

# ASX Announcement

29 May 2017

## Operational Update –Graphene Production and Mining Activities



**first graphite**  
A high-quality graphene producer

### Highlights

- Research work commences on university project
- Graphite ore is regularly being brought to surface
- Shaft H drive has advanced 11m toward a drill target at 14m.
- Shaft J has commenced its drive toward a drill target that is 32m from the shaft.

First Graphite (ASX: FGR) is pleased to provide an update on its graphene production and mining activities.

### University Projects

Following the completion of all documentation work has commenced on the BEST Battery project at the Swinburne University of Technology whereby FGR has the ability to earn a 70% interest in a global licence for this revolutionary energy storage technology.

### Graphene Production

During the month of May, the Company also announced that continuing optimisation of its graphene production cell has resulted in better than a 150% increase in capacity. The latest optimisation work has more than doubled the capacity of the cell so it can now produce up to 13 tonnes per annum with full utilisation, with the ability to produce at even higher rates demonstrated in some test runs, with as high as 300% improvement. Each cell now has the potential to generate sales in the order of \$2m per annum as a result of these productivity improvements. The number of operating cells will increase in line with the growth in demand for graphene.

The Company has submitted the necessary documentation to the Western Australian Department of Environmental Regulation (DER) for permitting of its new Henderson facility. It is anticipated DER approval will be received by the end of July, enabling the Company to move from its current shared location to premises in the Australian Marine Complex in Henderson, south of Fremantle in Western Australia.

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#### ASX Symbol

FGR, FGROB

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FGR's New Premises in the Australian Marine Complex, Henderson

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### Aluketiya – Shaft H

Further to the Company's release on 17 May 2017 it has continued to mine graphite ore, which is being brought to surface. The drive is now in 11m toward a previously identified drill target approximately 14m along the current drive. It appears the vein encountered at the previously identified drill target extends toward the current drive activities. The drive continues to progress toward the target intersected in drive H036196.

[17-052017: Operations Update](#)



Another kibble of graphite brought to surface

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Clean ore is bagged at the H036196 drive face to prevent impurities and dilution and then added to the kibble



Note extensive rock bolting and meshing in Shaft H, drive H036196

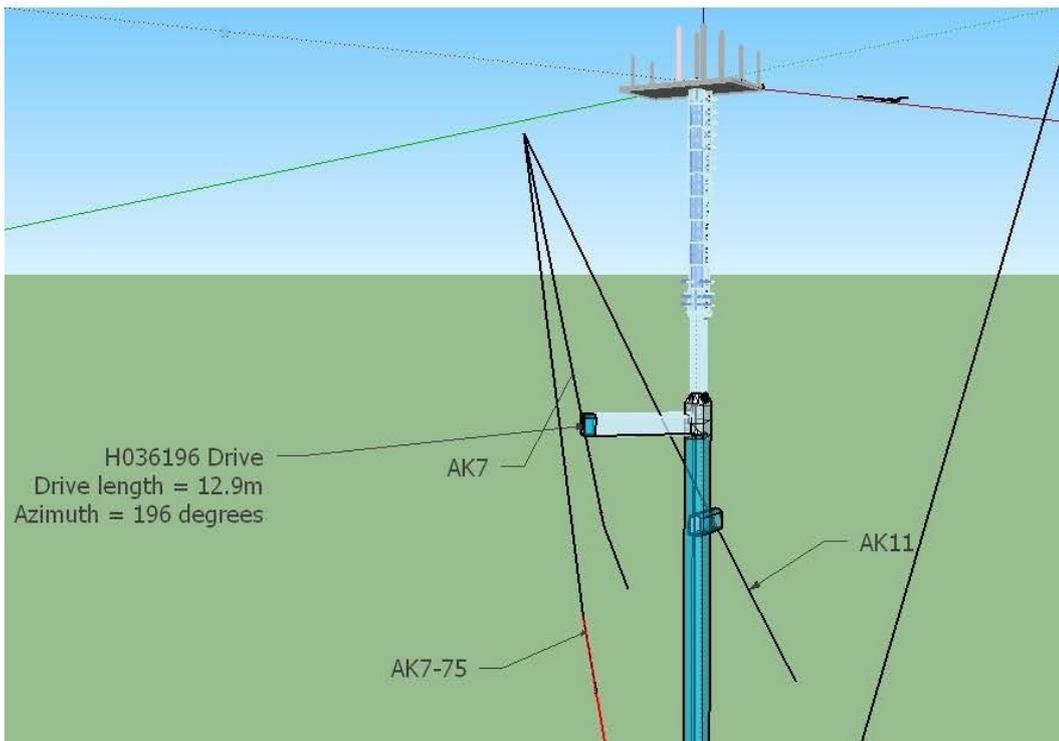
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An as built drawing of Shaft H, drive H036196 shows the proximity to the drill intersection

Note: Clear sections are as built, Blue sections are planned work

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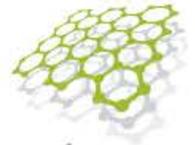
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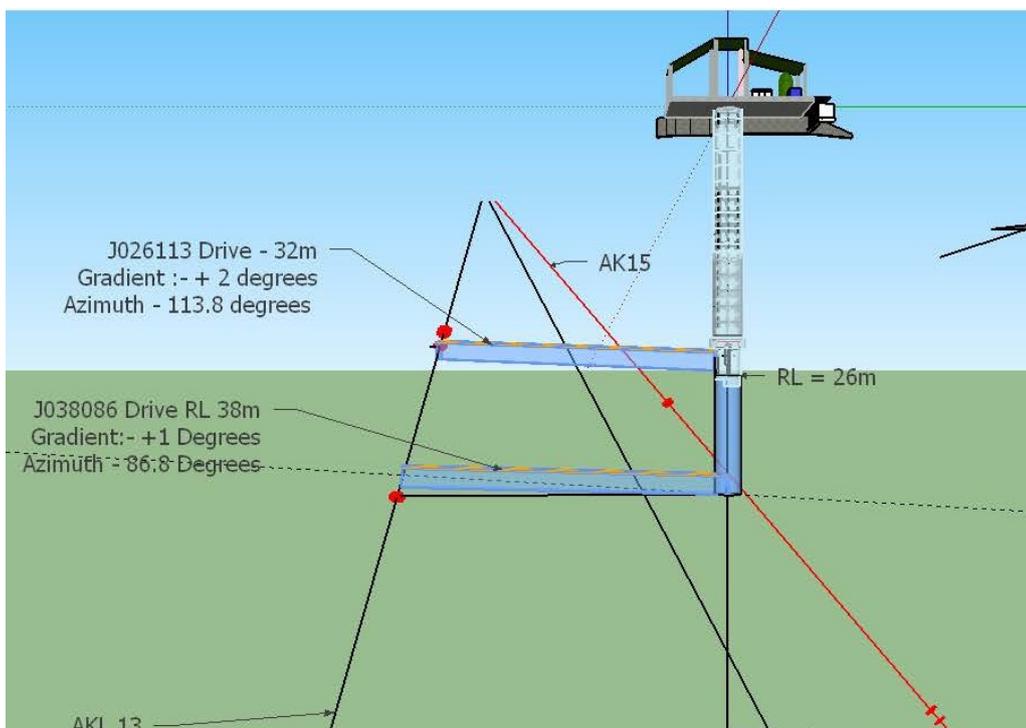
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### Aluketiya – Shaft J

Shaft J has reached its initial production drive depth and has commenced driving. The drive is targeting a 26cm (downhole) drill intercept in ALK 13. This intercept is approximately 32 metres from the shaft.



An as built drawing of Shaft J, drive J032113 shows the proximity to the drill intersection

### Drilling

The Company drill rig has returned to Aluketiya and is commencing to drill a series of holes to provide further geotechnical information for a planned drive toward the intersection of 1.72m of high grade vein graphite over 2.81m at drill hole ALK18.

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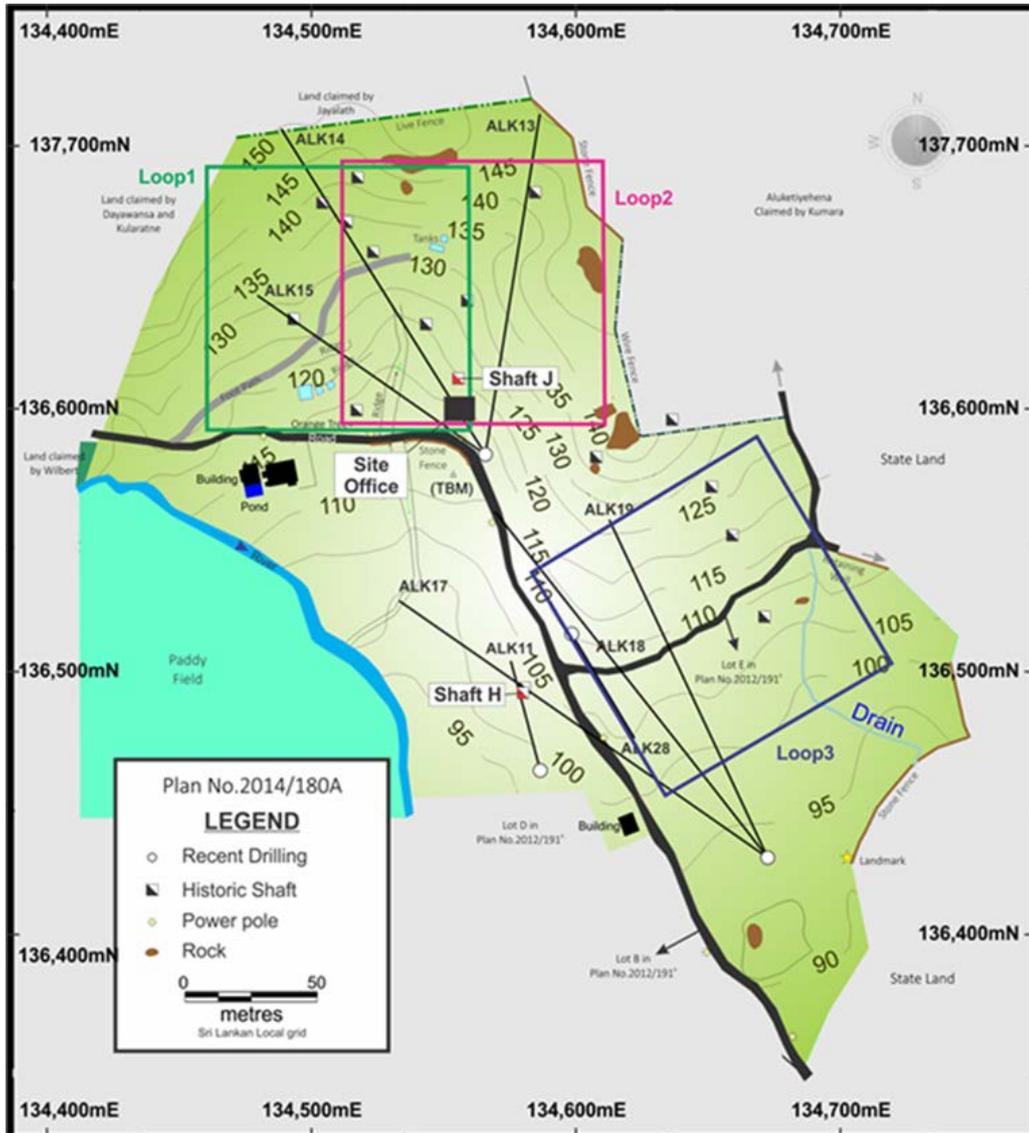
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Aluketiya project site plan with Shafts H and J and exploration drill hole traces and transmitter loop locations

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### Corporate

The Company has realised a further \$2.3m from the exercise of options which expired on 21 May 2017. These funds ensure the Company has adequate funds to continue its graphene expansion and staged mining activities.

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Commenting on this update, FGR's Managing Director Craig McGuckin said

*"This has been an exciting and busy month for the Company, with increased production capacity from the first graphene cell, holding the kick off meeting for the BEST battery with Swinburne, advancing final agreements with both Adelaide and Flinders universities, securing our own premises for graphene production, the first production of graphite from our mines in Aluketiya, and the raising of a further \$2.3m."*

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

First Graphite produces high quality graphene from high grade Sri Lankan vein graphite.

First Graphite seeks to develop graphene production methods and acquire graphene related intellectual property which can provide further revenue related opportunities.

### 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.

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