ASX: EV1 | 1 May 2023

New discovery confirms resource expansion potential at Chilalo

HIGHLIGHTS

- **Drilling has confirmed a new discovery of high-grade graphite mineralisation to the east of the Chilalo mining licence (to be named Chilalo East)**
- **High-grade graphite mineralisation at Chilalo East has been confirmed over 1.6km out of a potential 3.5km strike length indicated by the high-conductance electromagnetic conductor**
- **Significant intercepts included:**
  - **26m at 9.0% TGC from 8m in hole NRC22-221**
  - **8m at 13.7% TGC from 50m and 6m at 10.3% TGC from 66m in hole NRC22-200**
  - **10m at 10.2% TGC from 80m in hole NRC22-198**
  - **8m at 9.70% TGC from 90m in hole NRC22-223**
- **The discovery of Chilalo East highlights the potential for production expansion and extensions to mine life**

Evolution Energy Minerals ("Evolution" or the "Company") (ASX: EV1, FSE: P77) is pleased to announce that assay results from 13 holes for 1431 metres of a 5,440 metre, 44 hole reverse circulation drilling program at its Chilalo Graphite Project in south-east Tanzania, have confirmed the discovery of a new high-grade mineralised zone (Chilalo East) located to the east of the Chilalo Mining Licence ("**Chilalo**"). Chilalo is host to a high-grade mineral resource of 20.1Mt at 9.9% TGC for 1,991Kt of contained graphite.[1]

Evolution's Managing Director, Phil Hoskins, commented: *"The shallow depth, width, grade and close proximity to the existing Chilalo mineral resource make this an exciting discovery for Evolution. These results clearly demonstrate the scope to materially grow the Chilalo mineral resource and thereby potentially enable a production expansion, extension to mine life and reduction in mining costs."*

Since 2015, significant ground-based time-domain fixed-loop electromagnetic ("**FLEM**") surveys have been carried out to identify conductive bedrock layers at Chilalo related to graphite mineralisation. Over 17 kilometres of strong bedrock conductor trends were identified, as outlined in Figure 2, which were subsequently plate modelled by Resource Potentials to assist with drill planning.

The recent drill program was designed to test some of the strongest EM conductors to discover additional high-grade graphite mineralisation and confirm the scale potential for the Chilalo resource. The drilling identified a new high-grade mineralised zone – Chilalo East – that so far extends over 1.6 km and remains open to the east and west and at depth (see Figures 1 and 2). Additional strong FLEM bedrock conductor trends are awaiting assays or remain untested or under-tested by drilling and represent further priority target areas.

The drilling generally correlates well with the EM conductor images and plate models and has identified multiple mineralised zones. Downhole EM ("**DHEM**") and follow-up drilling will be required as it is likely that there are additional graphite layers that were not intersected by recent drilling.

[1] See ASX announcement dated 20 March 2023 and Appendix 1.

Figure 1. Chilalo East discovery – Location of drill holes and significant intercepts over a late-time FLEM decay image

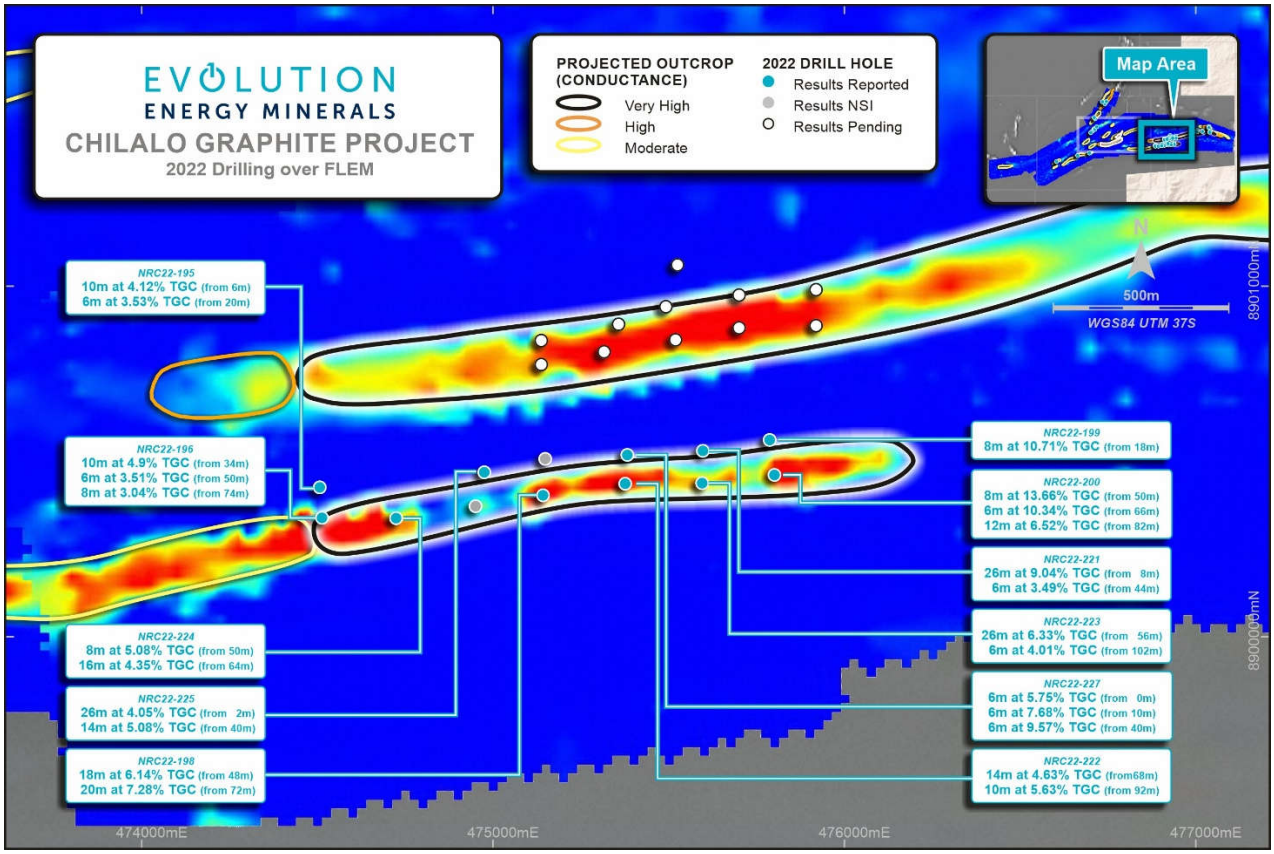
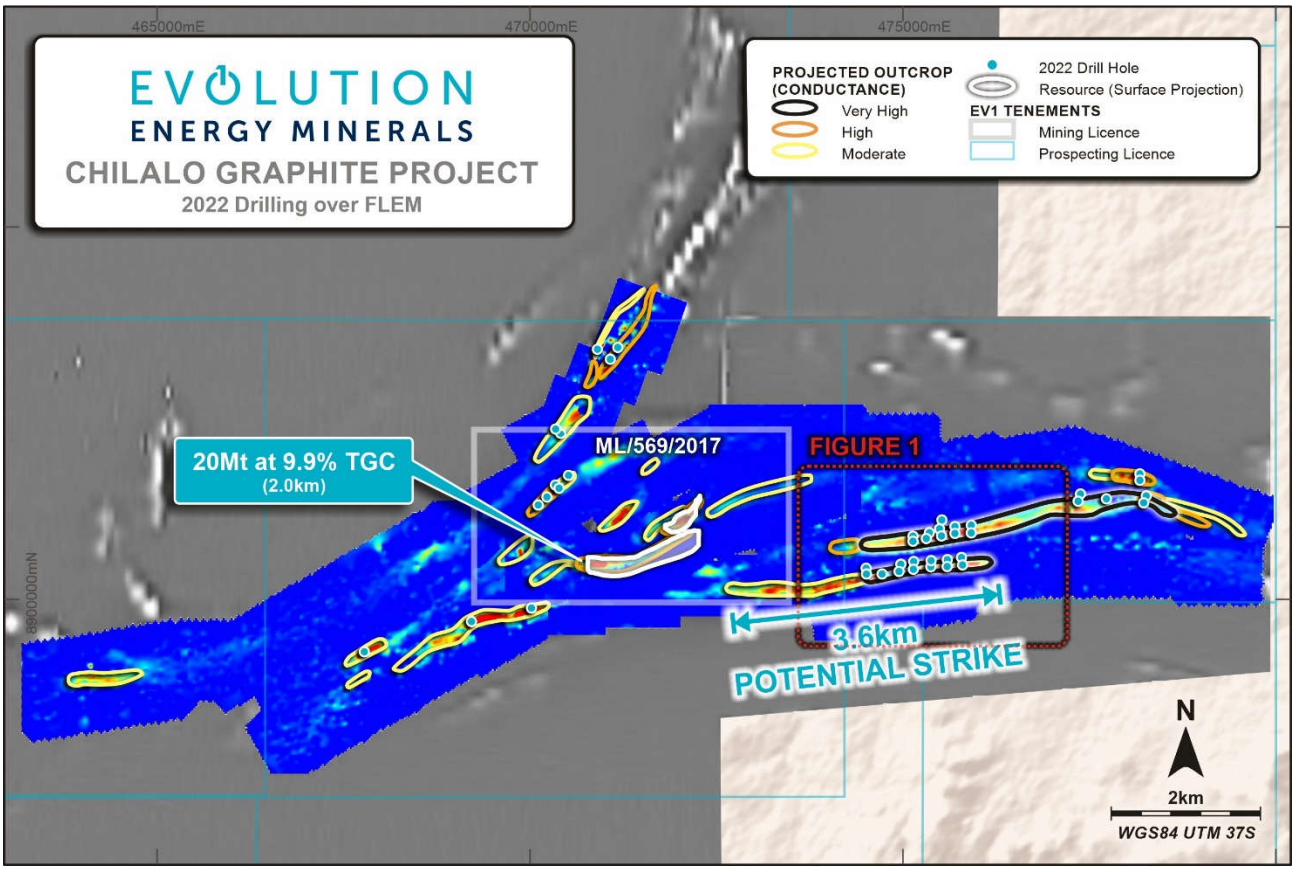


Figure 2. Chilalo East conductor over a late-time FLEM decay image



Significant intercepts included:

- **Hole NRC22-221**
  - 26m at 9.0% TGC from 8m
- **Hole NRC22-200**
  - 8m at 13.7% TGC from 50m;
  - 6m at 10.3% TGC from 66m; and
  - 12m at 6.6% TGC from 82m
- **Hole NRC22-198**
  - 18m at 6.1% TGC from 48m; and
  - 20m at 7.3% TGC from 72m
- **Hole NRC22-223**
  - 6m at 9.85% TGC from 74m; and
  - 8m at 9.70% TGC from 90m

The eastern end of the Chilalo East discovery shows high-grade graphite mineralisation over good widths from surface as shown in drill hole NRC22-221, which returned an intercept of 26m @ 9.0% TGC from 8m. Most encouragingly, high-grade graphite mineralisation along this trend appears to coincide with a range of electrical conductances, and not just the zones of highest conductance, suggesting that *any* of the FLEM conductor trends may be related to significant graphite deposits. The Chilalo and Chilalo East high-grade graphite deposits have moderate conductances that range from approximately 3,000-8,000S. Multiple factors can affect the electrical conductance of the graphite mineralisation, including weathering, mineralisation grade and thickness, and investigations are ongoing to help with future exploration and drill planning.

A number of drillholes have been cased allowing for DHEM surveys to be carried out in key areas. DHEM will help to differentiate between multiple mineralised layers within a drillhole, identify off-hole graphite layers that were not intersected, and assist with additional drill planning and resource modelling.

This announcement has been approved for release by Evolution's board of directors.

For further information please contact:

Phil Hoskins
Managing Director
phoskins@ev1minerals.com.au
T: +61 8 9200 4960

Andrew Rowell
White Noise Communications
andrew@whitenoisecomms.com
T: +61 400 466 226

Competent Person's Statement

The information in this announcement that relates to exploration results, data quality and geological interpretations for the Chilalo Graphite Project is based on information compiled by Mr Mathew Perrot, who is a Registered Practicing Geologist, a member of the Australian Institute of Geoscientists, Member No 2804. Mr Perrot is the principal geologist with Mathew Perrot Consulting Geologist Pty Ltd. Mr Perrot has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Perrot consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

Table 1: Chilalo East: Drill Collar locations and drilling details

Hole No	Hole Type	East	North	RL	Dip	Azi	End Depth (m)	From	To	Interval	Graphite %TGC
NRC22-195	RC	474510	8900417	297	-60	000	90	6	16	10	4.1
								20	26	6	3.5
NRC22-196	RC	474513	8900340	295	-60	000	145	34	44	10	4.9
								50	56	6	3.5
								74	82	8	3.0
NRC22-197	RC	475148	8900508	281	-60	000	79				No significant results
NRC22-198	**RC**	**475142**	**8900404**	**297**	**-60**	**000**	**150**	48	66	18	6.1
								72	**92**	**20**	**7.3**
NRC22-199	RC	475787	8900562	262	-60	000	90	18	26	8	10.7
NRC22-200	RC	475801	8900462	290	-60	000	139	50	58	8	13.7
								66	72	6	10.3
								82	94	12	6.5
NRC22-221	**RC**	**475597**	**8900531**	**273**	**-60**	**000**	**90**	**8**	**34**	**26**	**9.0**
								44	50	6	3.5
NRC22-222	RC	475376	8900437	297	-60	000	126	68	82	14	4.6
								92	102	10	5.6
NRC22-223	**RC**	**475595**	**8900439**	**267**	**-60**	**000**	**125**	**56**	**82**	**26**	**6.3**
								90	98	8	9.7
								102	108	6	4.0
NRC22-224	RC	474724	8900339	260	-60	000	102	50	58	8	5.1
								64	80	16	4.3
NRC22-225	RC	474975	8900470	236	-60	000	85	2	28	26	4.0
								40	54	14	5.1
NRC22-226	RC	474950	8900373	269	-60	000	120				No significant results
NRC22-227	RC	475382	8900519	279	-60	000	90	0	6	6	5.7
								10	16	6	7.7
								40	46	6	9.6

Appendix 1. Chilalo Mineral Resource Estimate

Domain	Classification	Zone	Million Tonnes (Mt)	TGC (%)	Contained Graphite (Kt)
High Grade	Indicated	Main	9.2	10.6	982
		Northeast	1.0	9.5	100
		All	**10.3**	**10.5**	**1,082**
	Inferred	Main	7.4	9.5	704
		Northeast	2.3	8.8	205
		All	**9.8**	**9.3**	**908**
	Indicated + Inferred	**All**	**20.1**	**9.9**	**1,991**
Low Grade	Inferred	Main	37.8	3.4	1,282
		Northeast	9.5	4.1	394
		All	**47.3**	**3.5**	**1,677**
High Grade + Low Grade	**Indicated + Inferred**	**All**	**67.3**	**5.4**	**3,667**

The Chilalo MRE 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 above a lower cut-off of 2% TGC within these wireframe solids. Differences may occur due to rounding.

Reference to Previous ASX Announcements

The Chilalo Mineral Resource estimate shown in Appendix 1 was first reported by Evolution in the Company's prospectus dated 28 September 2021 as supplemented by a supplementary prospectus dated 6 October 2021 (collectively, the "**Prospectus**") that was lodged with ASX on 12 November 2021. Evolution confirms that it is not aware of any new information or data that materially affects that information and that all material assumptions and technical parameters underpinning that Information continue to apply and have not materially changed.

ABOUT EVOLUTION (ASX:EV1)

Development ready
Chilalo Graphite Project in Tanzania

Robust DFS
High-margin, low capex

Framework agreement finalised
Provides Tanzanian government certainty

Binding offtake
With global leader for expandable graphite and foil

Battery suitability
Premium quality CSPG produced from fines

Vertically integrated strategy
Downstream processing in US using proven technology

Evolution's vision is to become a vertically integrated company that will only supply sustainably sourced graphite products and battery materials.

This will be achieved by combining our unique graphite source with industry-leading technology partners, working closely with customers and producing diversified downstream products in both Tanzania and strategically located manufacturing hubs around the world. Evolution is committed to being global leaders in ESG and ensuring its operations support the push for decarbonisation and the global green economy.

EVOLUTION ENERGY MINERALS

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JORC 2012 Table One Reporting

Section 1: Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	**2022 drilling program:** • Reverse circulation (RC) drilling was used to collect 2 m downhole samples for the laboratory analysis • Typically, a 1–2 kg sample was collected using a cone splitter or hand spear if samples were wet. Samples were composited to 2 m numbered calicos and bagged before dispatch to the laboratory and sent for combustion infrared detection (LECO) analyses. All RC samples were submitted for analysis. • CRMs, coarse blank material and field duplicate samples were used to monitor analytical accuracy and sampling precision. • Sampling is guided by Evolution's standard operating and QAQC procedures.
Drilling techniques	**2022 drilling program:** • RC holes were drilled in a direction to intersect EM plates orthogonally. • RC holes were drilled using a 140–146 mm face sampling hammer button bit. • The RC drilling was completed using a Schramm 450 with additional booster and auxiliary used as required to keep samples dry and produce identifiable rock chips. • Downhole directional survey was taken every 30 m to ensure target was reached.
Drill sample recovery	**2022 drilling program:** • Sample quality and recovery of RC drilling was continuously monitored during drilling to ensure that samples were representative, and recoveries maximized. • RC sample recovery was recorded using sample weights.
Logging	**2022 drilling program:** **RC drilling:** • 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 1 m intervals. • RC chip trays are photographed, wet and dry for future reference. • Logging data is collected via rugged laptops. The data is subsequently loaded into a dedicated fully relational geological database (Datashed) hosted by a consultant (rOREdata Pty Ltd) for storage. • All holes drilled have been geologically logged in their entireties.
Subsampling techniques and sample preparation	**2022 drilling program:** • RC samples were sampled dry and routinely taken at 1 m intervals. This was completed 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 bag. • 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 sampled using a spear by a trained technician. All samples were submitted for assay. • All RC samples were labelled such that they corresponded to remainder samples if further analysis was required. • Control samples (blanks, field duplicates and commercial standards) are inserted into the sample stream every 20th sample (one standard, one blank, one site duplicate) or not less than 5% of all collected samples for each control sample. • High valued standards are preferably inserted within the strong mineralisation. Similarly, low valued standards are inserted within the weak mineralisation. A mineralised zone is a zone greater than 5 m with a visual estimate of more than 5% graphite. • Samples were stored on site prior to being transported to the laboratory under seal. • 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.
Quality of assay data and laboratory tests	**2022 drilling program:**

Criteria	Commentary
	• Samples were sent to the SGS laboratory in Mwanza (Tanzania) for sample preparation. Samples are crushed to >70% passing -2 mm and then pulverised to >85% passing-75 microns. • Samples were then sent to ALS for assay using a combustion infrared detection method using a LECO analyser to determine TGC (ALS Minerals Codes C-IR18). • 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 subsampling stages. • Examination of all the QAQC data indicates that the laboratory performance has been satisfactory for both standards, with no failures and acceptable levels of precision and accuracy.
Verification of sampling and assaying	**2022 drilling program:** • Senior Ngwena Tanzania Ltd (Ngwena)/Evolution Energy Minerals Ltd (Evolution) geological personnel supervised the sampling, and alternative personnel verified the sampling locations. • Assay data is loaded directly into the fully relational Datashed geological database which is hosted 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 not less than 5% of all loaded data. • No adjustments have been made to assay data.
Location of data points	**2022 drilling program:** • Drillhole collar locations have been surveyed using a handheld global positioning system (GPS) with an accuracy of 5 m for easting, northing and elevation coordinates. • 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.
Data spacing and distribution	**2022 drilling program:** • Initial scout drilling of the EM plates were as isolated traverses with drill centers typically 100m apart and up to 500m between lines. Based on visual estimation of mineralization by Evolutions geologists infill drilling to a 200 x 100 m grid pattern was undertaken in favorable areas
Orientation of data in relation to geological structure	**2022 drilling program:** • All drillholes have been orientated to intersect EM plates (and likely graphitic mineralization) as close to perpendicular as possible. • Details of the various orientations of drilling is provided in Table 1 which details the collar information. • The orientation of drilling is not expected to introduce any significant sampling bias.
Sample security	**2022 drilling program:** • 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 are stored in the field yard at Ruangwa which has 24-hour security prior to transportation by sealed, locked commercial truck carrier to SGS Mwanza. • Once prepared the sealed samples were then air freighted to the ALS laboratory in Johannesburg, South Africa by SGS Mwanza transportation couriers.
Audits or reviews	**2022 drilling program:** • No audits have been carried out on the results

Section 2: Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• The exploration results reported in this announcement were originally situated on granted prospecting licence PL 9946/2014, PL 11034/2017 and ML 569/2017 which are all owned by Ngwena Tanzania, a wholly owned subsidiary of Evolution. • PL 9946/2014, PL 11034/2017 and ML 569/2017 are currently valid and in good standing.
Exploration done by other parties	• Exploration has been performed by an incorporated subsidiary company of Evolution, Ngwena Tanzania. • 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 (siliceous and aluminous rich sediments), amphibolites (mafic sourced material) and rarely high purity marble horizons.
Drillhole information	• All relevant drillhole information has been previously reported to the Australian Securities Exchange (ASX). No material changes have occurred to this information since it was originally reported. • All relevant data has been reported.
Data aggregation methods	• Significant intercepts have been calculated on a weighted average where a significant intercept is greater than 3% Total Graphitic Carbon greater than 6 meters in thickness with no more than 2m of internal dilution allowed
Relationship between mineralisation widths and intercept lengths	• Drilling has been oriented as much as practical to intercept mineralization orthogonal to the mineralization. • Insufficient drilling has been carried out to define the relationship between mineralization widths and interception lengths
Diagrams	• Refer to figures within the main body of this report
Balanced reporting	• Further results will be released when available
Other substantive exploration data	• A versatile time domain electromagnetic (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 Chilalo high-grade deposit was discovered. • Downhole electromagnetic (DHEM) surveys were carried out on 18 of the RC drillholes completed in 2014; nine diamond holes completed in 2015, five RC drillholes completed in 2016 and 11 diamond holes completed in 2018. The DHEM survey data were acquired by Evolution's in-house survey crew and equipment (EMIT probe and receiver, and Zonge transmitter). The aim of the DHEM survey campaign was to detect known and off-hole electromagnetic (EM) responses associated with graphite mineralisation. The EM responses were modelled by Resource Potentials Pty Ltd to determine the location, orientation and size of the conductors associated with graphite mineralisation. The modelled DHEM conductor plate wireframes were provided in 3D DXF format to assist in geological modelling. • Fixed loop electromagnetic (FLEM) surveys were carried out during the 2015 and 2016 field seasons to collect ground EM data over multiple linear conductive graphitic horizons identified in the existing versatile time-domain EM (VTEM) survey data. Evolution's 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.
Further work	May include: • DHEM surveys • RC drilling • Diamond drilling