

16 November 2016

ASSAY RESULTS CONFIRM NEW HIGH-GRADE ZONE AT CHILALO

Preparation of updated mineral resource estimate under way

Highlights

- RC drilling has identified a new mineralised zone in close proximity to the current mineral resource (Shimba) on the mining licence area
- The significant widths of mineralisation intersected include:
 - 68m @ 6.6% Total Graphitic Carbon (TGC) from 50m in hole NRC16-186, including
 - 18m @ 13.8% TGC from 80m, including
 - 5m @ 20.3% TGC from 91m
 - 45m @ 8.2% TGC from 10m in hole NRC16-184, including
 - 22m @ 11.9% TGC from 10m
- Results to deliver an increase in the existing Shimba mineral resource

Graphex Mining Limited is pleased to report significant assays from the recently completed drilling program at its Chilalo Graphite Project in Tanzania, which will underpin an increase in the Shimba mineral resource estimate. The assays have confirmed:

- the discovery of a new zone of mineralisation with a high-grade core within significant widths of mineralisation, located 200-300m to the north of Shimba. This deposit remains open to the north-east; and
- a south-west extension of the Shimba mineral resource.

Figure 1 presents a plan view showing the drill hole locations and Figures 2 and 3 show cross sections for both the new zone and the south-west extension of Shimba respectively. Both zones of mineralisation sit within the recently granted mining licence area.

The most notable intersection was recorded in hole NRC16-186 where significant widths and high-grade mineralisation were identified (Figure 2). Downhole EM analysis indicates that this mineralisation extends in all directions around the hole which will be important for resource estimation.

Work is under way on an updated Shimba mineral resource estimate which is expected to result in an extension to the currently proposed mine life resulting in improved project economics. The close proximity of the new high-grade zone to the Shimba deposit is expected to minimise transport costs from the pit to

the proposed plant location and may even result in the zone being incorporated into a larger Shimba pit shell.

Managing Director, Phil Hoskins commented, *“The discovery of a new high-grade zone so close to Shimba is very exciting news and is testament to the prospectivity of Chilalo. These results will underpin an increase in the existing mineral resource which is likely to provide an improvement to the already favourable project economics.”*

The recent drill program included a total of 13 holes for 1,365m, with targets derived principally from a Fixed Loop Electromagnetic (FLEM) survey. This most recent success was cost-effective and validates the use of FLEM surveys to identify quality drilling targets. To date, only 0.8km of the 34km of high conductance targets have been tested.

An Exploration Target of approximately 100–350 million tonnes grading approximately 3-11% TGC was previously reported (by IMX Resources Limited) in September 2015.¹ The upper end of the range (350Mt) was based on 34km of untested high-conductance EM targets which correlate very well with Shimba and an estimated mineralised thickness of 30m.

Results from the recently completed drilling program account for 0.8km of the previously untested 34km and some holes have produced significant widths of mineralisation that are in excess of those that underpinned the Exploration Target.

An Exploration Target is conceptual in nature. There has been insufficient exploration to estimate a Mineral Resource for the Exploration Target, which excludes the Shimba mineral resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource and there is no certainty that further exploration work will result in determination of mineral resources.

Commenting on Chilalo’s exploration potential, Mr Hoskins added, *“We have still only scratched the surface on our tenements and I expect additional exploration to be carried out following the finalisation of project offtake negotiations. Given the number of untested targets, Chilalo has the potential to host one of the world’s largest graphite resources.”*



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¹ 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.

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 a long and well-established presence in Tanzania.

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

Figure 1: Plan view showing drill hole locations and assay results on FLEM imagery

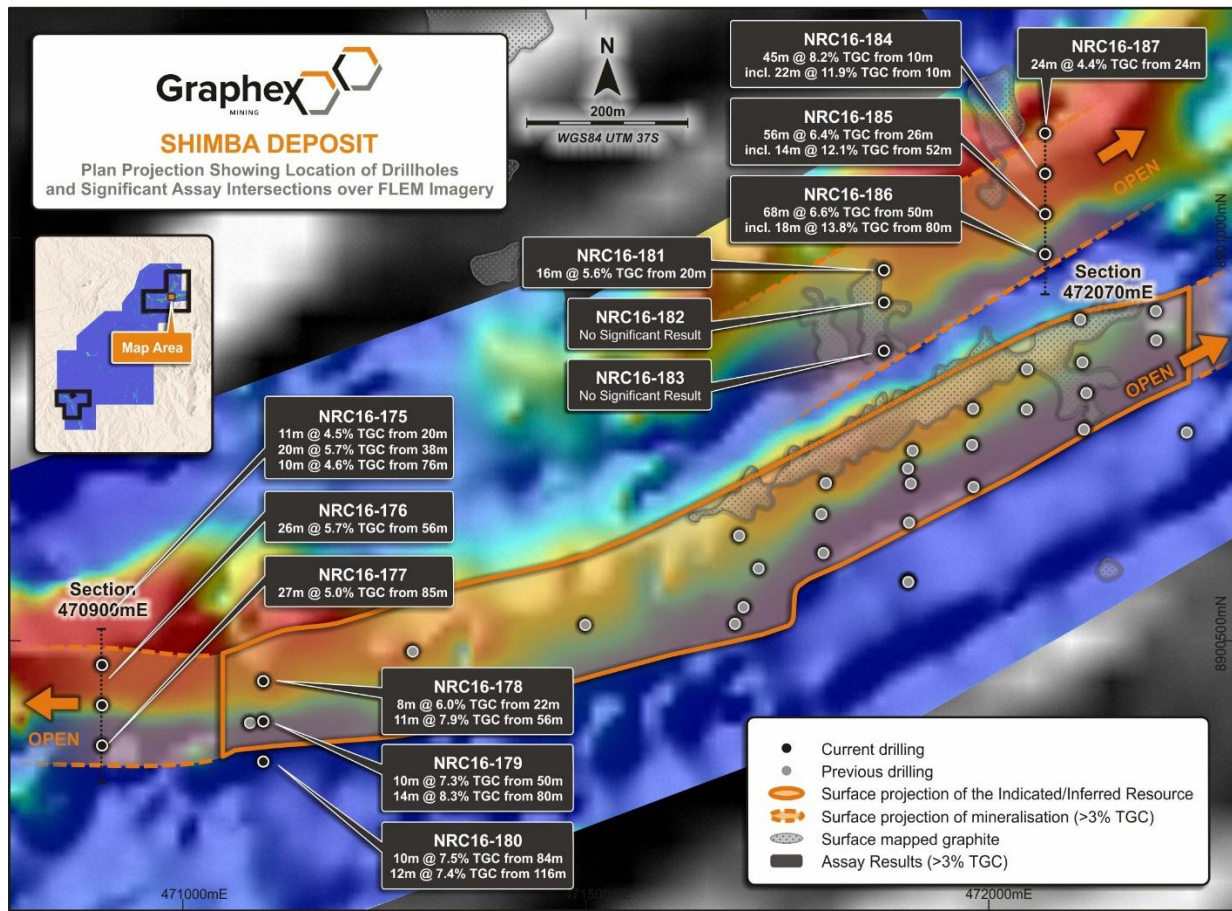


Figure 2: Cross-section 472070E

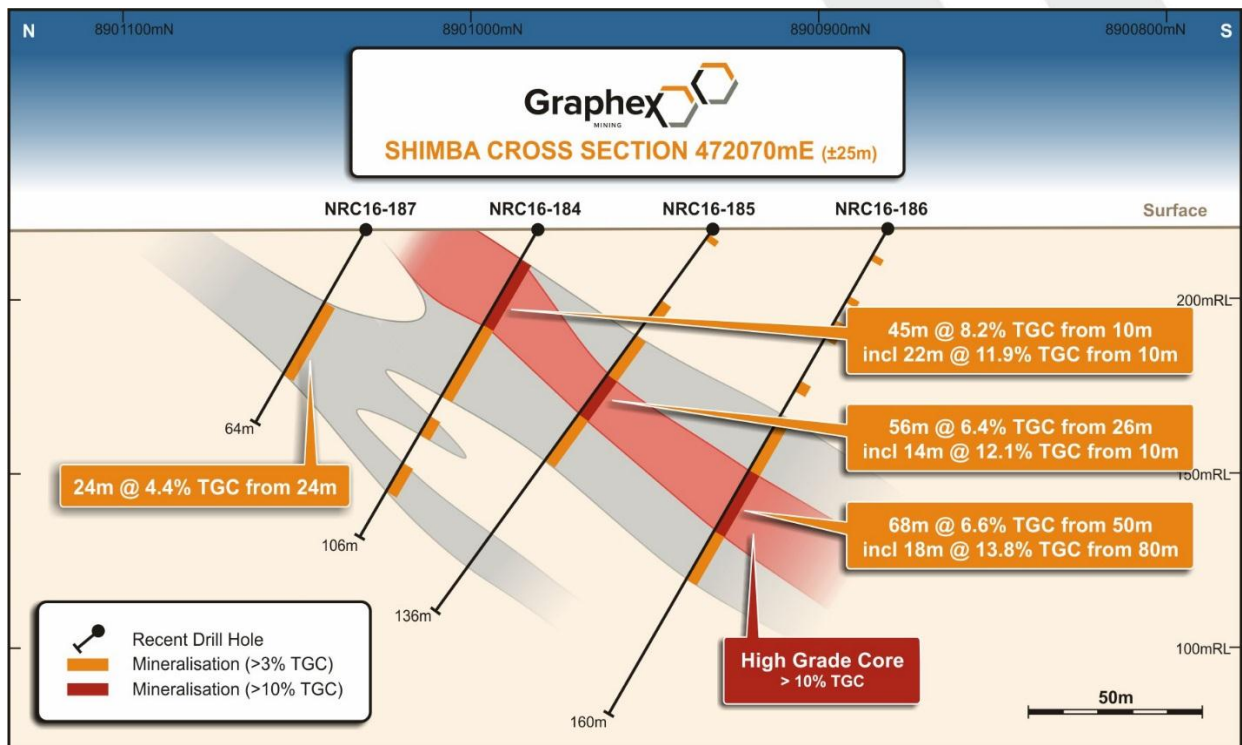
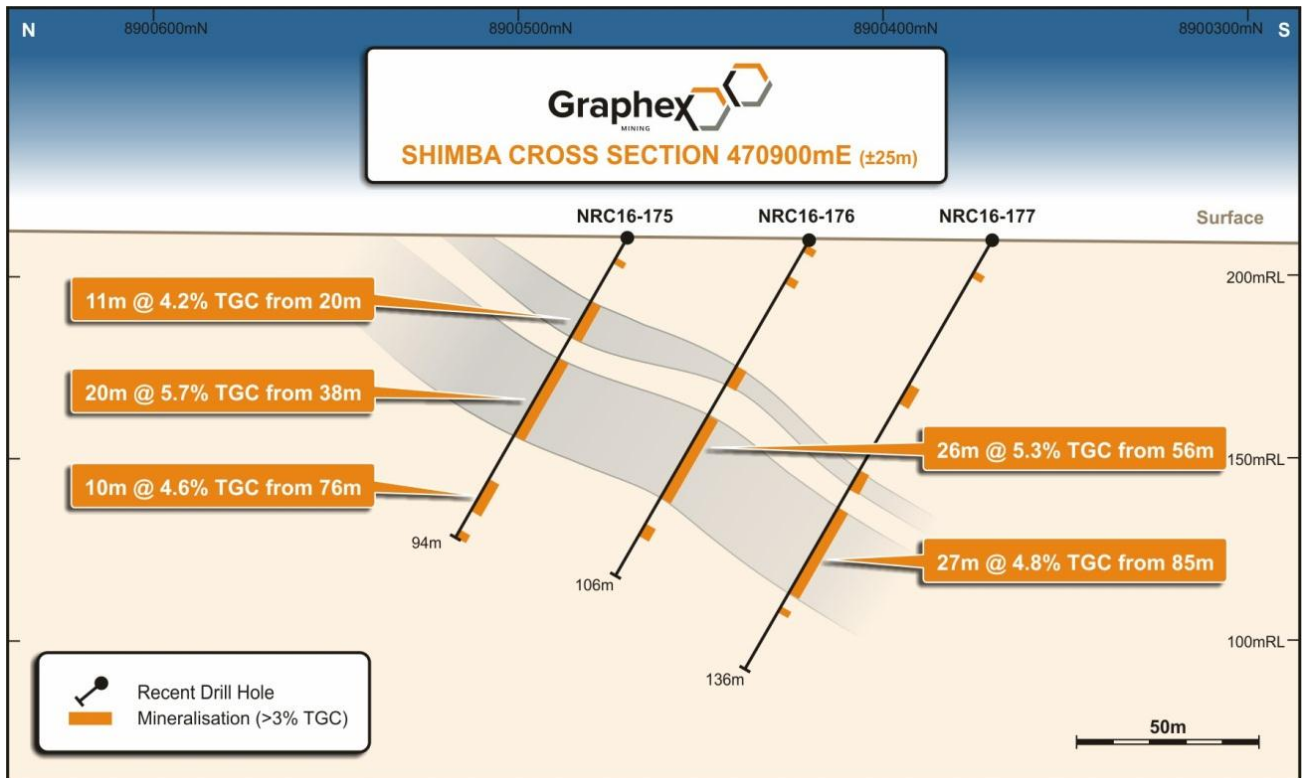


Figure 3: Cross-section 470900E



Appendix A: Summary of Assay Results
2016 RC Drilling Program: Shimba Deposit, 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	<p>Reverse Circulation Drilling</p> <ul style="list-style-type: none"> Reverse Circulation (RC) drilling was used to collect 1m downhole samples for assaying. Typically, a 1 to 2 kg sample was collected using a cone splitter. Samples were composited to 2m and sent for LECO analyses 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 140mm 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 1m 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 1m intervals with a 1–2 kg sample retrieved from a regularly cleaned cone splitter. The remainder is recovered in a larger plastic bag. 1m samples are then composited into a 2m 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 assaying	<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 consultant to regularly assess on site standards and practices to maintain best practice.

Criteria	Commentary
	<ul style="list-style-type: none"> 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 <5m for easting, northing and elevation coordinates. Drill hole collars were re-surveyed using a Differential GPS with an accuracy of <5cm 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 30m. 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 <5cm 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 (FLEM). 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. 1m RC samples have been composited to 2m 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 Mining Licence ML/00604/2016 which is owned by Ngwena Tanzania Limited, a wholly owned subsidiary of Graphex.
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.
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 5m which has an allowable maximum 2m of internal low grade material. All significant intercepts are generated using Datashed software automated grade compositing function.

Criteria	Commentary
	<ul style="list-style-type: none"> 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 Simba 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.