

5 May 2016

## Grade of 98.41% TGC<sub>LOI</sub> confirms significance of intercept

*Impressive grades confirm significance of intercept*

### Highlights

- Previously reported intersection of 1.72m of high grade vein graphite over 2.81m.
- The width of the intercept suggests Aluketiya will be a significant production area.
- Interval 118.34m to 119.45 Length Weighted Average (LWA) 98.41% Total Graphitic Carbon (TGC<sub>LOI</sub>) with results as high as 99.51% TGC<sub>LOI</sub>.
- Similar to previous assays on Aluketiya drill samples which returned TGC grades of up to 99.3%.<sup>1</sup>
- **Significantly the 115cm intersection returned a grade of 99.27% TGC<sub>LOI</sub>.**<sup>2</sup>

First Graphite Limited (ASX: FGR) is pleased to advise it has received analysis results from a significant drill intercepts on its Aluketiya mining licence announced on 17 March 2016.

The hole was testing unexplored zones down dip and adjacent to shaft "H". The intersection occurred at a depth of approximately 84m vertical in a drill hole designed to test depth to 240m. The assay results confirm the significance of this intercept.

Mr McGuckin, Managing Director, said *"The assay results from this intercept only confirm the importance of this intercept, which is located approximately 50 metres from where the Shaft H is being developed. Mine plans will be modified to mine the ALK18 intersection in conjunction with the Shaft H veins"*.

First Graphite Limited

ACN 007 870 760

ABN 50 007 870 760

Registered Office

Suite 3

9 Hampden Road

Nedlands WA 6009

Tel +61 1300 660 448

Fax +61 1300 855 044

Directors

Warwick Grigor

Craig McGuckin

Peter R. Youd

Denis Geldard

Chris Banasik

Company Secretary

Peter R. Youd

Email:

[info@firstgraphite.com.au](mailto:info@firstgraphite.com.au)

Website:

[www.firstgraphite.com.au](http://www.firstgraphite.com.au)

ASX Symbol

FGR, FGROA, FGROB

<sup>1</sup> ASX release 28 January 2015

<sup>2</sup> Refer to Appendix 1 – Analytical Results ALK18 intersection & repeat samples

Hole ID	Collar E (Local)	Collar N (Local)	Collar RL (Local)	Dip	Azimuth	Depth From	Depth To	Comment
ALK17	2116.4	1842.1	94.5	45.0	305	100.78	100.84	6cm vein of graphite
ALK18	2116.4	1842.1	94.5	45.0	322	116.68 117.31 118.34	119.93 117.64 119.45	25cm vein (including 10cm core loss) 32cm vein 115 cm vein
ALK19	2116.4	1842.1	94.5	45.0	354	58.82	117.40	Multiple veinlets to east of ALK18 intersection
ALK21	2116.4	1842.1	94.5	65.0	322	72.34	117.0	Multiple veinlets down dip and west of ALK18 intersection



Figure 1: Core from drill hole ALK18- boxes 27

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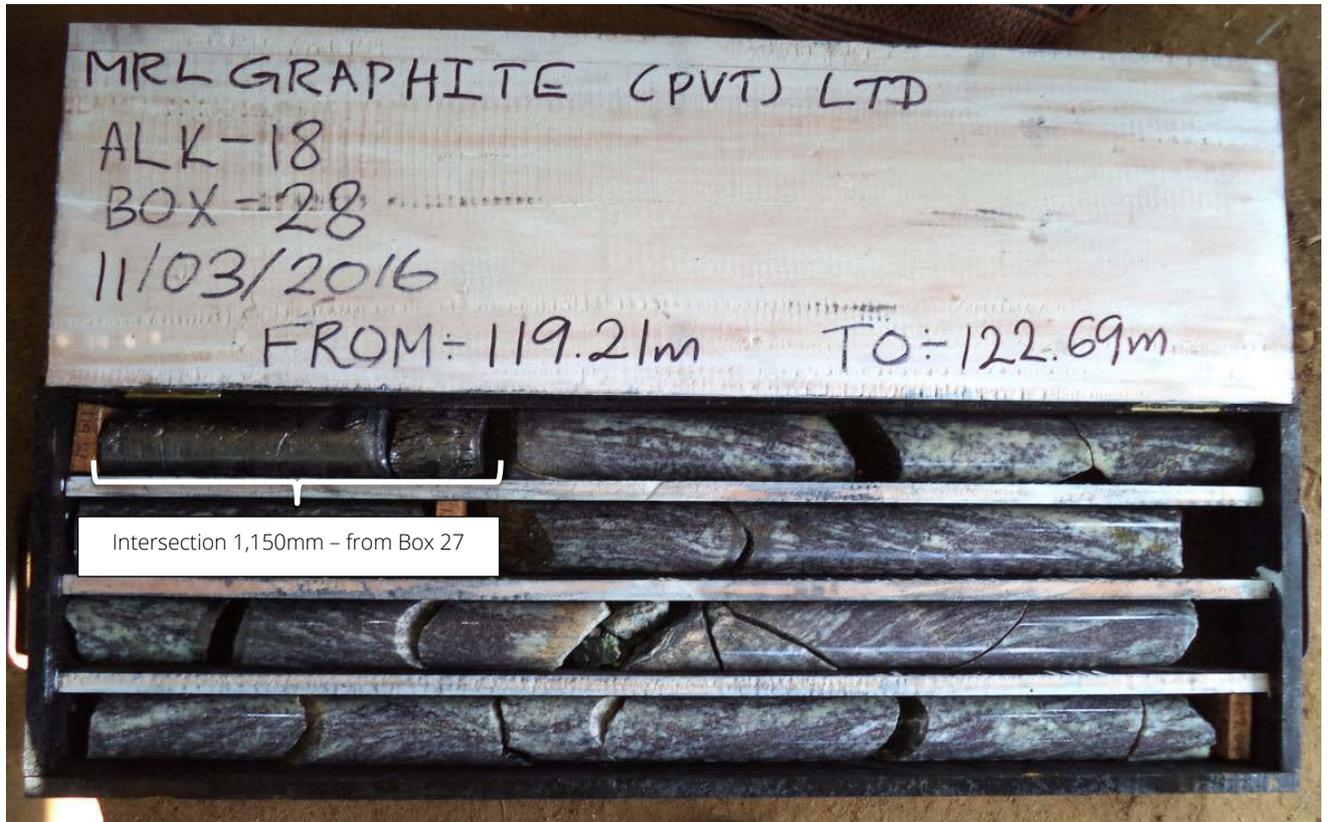


Figure 2: Core from drill hole ALK18- boxes 28

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Figure 3: Sinking Liners in Shaft H

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Figure 4: Shaft H Development Work

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#### *About First Graphite Ltd (ASX: FGR)*

*First Graphite is aiming to develop an underground mining operation to extract high-grade, crystalline vein graphite, which is unique to Sri Lanka. The Company holds exclusive rights to exploration licenses covering approximately 39,500 hectares in area, with historical workings located within nearly all license grids.*

#### *About Graphene*

*Graphene, the well-publicised and now famous two-dimensional carbon allotrope, is as versatile a material as any discovered on Earth. Its amazing properties as the lightest and strongest material, compared with its ability to conduct heat and electricity better than anything else, mean it can be integrated into a huge number of applications. Initially this will mean graphene is used to help improve the performance and efficiency of current materials and substances, but in the future it will also be developed in conjunction with other two-dimensional (2D) crystals to create some even more amazing compounds to suit an even wider range of applications.*

*One area of research which is being very highly studied is energy storage. Currently, scientists are working on enhancing the capabilities of lithium ion batteries (by incorporating graphene as an anode) to offer much higher storage capacities with much better longevity and charge rate. Also, graphene is being studied and developed to be used in the manufacture of supercapacitors which are able to be charged very quickly, yet also be able to store a large amount of electricity.*

#### *Nature of vein graphite*

*Sri Lankan graphite deposition model is best described from the 'bottom up': tension fractures formed in the metamorphic sediments, caused by the folding of the sediments, creating 'conduits' for the hydrothermal deposition of high quality vein graphite. Historically, mining of these veins has found the veins generally increase in thickness and grade quality with increasing depth. Graphite veins generally dip steeply at  $-70^{\circ}$  to near vertical, enabling 'narrow vein' extraction mining techniques similar to those used on narrow vein, high-grade gold deposits. The method commonly used is an overhead retreat stoping technique where the high-grade vein graphite is mined and hauled to surface without contamination. The graphite selvages, in contact with the surrounding waste, is hauled to surface and stockpiled for upgrading. The balance of the waste is used to fill the floor of the stope.*

*Due to the nature of the vein graphite, it is anticipated vein widths of  $\sim 25\text{cm}$ , using narrow vein mining techniques can be economically extracted from underground operations.*

#### For further information:

**Craig McGuckin**

Managing Director

First Graphite Ltd

**Peter R. Youd**

Executive Director

First Graphite Ltd

[www.firstgraphite.com.au](http://www.firstgraphite.com.au)

Information in this report relating to Metallurgical interpretation, analysis, mineral distribution and recommendations has been compiled by Mr Denis Geldard, MAusIMM in consultation with Dr Slobodanka Vukcevic, Senior Metallurgist at Nagrom the Mineral Processors. Dr Slobodanka Vukcevic has sufficient experience and expertise relevant to this type of test work through her job experience and expertise and qualifies as a competent person in the field of metallurgy. Mr Geldard consents to the inclusion in the report of the matters based on the information reported in the form and context in which it appears.

Information in this report relating to Exploration Results is based on information compiled by Mr Denis Geldard, MAusIMM working in consultation with consulting Geologist Mr Chris Banasik, MAusIMM and MRL's Senior Sri Lankan Geologist who has 35 years of vein graphite experience in Sri Lanka. Their experience is relevant to the type of deposit under consideration. Mr Geldard is signing as competent person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Geldard consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

#### Appendix 1 – Analytical Results ALK18 intersection & repeat samples

Drill hole	Sample Test #	Intersection from (m) – To (m)		TGC <sub>LoI</sub> %	Length Weighted Average
					TGC <sub>LoI</sub> %
ALK18	Sample ALK18/01	116.68	116.93	96.06	96.06
ALK18	Sample ALK18/02	117.31	117.63	97.12	97.12
ALK18	Sample ALK18/03	118.34	118.76	99.34	99.27
ALK18	Sample ALK18/04	118.76	118.98	99.51	
ALK18	Sample ALK18/05	118.98	119.21	99.43	
ALK18	Sample ALK18/06	119.21	119.49	98.86	

#### JORC TABLE 1 Report for Exploration Locations

##### Section 1 Sampling Techniques and Data

<i>Criteria</i>	<i>Explanation</i>
Sampling techniques	<ul style="list-style-type: none"> <li>Diamond core is collected and stored in core trays of 4m per tray. Vein graphite is readily identified visually (black in colour) and intersections recorded accordingly. Intersections will then be cut under the supervision of MRL's Senior Sri Lankan Geologist and prepared for transport to Nagrom (Australia) for analysis.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>All drilling is undertaken utilising HQ Triple Tube (HQT) drilling.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Diamond core recovery is recorded between core runs by the geological crew in the Core Logging Record. The unconsolidated surface material will be drilled using rotary wash method until competent material is intersected</li> </ul>
Logging	<ul style="list-style-type: none"> <li>All holes are logged on site by MRL Graphite (Pvt) Ltd (MRL) geological personnel under the supervision of MRL's Senior Sri Lankan Geologist, using MRL's Core Logging Procedure Manual.</li> <li>Logging will record geological and geotechnical observations, and is undertaken on a continual basis throughout the entire drill hole.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>Half-core intersections of Vein Graphite will be submitted for analysis to Nagrom laboratories in Perth Western Australia. The remaining half-core is stored in the core boxes. Core &amp; bulk samples may be provided to potential off-take parties.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>All Vein Graphite core intersections will be analysed by Nagrom the Mineral Processors in Perth Western Australia and or Wuhan University of Technology (WUT). Nagrom and WUT will follow industry practice QA/QC procedures to ensure high quality sample assurance.</li> <li>Certified Sample Standards will be inserted routinely into sample analysis.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>All diamond core will be logged and photographed by MRL geologists under the supervision of MRL's Senior Sri Lankan Geologist. Independent consulting geologist will</li> </ul>

<i>Criteria</i>	<i>Explanation</i>
	visit the MRL operation sites on a regular basis to oversee QA.
Location of data points	<ul style="list-style-type: none"> <li>Initial drill locations are positioned using hand-held Garmin GPS systems. MRL completes full topographical surveys of each drill location. All drill collars will be georeferenced to the Sri Lankan Transverse Mercator Projection. All final drill locations are set out by surveyor.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Drill holes have been orientated in a position to intersect the expected vein mineralisation (based on historical shafts / adits and geophysical information) at the optimal angle for evaluation, whilst minimising surface land disturbance.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Diamond Core Drill holes are designed to intersect potential graphite vein mineralisation perpendicular to strike, wherever possible, whilst taking into account expected deviation in dip and azimuth.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>Core Samples are collected and stored in core trays under the supervision of MRL geological crews and then transported at the end of each day, and secured in a locked container at the MRL site facility for further detailed logging. Security is managed by MRL's Senior Sri Lankan Geologist and the MRL country General Manager.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>A review was undertaken by the consulting Geologist of all procedures, including retrieving of core samples from the core tube, through to logging and storage of core samples, during drilling activities. Consulting Geologist will undertake further reviews into the future.</li> </ul>

### Section 2 Reporting of Exploration Results

<i>Criteria</i>	<i>Explanation</i>																																												
Mineral tenement and land tenure status	<p>The Warakapola / Bopitiya / Pandeniya project exploration license areas EL228 are 100% owned by MRL Graphite (Pvt) Ltd. The exploration Licenses when granted have a two year term which can be renewed prior to the 2 year anniversary.</p> <table border="1" data-bbox="536 1211 1362 1518"> <thead> <tr> <th>License No.</th> <th>MRL Interest</th> <th>Status</th> <th>General Location</th> </tr> </thead> <tbody> <tr> <td>EL/225</td> <td>100%</td> <td>Granted</td> <td>Central</td> </tr> <tr> <td>EL/226</td> <td>100%</td> <td>Granted</td> <td>Central</td> </tr> <tr> <td>EL/227</td> <td>100%</td> <td>Granted</td> <td>South Central</td> </tr> <tr> <td>EL/228</td> <td>100%</td> <td>Granted</td> <td>Central</td> </tr> <tr> <td>EL/231</td> <td>100%</td> <td>Granted</td> <td>South West</td> </tr> <tr> <td>EL/243</td> <td>100%</td> <td>Granted</td> <td>Central</td> </tr> <tr> <td>EL/244</td> <td>100%</td> <td>Granted</td> <td>South West</td> </tr> <tr> <td>EL/262</td> <td>100%</td> <td>Granted</td> <td>Central</td> </tr> </tbody> </table> <table border="1" data-bbox="536 1552 1362 1621"> <tbody> <tr> <td>IML/C/HO/8416</td> <td>100%</td> <td>Granted</td> <td>Western</td> </tr> <tr> <td>IML/A/HO/9405</td> <td>100%</td> <td>Granted</td> <td>Central</td> </tr> </tbody> </table> <ul style="list-style-type: none"> <li>First Graphite Ltd has informed the Consulting Geologist all granted licenses are in good standing and comply with the reporting requirements of the exploration licence.</li> </ul>	License No.	MRL Interest	Status	General Location	EL/225	100%	Granted	Central	EL/226	100%	Granted	Central	EL/227	100%	Granted	South Central	EL/228	100%	Granted	Central	EL/231	100%	Granted	South West	EL/243	100%	Granted	Central	EL/244	100%	Granted	South West	EL/262	100%	Granted	Central	IML/C/HO/8416	100%	Granted	Western	IML/A/HO/9405	100%	Granted	Central
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Exploration done by other parties	<ul style="list-style-type: none"> <li>Initial Exploration and Review of the Warakapola / Bopitiya / Pandeniya / Dedigama project was carried out by Geological Survey and Mines Bureau (GSMB) Technical Services (Pvt) Ltd with reports provided to MRL. MRL has established a regional office in the EL228 area to support the company geologists and underground exploration crews.</li> <li>Historical mining has taken place with several shafts and adits evident.</li> <li>MRL continues exploration in all license areas</li> </ul>																																												

Geology	<ul style="list-style-type: none"> <li>• Warakapola / Bopitiya / Pandeniya / Aluketiya / Dedigama</li> <li>• Geologically, the area covered by the selected grid units belong to the Wannu Complex of Sri Lanka. The Wannu Complex is mainly characterised by thick sequences of orthogneisses, comprising amphibolite, migmatitic, granitic and granodioritic gneisses. These rocks represent a series of antiformal and synformal structures. A characteristic feature of the exploration area is the alignment of identified abandoned graphite mines / pits within a NNW-SSE trending corridor.,(GSMB 2013)</li> </ul>
Drill hole Information	<p>Planned Diamond Core Drill Holes</p> <ul style="list-style-type: none"> <li>• MRL is undertaking exploration drilling presently at its Aluketiya location and will report on commercial intersections when they occur.</li> <li>• All Diamond Core Drill holes are planned to be accurately surveyed for dip and azimuth using a GlobalTech Pathfinder multi-shot, electronic, down-hole survey tool.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• Intersections of diamond core containing vein graphite will be visually selected for analytical testing with accurate lengths recorded to ensure 100% of mineralisation is analysed and reported.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• Planned Drill hole orientation is based on observations from historical shafts / adits and geophysics, and planned to intersect any vein graphite mineralisation as close to perpendicular as practical.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>• NA</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• First Graphite Ltd will endeavour to produce balanced reports accurately detailing the results from any exploration activities.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>• No other substantive exploration data is available at this time.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>• MRL continues to complete further site investigations on all licenses. Following the completion of progressive site investigations and evaluation the next phase of exploration for each location will be undertaken and reported.</li> <li>• Land access agreements continue at Pujapitiya, Dedigama and Hikkaduwa</li> <li>• Further drilling is planned at Aluketiya, Dedigama &amp; Pujapitiya and other license areas as land access is obtained.</li> </ul>

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