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ASX Symbol

FGR, FGROA, FGROB

June 2016 Quarterly Report

Solid progress as the Company proceeds to become a producer of high quality graphene and high grade graphite

First Graphite (ASX: FGR) is pleased to report on what has been a successful June Quarter in which it has made substantial progress in its strategy to become a significant supplier of premium quality graphene and high grade graphite in 2016.

Highlights

- Full size – 250 litre production cell nearing completion
- Capable of producing 5 tonnes p.a. of high quality graphene
- Continued development at Pandeniya and Aluketiya mine shafts
- Successful capital raising of \$2.4m

Graphene production cell

Following on from extensive bench scale test work undertaken by the University of Adelaide, FGR has constructed a prototype commercial scale production unit for graphene. This unit will be ready for commissioning by early August.

The Company has finalised an agreement with Nagrom the Mineral Processor to house the cell at their premises in Perth and for Nagrom to operate the cell under strict confidential guidelines. Test work will be undertaken to confirm the scalability of the production process. As an integral part of this testing the Company expects there will be a period of optimisation prior to finalising the process for commercial application.

First Graphite believes that the 250 litre production unit will give it a significant commercial advantage over any alternative method of producing bulk graphene. Rather than relying on a central processing facility from which graphene supplies would be transported, the technology may enable the location of production units in the facilities of the consuming industry for “just-in-time” production and delivery of pristine graphene, tailored to meet the specific requirements of each customer. Each unit could produce up to 5 tonnes p.a. of graphene at very low capital cost.

Industry has not yet had access to bulk quantities of low cost graphene but that will change with the commissioning of this production unit. The Company will be able to supply graphene for research and development for large-scale applications, thereby accelerating market development.

Having established the ability to produce graphene at very low cost, First Graphite is continuing its work at the University of Adelaide to identify commercial applications of graphene, thereby opening up new markets.

The Company is at an advanced stage of marketing arrangements in preparation for having adequate raw material from which to produce high quality graphene.



Figure 1: Semi Completed production graphene cell



Figure 2: Semi Completed production graphene cell

Pandeniya

Pandeniya Work Program

The installation of the shaft liner boxers has been completed at Pandeniya and the annulus has been cemented to stop water ingress into the shaft. The mesh and bolt work to the foot of the shaft has also been completed.

Work has now commenced to winze down either side of the projected ore zone. It is anticipated ore from the Pandeniya shaft will be generated in late August. Underground crews have discovered the existence of several abandoned adits and sub-shafts in the underground where vein sets are visible in the historical drives and are progressing to make these safe. This process has marginally slowed progress as safe working conditions have been a priority.



Figure 3: Miners installing mesh and bolt support in the Pandeniya shaft



Figure 4: Pandeniya workshop and office facilities with solar power and battery storage

Aluketiya

Aluketiya Work Program

The headframe at Aluketiya Shaft H was completed and the sinking of the shaft liners continues. There have been seven sets of shaft liners installed at Shaft H and the shaft is at fifteen metres of a planned depth of 30 metres. The current work program plans to have the shaft at the designed depth by the end of August. Miners will then commence production drives for ore development.



Figure 5: Installation of liner seven at Aluketiya Shaft H

The engineered concrete pad area for Shaft J has been completed and shaft development is commencing. The headframe for the shaft will be installed during August.



Figure 6: First trial set of 2.5m diameter shaft liners for Shaft J from FGR designed mould

Exploration Licences

The Company's total exploration land bank is 39,500ha, making it the largest holder of high grade exploration licences in Sri Lanka. The Company continues to conduct exploration work on these licences and is rating the areas for future drilling and development programs.

In August FGR will be embarking on the first in country downhole electromagnetic survey at its Aluketiya project. The survey is designed to delineate graphite veins intersected in existing drilling and to also identify the possible existence of graphite veins not intersected by existing drilling. Downhole electromagnetics is used widely in highly conductive mineralisation styles. This method has not been used in Sri Lanka to delineate graphite veins but FGR believes that, if successful, it will make exploration for graphite more efficient. Results of the survey will be completed before the September quarterly report.

Corporate

In May the Company advised it has received commitments for a placement of shares at \$0.09 with attaching options on a 1 for 2 ratio, raising \$2.4 million.

Far East Capital Limited, the Lead Manager, advised the placement was strongly supported by strategic investors and high net worth individuals.

Noosa

In mid-July the Company gave a presentation at the Noosa Mining & Exploration Conference. The presentation was well received and the Company has received very positive feedback from shareholders and potential investors who were in attendance.

FGR's Managing Director Craig McGuckin said he was pleased with the quarter's progress for the Company as it marched towards production.

Mr McGuckin said First Graphite was making rapid progress towards its goal of becoming a substantial supplier of high quality-graphene and high grade graphite in 2016.

"The progress on the 250 litre production cell has been excellent," Mr McGuckin said, "We look forward to having this running during August as we progress our graphene production strategy".

"Work also progressed rapidly on the Aluketiya project during the quarter and the significant drill intercept reported in May has provided a new dimension to this project.

"Furthermore ore production from Pandeniya is imminent demonstrating the ability of the Company to take a target area from exploration through to mining, something not previously achieved by other recent players in the Sri Lankan graphite space."

The September Quarter Program

FGR is now immersed in an active September Quarter, which includes:

- Commencement of graphene production and optimisation from the full size production cell following successful test work at the University of Adelaide
- Pandeniya mining and ore production to commence
- Completion of shaft sinking on Shaft H at Aluketiya
- Complete construction of the second headframe and proceed with shaft sinking on Shaft J at Aluketiya
- Downhole electromagnetic survey at Aluketiya and Pandeniya projects
- Expansion of collaboration with prospective graphite and graphene off take parties

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° 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:

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Managing Director

First Graphite Ltd

Peter R. Youd

Executive Director

First Graphite Ltd

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Information in this report relating to Metallurgical interpretation, analysis, mineral distribution and recommendations has been compiled by Mr Chris Banasik, 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.

Information in this report relating to Exploration Results is based on information compiled by Mr Chris Banasik, MAusIMM working in consultation with 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 Banasik 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 Banasik consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

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"> 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.
Drilling techniques	<ul style="list-style-type: none"> All future drilling will be undertaken utilising HQ Triple Tube (HQTT) drilling.
Drill sample recovery	<ul style="list-style-type: none"> 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
Logging	<ul style="list-style-type: none"> 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. Logging will record geological and geotechnical observations, and is undertaken on a continual basis throughout the entire drill hole.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> 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 & bulk samples may be provided to potential off-take parties.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> 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. Certified Sample Standards will be inserted routinely into sample analysis.
Verification of sampling and assaying	<ul style="list-style-type: none"> 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 visit the MRL operation sites on a regular basis to oversee QA.
Location of data points	<ul style="list-style-type: none"> 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 geo-referenced to the Sri Lankan Transverse Mercator Projection. All final drill locations are set out by surveyor.
Data spacing and distribution	<ul style="list-style-type: none"> 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.

Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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.
Sample security	<ul style="list-style-type: none"> 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.
Audits or reviews	<ul style="list-style-type: none"> 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.

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="550 824 1377 925"> <thead> <tr> <th>License No.</th> <th>MRL Interest</th> <th>Status</th> <th>General Location</th> </tr> </thead> <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> <table border="1" data-bbox="550 974 1377 1406"> <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/228</td><td>100%</td><td>Granted</td><td>Central</td></tr> <tr><td>EL/243</td><td>100%</td><td>Granted</td><td>Central</td></tr> <tr><td>EL/262</td><td>100%</td><td>Granted</td><td>Central</td></tr> <tr><td>EL/318</td><td>100%</td><td>Granted</td><td>Central</td></tr> <tr><td>EL/321</td><td>100%</td><td>Granted</td><td>Central</td></tr> <tr><td>EL/325</td><td>100%</td><td>Granted</td><td>Central</td></tr> <tr><td>EL/326</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/322</td><td>100%</td><td>Granted</td><td>South Central</td></tr> <tr><td>EL231</td><td>100%</td><td>Granted</td><td>South West</td></tr> <tr><td>EL/244</td><td>100%</td><td>Granted</td><td>South West</td></tr> </tbody> </table> <ul style="list-style-type: none"> 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. 	License No.	MRL Interest	Status	General Location	IML/C/HO/8416	100%	Granted	Western	IML/A/HO/9405	100%	Granted	Central	EL/225	100%	Granted	Central	EL/226	100%	Granted	Central	EL/228	100%	Granted	Central	EL/243	100%	Granted	Central	EL/262	100%	Granted	Central	EL/318	100%	Granted	Central	EL/321	100%	Granted	Central	EL/325	100%	Granted	Central	EL/326	100%	Granted	Central	EL/227	100%	Granted	South Central	EL/322	100%	Granted	South Central	EL231	100%	Granted	South West	EL/244	100%	Granted	South West
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Exploration done by other parties	<ul style="list-style-type: none"> 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. Historical mining has taken place with several shafts and adits evident. MRL continues exploration in all license areas 																																																																

Geology	<ul style="list-style-type: none"> • Warakapola / Bopitiya / Pandeniya / Aluketiya / Dedigama • 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)
Drill hole Information	<p>Planned Diamond Core Drill Holes</p> <ul style="list-style-type: none"> • MRL is undertaking exploration drilling presently at its Aluketiya location and will report on commercial intersections when they occur. • 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.
Data aggregation methods	<ul style="list-style-type: none"> • 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.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • 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.
Diagrams	<ul style="list-style-type: none"> • NA
Balanced reporting	<ul style="list-style-type: none"> • First Graphite Ltd will endeavour to produce balanced reports accurately detailing the results from any exploration activities.
Other substantive exploration data	<ul style="list-style-type: none"> • No other substantive exploration data is available at this time.
Further work	<ul style="list-style-type: none"> • 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. • Land access agreements continue at Pujapitiya, Dedigama and Hikkaduwa • Further drilling is planned at Aluketiya, Dedigama & Pujapitiya and other license areas as land access is obtained.