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**ASX Symbol**

FGR, FGROA, FGROB

## FGR Accesses New IP

### *Negotiating further IP related to graphene products*

First Graphite (ASX: FGR) is pleased to provide an update on the operations of the graphite and graphene production business units.

### Highlights

- Licence agreement Term Sheet for Multipurpose graphene-based composite and Fire Retardant IP.
- Potential for worldwide use of the IP

### Multipurpose graphene-based composite and Fire Retardant

FGR has received a Licence Agreement Term Sheet from the University of Adelaide to progress the use of IP relating to Multipurpose graphene-based composite and Fire Retardant. Successful negotiation of the licence would see FGR with an exclusive worldwide licence to commercialise the IP within the field of fire retardant applications and would include the right to sub licence. FGR would be paying a royalty and fee to the University of Adelaide for the licence.

Expandable flake graphite has been used for some time in flame retardant resins. Their successful use is dependent on the purity of the graphite flake, particle size of flake and also on the expansion properties of expandable graphite.

The use of graphene in these retardants will significantly improve their effectiveness.

Managing Director, Mr Craig McGuckin said *"This is another step by FGR to progress from research to commercial uses for graphene. We are pleased to be building on our relationship with the University of Adelaide by negotiating this licence agreement"*

#### 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 ~25cm, using narrow vein mining techniques can be economically extracted from underground operations.*

For further information:

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