

19 May, 2015

## Further excellent metallurgical results from Chilalo Graphite Project

*High purity and flake size distribution consistent with end user requirements*

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### Key Points

- Latest results from metallurgical testwork on material from the high-grade Shimba deposit at IMX's Chilalo Graphite Project in Tanzania have confirmed:
  - *World class graphite concentrate grades of 97.4%<sup>1</sup> TGC (98.1%<sup>1</sup> TGC in large and jumbo flake) can be achieved using basic flotation; and*
  - *Flotation product with 47% in large and jumbo flake categories.*
- End-users have identified product purity as most important and flake sizes between 150 and 300 microns for their specific applications.
- Metallurgical program optimised to meet end user specifications now and for the future growth applications of graphite (batteries for electric vehicles and energy storage).
- Testwork on downstream applications including spherical, expandable, micronized and purified graphite being conducted by potential customers and European graphite specialists.

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IMX Resources Limited (ASX: IXR, TSX: IXR, IXR.WT) ('IMX' or the 'Company') is pleased to report further results from ongoing metallurgical testwork on core from the high-grade Shimba deposit, at its flagship **Chilalo Graphite Project** in south-east Tanzania.

The results show high purity across all flake sizes is a distinguishing characteristic of Chilalo graphite concentrate, and it is therefore well suited to the battery market where purity is the key characteristic desired by end users.

Representatives of IMX are currently in China, where initial feedback from end users regarding the results of this testwork has been excellent. Purification to 99.9% TGC is one of the costly steps involved in producing spherical graphite used in lithium-ion batteries and the feedback received to date has been that the high purity of Shimba product could significantly reduce this cost.

The metallurgical testing consisted of a series of bulk flotation runs undertaken on a 56kg drill core composite sample. This represented an increase in scale from previous batch testwork that was based on 1kg and 2kg samples. The testwork program has also generated marketing samples for distribution to potential customers.

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1. Calculated as a weighted average.

The samples had a typical head grade of 9-10% total graphitic carbon (TGC) and were subjected to flotation and grinding conditions that comprised:

- Primary rod mill grind to 700 microns followed by rougher flotation using conventional flotation reagents;
- The rougher concentrate was then subject to five stages of regrind and cleaner flotation to produce final concentrate; and
- The final concentrate had all material less than 75 microns removed.

The results are presented in Table 1 and are for two test runs – Test A and Test B – the difference being an increased grinding time for Test B. The results illustrate that Chilalo material has the flexibility to increase product purity at the expense of flake size and vice versa.

Test B achieved excellent results with respect to purity with a weighted average concentrate grade of 97.4% TGC using basic flotation and weighted average concentrate grade of 98.1% TGC for the large and jumbo flake.

**Table 1: Concentrate grade and flake size distribution**

Flake Size	(microns)	Mesh	Fresh		Fresh	
			Bulk sample GK 34 (Test A)		Bulk sample GK 34 (Test B)	
			Mass Dist. %	Assay TGC %	Mass Dist. %	Assay TGC %
Jumbo	> 300	50	11.7	97.5	5.9	97.2
Large	180 – 300	80	35.3	97.8	34.8	98.3
Medium	150 – 180	100	16.7	96.5	15.5	97.4
Fine	75 – 150	200	36.3	96.1	43.8	96.8
Total			100.0	96.8	100.0	97.4

In addition, a significant proportion of the material has been confirmed as coarse flake, with 47% of the mineralisation from Test A measuring greater than 180 microns (80 mesh).

The Company is aligning its metallurgical testwork with end-users' product specifications. Feedback from end-users has consistently identified product purity (concentrate grade) as critically important, with high-grade concentrate in the 150 to 300 micron range considered to be highly desirable. This is especially so where the graphite is to be applied for the manufacture of batteries for use in electric vehicles and energy storage. The testwork results produced a weighted average grade of up to 98.0% TGC for concentrate in the 150 to 300 micron range.

The Company's discussions with end-users have also found that there is little demand for sub-75 micron (-200 mesh) material and there is plentiful supply in this size bracket. As a result, IMX is investigating the minimisation and removal of sub-75 micron material from its concentrate to produce four discrete products that reflect the flake sizes and concentrate grades sought by end-users.

The testwork results in this announcement are reported on the basis that the sub-75 micron material has been removed from the concentrate. It represents 25-30% of the flotation product.

CEO Phil Hoskins commented on the results, "When we began the testwork, the main objective was to maximise flake size as this was considered to be the most sought after product characteristic. However our discussions with end-users have caused us to refocus the testwork with an added emphasis on product purity, better aligning us with their requirements."

"The metallurgical testwork program is still at a relatively early stage and these latest quality results are an excellent platform from which to optimise our ongoing testwork."

"IMX has strong relationships in China, thanks to the previous sale of iron ore from the Cairn Hill mine and we have a sound understanding of what is required to establish meaningful off-take agreements. Our

current activities in China with end-users and their initial reaction to our marketing material, provides significant encouragement that these efforts will result in agreements of real substance.”

In addition to samples for marketing purposes, samples have also been provided to a European graphite processing specialist for the purpose of conducting testwork on Chilalo material for downstream applications including spherical, expandable, micronized and purified graphite. The Company has also engaged graphite market specialists, Benchmark Mineral Intelligence to produce a marketing report to support the Pre-feasibility Study as well as provide strategic graphite market advice relevant to the Chilalo project.

The metallurgical testwork was carried out by SGS Australia at its Perth laboratory and by ALS Australia at its Brisbane laboratory.

### **Pre-feasibility Study**

The metallurgical testwork program is closely tied to the Pre-feasibility Study for the Chilalo Project, with the results providing the basis for flow sheet design, which will inform equipment specifications and logistics considerations.

The PFS is progressing to schedule, with with infill drilling at the Shimba deposit to convert the Inferred Resource to Indicated and Measured categories, pit optimisation and scheduling studies, and planning of preliminary site layout options.



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### **Competent Person's / Qualified Person's Statement**

Information relating to exploration results at the Chilalo Project, located on the Nachingwea Property, is based on data collected under the supervision of Mr Nick Corlis, in his capacity as Executive Director, Exploration. 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 JORC 2012 and as a qualified person under NI 43-101. 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.

### **JORC 2012 Table One Reporting**

The JORC 2012 Table One Reporting in connection with exploration results at the Chilalo Graphite Project has been provided previously in ASX announcements of 10 February 2015 and 7 April 2015 and is not reproduced in this news release.

## 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).

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There can be no assurance that exploration at the Nachingwea Property, or any other tenements that may be acquired in the future, will result in the discovery of an economic ore deposit. Even if an apparently viable deposit is identified, there is no guarantee that it can be economically exploited.

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