9% TGC for 613,800 tonnes of contained graphite; and
- Inferred Resource of 4.1 Mt grading 9.1% TGC for 370,300 tonnes of contained graphite.

The high-grade resource is part of the total Indicated and Inferred Resource of 25.1 Mt, which includes a low-grade Inferred Resource of 15.9 Mt grading 3.3% TGC for 523,000 tonnes of contained graphite.¹

The Shimba resource is capable of supporting a 10-year mine life producing 69,000 tonnes of graphite concentrate per year², meaning that a resource expansion will result in improved project economics through mine life extensions or production expansions.

An Exploration Target of approximately 100–350 million tonnes grading approximately 3-11% Total Graphitic Carbon was previously reported (by IMX Resources Limited) in September 2015.³ This was based on a mineralised thickness of between 10m to 30m, over 34km of untested high-conductance targets identified from electromagnetic surveys, which correlate very well with high-grade graphite mineralisation at Shimba. The results of this drill program appear to be in line with assumptions made in estimating the Exploration Target except the widths of the northern target exceed the maximum 30m assumed for the upper limit.

An Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. Relevant background to the estimation of this Exploration Target is included in Appendix A.

Further FLEM surveys are currently being undertaken over the proposed mining licence area. It is expected that these surveys will generate additional high-conductance targets, further refining the VTEM survey data at Chilalo. This is expected to be an efficient exploration technique that provides the best opportunity for progressively growing the high-grade resource base.

¹ Since the announcement of the Mineral Resource estimate on 13 October 2015 by IMX Resources Limited, Graphex confirms that it is not aware of any new information or data that materially affects the information included in those announcements and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in that announcement continue to apply and have not materially changed.

² Graphex confirms that all material assumptions underpinning the production targets and forecast financial information in the Replacement Prospectus lodged on 10 May 2016 continue to apply and have not materially changed.

³ Since IMX's announcement of the Exploration Target on 2 September 2015, Graphex confirms that it is not aware of any new information or data that materially affects the information included in that announcement.

Figure 1: Location of drill holes and visual estimates of intersections on FLEM imagery,

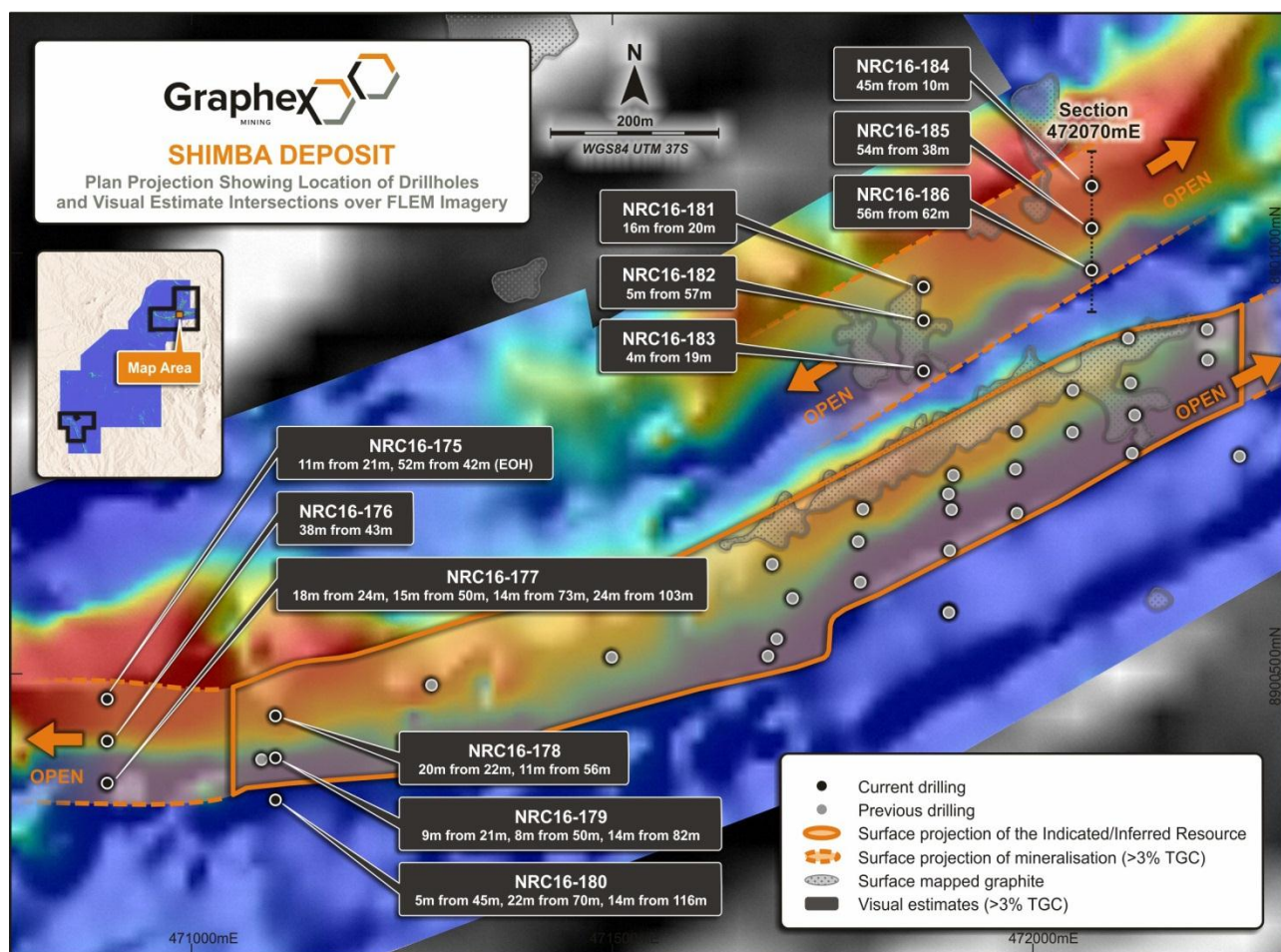


Figure 2: Shimba Deposit⁴ showing drill hole locations

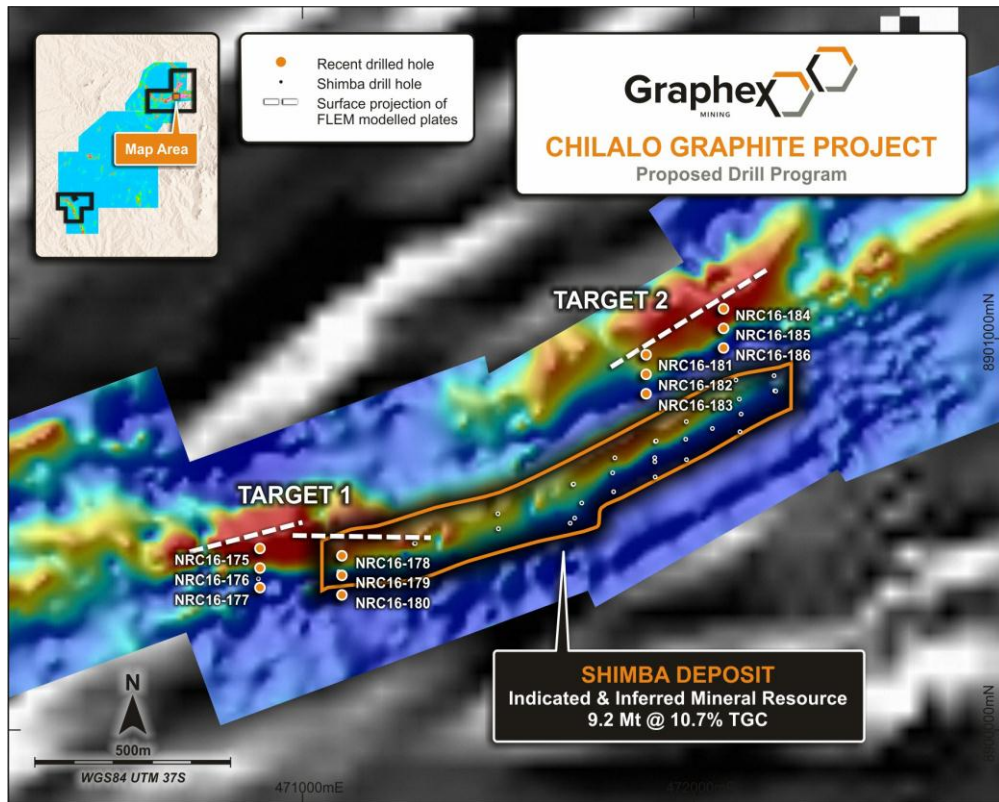
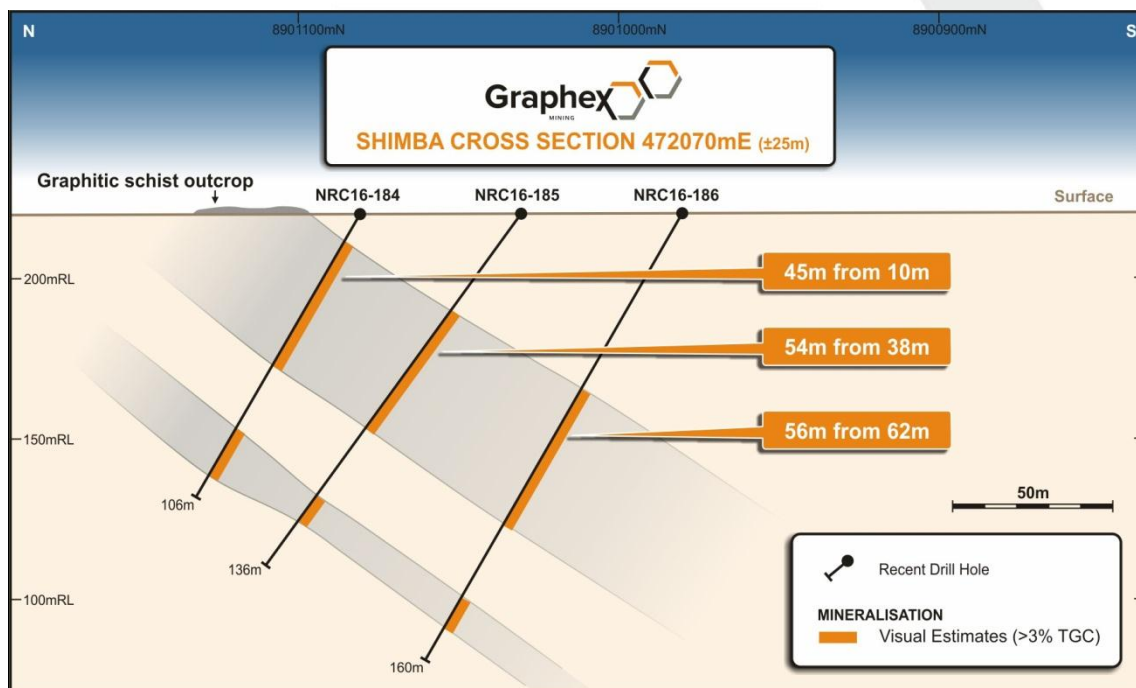


Figure 3: Cross Section



⁴ Since the announcement of the Mineral Resource estimate on 13 October 2015 by IMX Resources Limited, Graphex confirms that it is not aware of any new information or data that materially affects the information included in those announcements and that all material assumptions and technical parameters underpinning the Mineral Resource estimate in that announcement continue to apply and have not materially changed.



PHIL HOSKINS

Managing Director

For further information, please contact:
Phil Hoskins – Managing Director
Tel: +61 8 9200 4960

**Stuart McKenzie – Commercial Manager and
Company Secretary**
Tel: +61 8 9200 4960

Media

Michael Weir and Richard Glass – Citadel-MAGNUS
Tel: +61 8 6160 4900

Competent Person's Statement

Information relating to exploration results at the Chilalo Project, located in south-east Tanzania, is based on data collected under the supervision of Mr Nick Corlis, in his capacity as General Manager – Technical. Mr Corlis, BSc (Hons) MSc, is a registered member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and the activity being undertaken to qualify as a Competent Person under the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Corlis has verified the data underlying the information contained in this announcement and approves and consents to the inclusion of the data 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 negotiation 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 had a long and well-established presence in Tanzania.

Appendix A: Summary of drill hole information

Hole ID	Hole Type	East UTM:WGS84	North UTM:WGS84	Azimuth	Dip	Hole Depth (m)
NRC16-175	RC	470900	8900470	0	-60	94
NRC16-176	RC	470900	8900420	0	-60	106
NRC16-177	RC	470900	8900370	0	-60	136
NRC16-178	RC	471100	8900450	0	-60	82
NRC16-179	RC	471100	8900400	0	-60	100
NRC16-180	RC	471100	8900350	0	-60	136
NRC16-181	RC	471870	8900960	0	-60	82
NRC16-182	RC	471870	8900920	0	-69	93
NRC16-183	RC	471870	8900860	0	-60	100
NRC16-184	RC	472070	8901080	0	-60	106
NRC16-185	RC	472070	8901030	0	-54	136
NRC16-186	RC	472070	8900980	0	-60	160

APPENDIX B. JORC 2012 TABLE 1 REPORTING

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<p>Reverse Circulation Drilling</p> <ul style="list-style-type: none"> Reverse Circulation (RC) drilling was used to collect 1 m downhole samples for assaying. Typically, a 1 to 2 kg sample was collected using a cone splitter. Samples were composited to 2 m and sent for LECO analyses. All RC samples were submitted for analysis. Certified Reference Materials (CRM's) and field duplicate samples were used to monitor analytical accuracy and sampling precision. Sampling is guided by Graphex's standard operating and QA/QC procedures.
Drilling techniques	<ul style="list-style-type: none"> RC holes were drilled in a direction to intersect the mineralisation orthogonally. RC holes were drilled using a 140 mm face sampling hammer button bit. The RC drilling is completed using a UDR 650 drill rig with additional booster and auxiliary used as required to keep samples dry and produce identifiable rock chips.
Drill sample recovery	<ul style="list-style-type: none"> 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. 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	<ul style="list-style-type: none"> Detailed geological logging of all RC holes captured various qualitative and quantitative parameters including mineralogy, colour, texture and sample quality. RC holes were logged at 1 m intervals. Logging data is collected via rugged laptops. The data is subsequently downloaded into a dedicated Datashed database for storage, hosted by a database consultant.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> RC samples are drilled dry and are routinely taken in 1 m intervals with a 1–2 kg sample retrieved from a regularly cleaned cone splitter. The remainder is recovered in a larger plastic bag. 1 m samples are then composited into a 2 m sample using a laboratory deck splitter. A small fraction of samples returned to the surface wet. These samples were dried prior to compositing. All samples were submitted for assay. Samples were stored on site prior to being transported to the laboratory. Samples were sorted, dried and weighed at the laboratory where they were then crushed and riffle split to obtain a sub-fraction for pulverisation.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> All RC samples were submitted to ALS for both the 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 using a LECO analyser to determine graphitic carbon (ALS Minerals Codes C-IR18). 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. Laboratory duplicates and standards were also used as quality control measures at different sub-sampling stages. 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 believes 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	<ul style="list-style-type: none"> Senior Graphex geological personnel supervise the sampling, and alternative personnel verified the sampling locations. External oversight is established with the contracting of an external

Criteria	Commentary
assaying	<p>consultant to regularly assess on site standards and practices to maintain best practice.</p> <ul style="list-style-type: none"> 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.
Location of data points	<ul style="list-style-type: none"> Drill hole collar locations have been surveyed using a handheld GPS with an accuracy of <5 m for easting, northing and elevation coordinates. Drill hole collars where 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 a Differential GPS with an accuracy of <5 cm over the resource area.
Data spacing and distribution	<ul style="list-style-type: none"> The drilling is exploratory, with spacing dictated by the location of targets interpreted from Fixed Loop Electromagnetic Surveys (VTEM). The spacing of infill RC drilling is aimed at determining a Mineral Resource spacing of drilled holes on a nominal grid of 200m x 50m. 1 m RC samples have been composited to 2 m for grade estimation.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> All holes have been orientated to intersect the graphitic mineralisation as close to perpendicular as possible. From surface mapping of the area and FLEM 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.
Sample security	<ul style="list-style-type: none"> The samples are packed at the drill site and sealed prior to daily 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, Australia.
Audits or reviews	<ul style="list-style-type: none"> An independent consultant from CSA Global, with expertise in graphite, completed a site visit prior to and upon commencement of drilling at the nearby Shimba deposit to ensure the sampling protocol met best practices to conform to industry standards. This knowledge and protocols have been used for the drilling presented.

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> The exploration results reported in this announcement are from work carried out on granted prospecting licence PL 6073/2009 which is owned by Ngwena Tanzania Limited, a wholly owned subsidiary of Graphex. 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	<ul style="list-style-type: none"> Exploration has been performed by Ngwena Tanzania Limited, an incorporated subsidiary company of Graphex. Previously conducted stream sediment surveys carried out historically by BHP were not assayed for the commodity referred to in the announcement.
Geology	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> • All relevant drill hole information is included in the announcement. • All relevant data has been reported.
Data aggregation methods	<ul style="list-style-type: none"> • Significant intercepts are reported based on a 5% cut-off with a minimum length of 5 m which has an allowable maximum 2m of internal low grade material. All significant intercepts are generated using Datashed software automated grade compositing function. • Higher grade significant intercepts are reported based on a 10% cut-off with a minimum length of 2m with no internal low grade material. All significant intercepts are generated using Datashed software automated grade compositing function.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • Due to the exploratory nature of the drilling the assessment of geometry of the mineralisation is ongoing. This will be greatly improved by the drilling of several DD holes enabling structural and mineralogical assessment. • At present all the reported lengths are 'down-hole'. The true widths will be applied once the structure and mineralogy has been correlated with structural core measurements and modelled.
Diagrams	<ul style="list-style-type: none"> • Refer to figures within the main body of this report.
Balanced reporting	<ul style="list-style-type: none"> • All reported visual estimate intervals are downhole intervals from drilling aimed at being as perpendicular to mineralisation as practical.
Other substantive exploration data	<ul style="list-style-type: none"> • Ground fixed-loop EM (FLEM) surveys using 50m line and station spacings were carried out over the Shimba Resource using Graphex personnel and equipment (EMIT fluxgate and Zonge transmitter). The survey lines were orientated NW-SE, with the transmitter loop positioned to provide maximum coupling with the SE dipping geology. A low frequency of 0.33Hz was used to detect the very conductive horizons associated with large graphite deposits. Transmitter loop and survey station locations were acquired using a handheld GPS in datum WGS84 and projection SUTM37. The data were processed, imaged and modelled in conjunction with the DHEM data by Resource Potentials Pty Ltd. The results were compared to the VTEM data to identify other conductive horizons in the Chilalo Project. • 25Hz, 200m spaced helicopter-borne versatile time-domain EM (VTEM) surveys were carried out over the Chilalo Project, providing magnetic and electromagnetic data. The survey flight lines were oriented N-S in the eastern areas of the Chilalo Prospect, and E-W in the western areas. The surveys overlap over the Simba Deposit, providing data acquired from both flight orientations. The data were provided using datum WGS84 and projection SUTM37. • 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 information reported in this announcement. All relevant data has been described in Section 1 of JORC Table 1.
Further work	<ul style="list-style-type: none"> • Extensional drilling to the west 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.