

28 July, 2015

## Chilalo Graphite Project: New EM targets offer potential extensions to high-grade Shimba resource

### Key Points

- Two untested, high quality targets identified by a Fixed Loop Electromagnetic (FLEM) survey in close proximity to the existing high-grade Shimba resource at the Chilalo Graphite Project, Tanzania.
- New targets appear to represent extensions to the existing Shimba resource due to the similarity of their EM, magnetic and geological signatures to the high-grade mineralisation at the Shimba deposit.
- The new targets represent attractive, high-probability resource extension opportunities which may be drilled in the future to extend the mine life at Chilalo.
- FLEM surveying showing strong promise as an effective method of differentiating between lower grade and high-grade zones of graphite mineralisation in this area, where the VTEM has been ineffective.

IMX Resources Limited (ASX: IXR, TSX: IXR, IXR.WT) ('IMX' or 'the Company') is pleased to advise that a Fixed Loop Electromagnetic ('FLEM') survey has identified two strongly conductive, high quality drill targets in close proximity to the high-grade Shimba resource at its flagship **Chilalo Graphite Project** in south-east Tanzania.

The new targets, highlighted in Figure 1, are both located within 300m of the Shimba resource and are believed to represent extensions to the existing Mineral Resource (Inferred Resource of 7.4Mt grading 10.7% Total Graphitic Carbon (TGC) for 792,000t of contained graphite – see *ASX Announcement 7 April 2015*)<sup>1</sup>, as they show a similar EM and magnetic response to the previously identified high-grade Shimba mineralisation.

Importantly, the FLEM survey results also correlate extremely well with the high-grade mineralisation at Shimba, providing early encouragement that this exploration technique may present a cost-effective method of differentiating between high-grade and lower grade EM targets prior to drilling.

IMX's Chief Executive Officer, Mr Phil Hoskins, said the survey results represented an important breakthrough for the Company.

"This is an excellent result for IMX, delivering two potential zones of new mineralisation at Shimba, but more importantly, offering a cost effective tool to help us prioritise future exploration targets prior to drilling," he said.

<sup>1</sup> Since announcing the mineral resource estimate on 7 April 2015, IMX is not aware of any new information or data that materially affects the information included in that announcement and that all material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.

Based on the results, IMX is confident that it has characterised the EM, magnetic and geological signature of the high-grade mineralisation, which is expected to reduce the number of drill holes required to test any prospective areas for additional high-grade graphite deposits.

Mr Hoskins said that while the Company had no immediate plans to drill out the potential resource extensions at Shimba, they did provide attractive targets to extend the life of a future mining operation at Chilalo.

“The existing Shimba resource is already sufficient to support IMX’s proposed scale of operation at Chilalo, so there is no intention to drill these extensions at this stage. However, if we do require additional resources in the future, this drilling can be undertaken cost-effectively and with a high degree of confidence,” he said.

**Figure 1. FLEM Image showing potential high-grade extensions to Shimba resource**

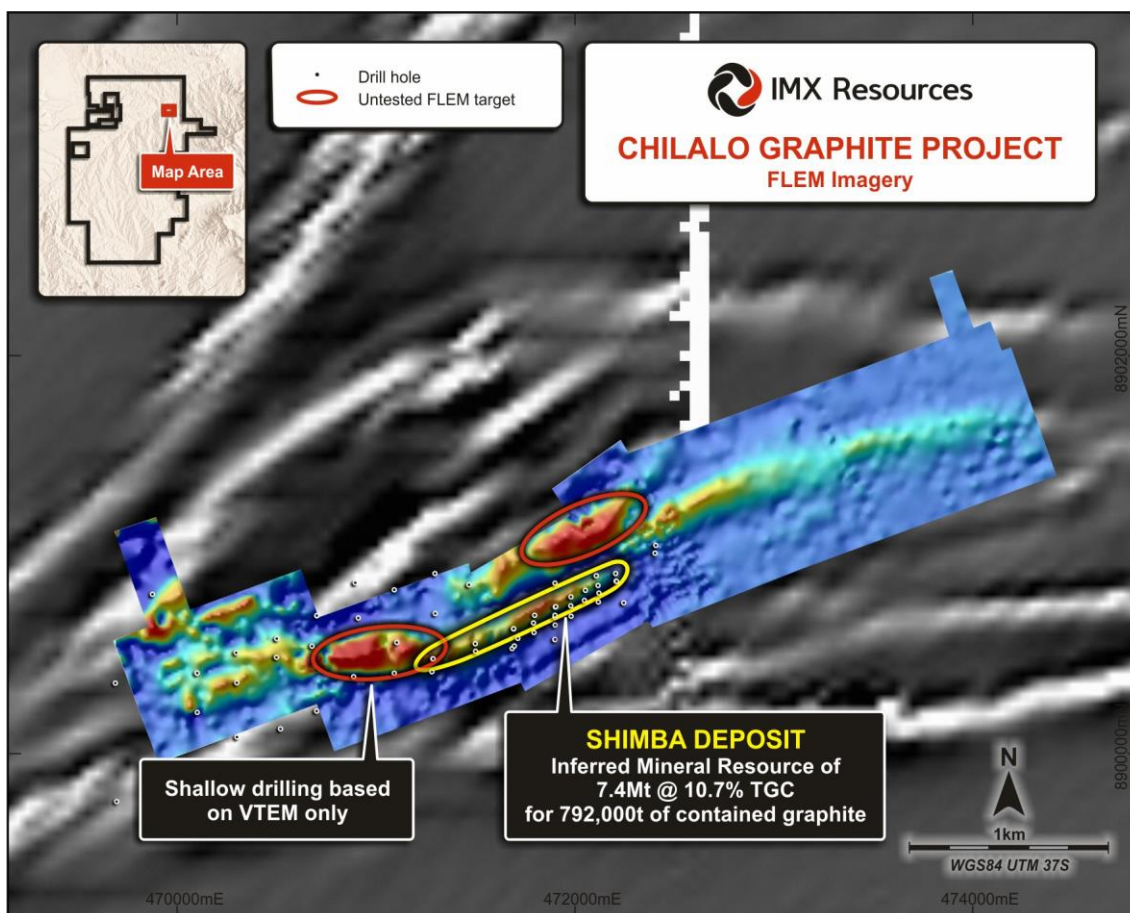


Figure 1 shows drilling that has been carried out in the vicinity of these two very high conductance targets, however these holes were planned based on VTEM targets. No holes have intersected the modelled 3D FLEM conductive plates, having either stopped short or drilled directly into the footwall.

#### **FLEM Survey – background**

A reverse circulation (‘RC’) drill campaign targeting versatile time domain electromagnetic (VTEM) conductors was undertaken in 2014 at Chilalo, which resulted in the Shimba discovery.

However, while VTEM surveys have proven to be an effective tool for graphite targeting and delineation at Chilalo, based on the results of the 2014 RC drilling program, these surveys do not provide a clear distinction between high-grade and low-grade targets.

A down-hole electromagnetic (DHEM) survey campaign carried out in 2014 identified a large number of strong EM conductors. A correlation has been noted, where higher grade graphite mineralisation has higher conductance. The DHEM data were modelled and identified numerous parallel conductive horizons of varying conductance, many of which remain untested by drilling.

The reason that this relationship is not seen in the VTEM data is the method of data collection. A FLEM survey is static and therefore allows for collection of later time electromagnetic responses which are not able to be collected in a VTEM system because it is collecting data from a moving helicopter.

A FLEM survey was carried out over the Shimba deposit and along strike to the NE and SW to identify more high-grade graphite mineralisation and to aid in the cost effective sterilisation of the proposed mine plan area.

The survey identified six very high conductance targets identified in the FLEM data, four of which correspond to the Shimba high-grade resource wireframe. The other two very high conductance targets remain untested by drilling, one of which is located along strike to the south-west of the current high-grade resource wireframe.



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**About IMX Resources Limited**

IMX Resources is an Australian minerals exploration company that holds a 5,800 km<sup>2</sup> tenement package at the Nachingwea Property in south-east Tanzania. The Nachingwea Property hosts the Chilalo Graphite Project, the Ntaka Hill Nickel Project and the Kishugu and Naujombo Gold Prospects. IMX's primary focus is on high-grade, high quality graphite and it is rapidly advancing development of the Chilalo Graphite Project, where there is a high-grade JORC Inferred Resource of 7.4 million tonnes grading 10.7% Total Graphitic Carbon, for 792,000 tonnes of contained graphite. Chilalo is located approximately 220 km by road, from the deep water commercial Mtwara Port, the majority of which is a sealed main road. IMX aims to become a respected supplier of high quality graphite for the clean technology economy.

To find out more, please visit [www.imxresources.com.au](http://www.imxresources.com.au).

## APPENDIX 2 JORC TABLE 1

### Section 1 Sampling Techniques and Data

Criteria	Commentary
<b>Sampling techniques</b>	<p>Reverse Circulation</p> <ul style="list-style-type: none"> <li>• Reverse Circulation (RC) drilling was used to collect 1 m downhole samples for assaying.</li> <li>• Typically, a 1 to 2 kg sample was collected using a cone splitter. Samples were composited to 2 m and sent for LECO analyses as well as for ICP Multi-element analyses. All RC samples were submitted for analysis.</li> <li>• Certified Reference Materials (CRM's) and field duplicate samples were used to monitor analytical accuracy and sampling precision.</li> <li>• Sampling is guided by IMX Resources' standard operating and QA/QC procedures.</li> </ul> <p>Diamond</p> <ul style="list-style-type: none"> <li>• Samples were composited to 2 m and sent for LECO analyses as well as for ICP Multi-element analyses. All core samples were submitted for analysis.</li> <li>• CRM's and field duplicate samples were used to monitor analytical accuracy and sampling precision.</li> <li>• Sampling is guided by IMX's standard operating and QA/QC procedures.</li> <li>• HQ diamond core is geologically logged and sampled to corresponding RC intervals when twinning an RC hole, otherwise sampling is to geological contacts with nominal samples lengths between 0.25 and 1.5 m. Core is quarter cored by diamond blade rock saw, numbered and bagged before dispatch to the laboratory for analysis.</li> <li>• Core is routinely photographed.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>• Diamond and RC holes were drilled in a direction to intersect the mineralisation orthogonally.</li> <li>• RC holes were drilled using a 140 mm face sampling hammer button bit.</li> <li>• The RC drilling is completed using a Schramm 450 drill rig with additional booster and auxiliary used as required to keep samples dry and produce identifiable rock chips.</li> <li>• Diamond drilling (HQ) with standard inner tubes. HQ diameter (63.5mm) to target depth.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>• Diamond core recoveries in fresh rock are measured in the core trays. Rock Quality Designation (RQD) is also recorded as part of the geological logging process.</li> <li>• Core recoveries were good – typically &gt;95%.</li> <li>• Sample quality and recovery of RC drilling was continuously monitored during drilling to ensure that samples were representative and recoveries maximised.</li> <li>• RC Sample recovery was recorded using sample weights.</li> <li>• 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.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• Detailed geological logging of all diamond holes captured various qualitative and quantitative parameters including mineralogy, colour, texture and sample quality.</li> <li>• Detailed geological logging of all RC holes captured various qualitative and quantitative parameters including mineralogy, colour, texture and sample quality.</li> <li>• RC holes were logged at 1 m intervals.</li> <li>• Logging data is collected via rugged laptops. The data is subsequently downloaded into a dedicated Datashed database for storage, hosted by a database consultant.</li> <li>• All diamond core has been geologically and geotechnically logged to a level of detail to support Mineral Resource estimation.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• A small fraction of samples returned to the surface wet. These samples were dried prior to compositing. All samples were submitted for assay.</li> </ul>

Criteria	Commentary
	<ul style="list-style-type: none"> <li>• Samples were stored on site prior to being transported to the laboratory.</li> <li>• Samples were sorted, dried and weighed at the laboratory where they were then crushed and riffle split to obtain a sub-fraction for pulverisation.</li> <li>• Core is cut with a diamond saw into half core and then one half into quarter core. A quarter of the core is sent for assay, a quarter for archive and a half for metallurgical testwork. Generally, one of each of the 2 control samples (blank or standard) is inserted into the sample stream every twentieth sample.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• All RC and diamond samples were submitted to ALS for both the sample preparation and analytical assay.</li> <li>• Samples were sent to the ALS laboratory in Mwanza (Tanzania) for sample preparation. Samples are crushed to &gt;70% passing -2 mm and then pulverised to &gt;85% passing -75 microns.</li> <li>• For all samples a split of the sample is analysed using a LECO analyser to determine graphitic carbon (ALS Minerals Codes C-IR18).</li> <li>• Every 20th sample is analysed using a complete sample characterisation package (CCP-PKG01). This package combines the whole rock package ME-ICP06 plus carbon and sulphur by combustion furnace (ME-IR08) to quantify the major elements in a sample. Trace elements including the full rare earth element suites are reported from three digestions with either ICP-AES or ICP-MS finish: a lithium borate fusion for the resistive elements (ME-MS81), a four acid digestion for the base metals (ME-4ACD81) and an aqua regia digestion for the volatile gold related trace elements (ME-MS42).</li> <li>• 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.</li> <li>• Laboratory duplicates and standards were also used as quality control measures at different sub-sampling stages.</li> <li>• 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.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• Senior IMX 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.</li> <li>• 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.</li> <li>• Assay data is loaded directly into the Datashed database which is hosted by and managed by an external database consultancy.</li> <li>• Visual comparisons will be undertaken between the recorded database assays and hard copy records at a rate of 5% of all loaded data.</li> <li>• No adjustments have been made to assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Drill hole collar locations have been surveyed using a handheld GPS with an accuracy of &lt;5 m for easting, northing and elevation coordinates.</li> <li>• Drill hole collars were re-surveyed using a Differential GPS with an accuracy of &lt;5 cm at the end of the program.</li> <li>• Collar surveys are validated against planned coordinates and the topographic surface.</li> <li>• Downhole surveys are conducted during drilling using a Reflex single shot every 30 m.</li> <li>• The primary (only) grid used is UTM WGS84 Zone 37 South datum and projection.</li> <li>• The topographic surface used in resource modelling has been generated from track spot heights and collar surveys. It is considered adequate for the current level of study but an accurate topographic surface will be required in future work.</li> </ul>



Criteria	Commentary
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>This program is the first drilling conducted in the area. A proportion of the drilling will be exploratory with spacing dictated by the location of targets interpreted from airborne Versatile Time Domain Electromagnetic Surveys (VTEM).</li> <li>The spacing of infill RC drilling is aimed at determining a Mineral Resource spacing of RC drilled holes on a nominal grid of 200 m x 150 m or less up to 200 m x 200 m being deemed appropriate in most instances. Drilling will have some closer spacing in order to confirm continuity of mineralisation.</li> <li>The diamond drilling spacing is variable and designed to provide ample coverage to twin the RC holes for QA/QC and collect enough mineralised material for metallurgical testwork.</li> <li>1 m RC samples have been composited to 2 m for grade estimation.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>All holes have been orientated to intersect the graphitic mineralisation as close to perpendicular as possible.</li> <li>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.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>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 in Australia.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>The exploration results reported in this announcement are from work carried out on granted prospecting licence PL 6073/2009 which is owned by Warthog Resources Limited, a wholly owned subsidiary of IMX.</li> <li>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%.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Exploration has been performed by Ngwena Limited, an incorporated subsidiary company of IMX.</li> <li>Stream sediment surveys carried out historically by BHP were not assayed for the commodity referred to in the announcement.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>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.</li> <li>All relevant data has been reported.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>Not relevant when reporting Mineral Resources.</li> <li>No metal equivalent grades have been used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>Not relevant when reporting Mineral Resources.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Refer to figures within the main body of this report.</li> </ul>
<b>Balanced</b>	<ul style="list-style-type: none"> <li>Not relevant when reporting Mineral Resources.</li> </ul>

Criteria	Commentary
<i>reporting</i>	
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• DHEM surveys were carried out on 18 of the RC drill holes completed in 2014 by IMX's in house survey crew and equipment (EMIT probe and receiver, and Zonge transmitter). 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.</li> <li>• Ground fixed-loop EM (FLEM) surveys using 50m line and station spacings were carried out over the Shimba Resource using IMX's 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.</li> <li>• 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.</li> <li>• All other meaningful exploration data concerning the Chilalo Project has been reported in previous reports to the ASX.</li> <li>• No other exploration data is considered material in the context of the Mineral Resource estimate which has been prepared. All relevant data has been described in Section 1 and Section 3 of JORC Table 1.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• Infill drilling to verify geological and grade continuity is planned. Extensional drilling to the east to test for strike extent based on surface geology mapping indications and on section to test depth extent.</li> <li>• Figures are provided within the main body of this report.</li> </ul>