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29 January 2016

# ASX Announcement December 2015 Quarterly Activities Report

Lanka Graphite Limited (ASX: LGR, "Lanka" or "the Company") is pleased to report on activities on its Sri Lankan graphite exploration projects for the 3-month period to 31 December 2015.

#### Highlights

- Signed MOU with Government of Sri Lanka for future partnership
- Assays from Exploration Licences EL266, EL267 and EL268 achieved exceptional high grade 99.97% purity with potential for Nuclear Grade
  - Flotation testing assays of vein graphite powder sample returned grade of 99.97% TC (Total Carbon);
  - Assays of supplied rock sample returned 99.90% TC;
  - Recovery rates circa 96%
- Assay laboratory confirmed that both products can be sold as premium battery-grade graphite (\$5,000 - \$20,00 / tonne) with very low cost production of graphite product (no chemical leach requirement - simple wash and flotation process)
- Mapping and geophysics extended vein graphite targets reconnaissance geological mapping confirmed the locations of historical workings and identified structural targets for new vein graphite deposits across Lanka's licences.

#### **March Quarter Plans**

- Graphite industry development committee to be established to undertake feasibility study to consist of government and Lanka Graphite representatives
- Second phase of detailed geophysical surveying to commence, to identify targets for core drilling in 2016

# **Operations**

#### Memorandum of Understanding (MOU) with the Government of Sri Lanka

During the quarter, Lanka Graphite signed a Memorandum of Understanding (MOU) with the Government of Sri Lanka covering the development of the graphite and graphene industry in Sri Lanka.

The MOU is the first step toward a feasibility study outlining a development structure between the two parties that will progress Sri Lanka toward a world leading position in the current vein graphite industry and becoming a future leader in graphene research and development.

Under the terms of the MOU, government and Lanka Graphite representatives will form a graphite industry development committee for the purposes of undertaking the feasibility study and determining the nature of the projects and the level of investment required to achieve the stated aims.

#### **Exploration Licences EL266, EL267 and EL268**

## Assays achieved exceptional high grade 99.97% purity, with potential for Nuclear Grade

The Company reported that assays from vein graphite rock and powder samples taken from across its exploration licences EL266, 267 and 268 in south-west Sri Lanka returned exceptionally high grades of more than 99% TC, indicating that the product is suitable as premium battery grade graphite.

Assay laboratory ALS Metallurgy noted that with simple purification the product could be further upgraded for use in nuclear reactors, where graphite is an important material in construction and in temperature moderation, due to its purity and its ability to withstand extremely high temperatures.

#### Vein graphite targets extended via new mapping and geophysics

The Company announced the first set of results from an ongoing VLF geophysical survey and geological mapping.

Geological mapping identified more than 50 existing pits, shafts and adits, and highlighted structural and lithological trends that may be related to vein graphite mineralisation.

The VLF survey initially targeted seven areas in EL266, 267 and 268 (Figure 1) where there are historical graphite workings. The VLF survey results suggested the presence of graphite mineralisation between and beyond the extent of the mine workings, indicating that the mineralisation may extend well beyond historical mining areas.

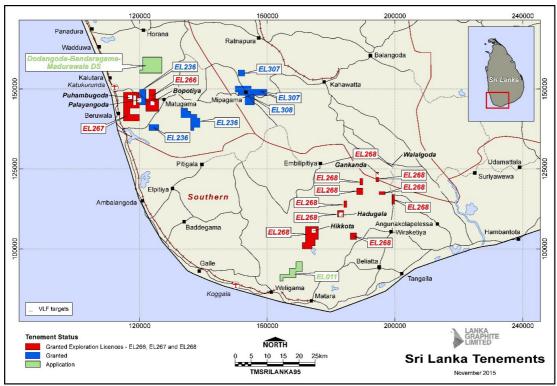


Figure 1. Location of Lanka's tenements in the surveyed part of south-western Sri Lanka. VLF survey grids shown as white squares.

## **Geological mapping**

Reconnaissance geological mapping was completed over portions of EL266, EL267 and EL268. The work identified structural and lithological trends and a range of cross cutting joint/fracture directions. A total of 51 historical pits, shafts and adits were identified and mapped; an example of the historical workings is shown in Figure 2.

The distribution of the graphite occurrences together with the geological information will assist in prioritising targets for follow up.

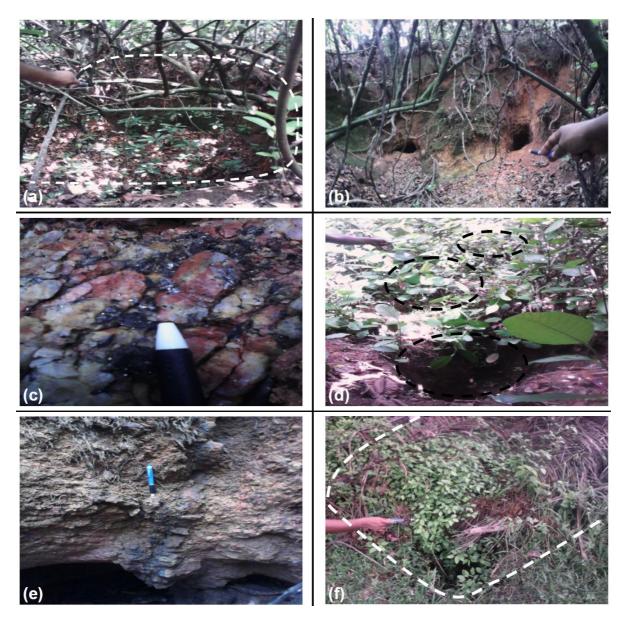


Figure 2. Abandoned Graphite mine site 4 in Grid 34 (a) Partially filled shaft covered by thick Diyapara vegetation (b) Two adits opened to the main Shaft (c) Graphite flakes associated with Quartzite (d) Interconnected series of adits (e) Graphite associated with a pelitic band going through laterite observed at adit mouth (f) A shaft totally filled with debris.

# **Geophysical Surveying**

VLF surveys were undertaken to identify conductors within graphite mineralised areas around and between old adits and shafts. A total of seven prospects (two in EL266, one in EL267 and five in EL268) were selected for VLF geophysical surveys. All survey areas contained old graphite mine shafts, adits or pits.

The VLF survey employed a Geonics EM-16 receiver, using the VLF EM signal transmitted from the Northwest Cape (NWC 22.3) VLF transmitter tower in Western Australia. The acquired EM data was gridded and imaged (with a reverse colour stretch) to highlight EM responses interpreted to be caused by local electrical conductors such as graphite.

A Fraser filter was used to transform inflections into peaks to identify the conductor locations. The resulting Fraser filtered tilt angle VLF data were imaged, highlighting the crossover trends, and therefore possible conductor locations, in red. The images showing the results are presented below in Figure 3–Figure 9.

Many of these conductors correspond to known historical graphite locations, suggesting these conductors are related to graphite mineralisation. The interpreted conductor locations are displayed as the pink and white lines in Figures 2–8. These conductor traces are considered a very rough approximation only, and are not

considered adequate to define drill targets because of the uncertainties associated with VLF data.

The VLF survey results suggest the presence of untested graphite mineralisation. The lengths of the interpreted conductors are often longer than the extent of the mine workings, indicating the mineralisation may extend well beyond the areas of historical mining.

Several of the conductors detected in the VLF survey blocks have no historical mine workings, and may be related to untested graphite mineralisation under cover.

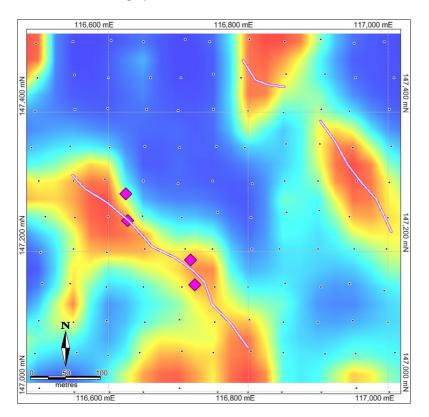


Figure 3. EL266 Palayangoda graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) overlain on a Fraser filtered VLF tilt angle survey data image.

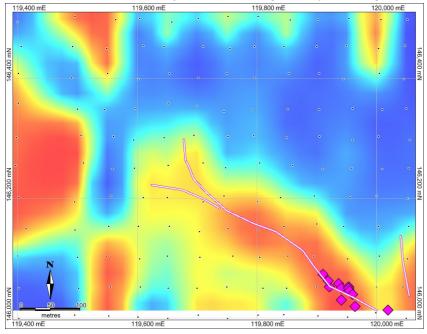


Figure 4. EL266 Puhambugoda graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) (LHS) overlain on a Fraser filtered VLF tilt angle survey data image.

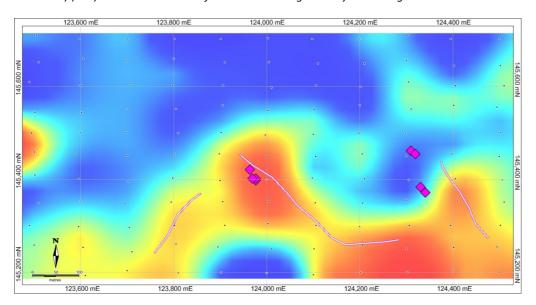


Figure 5. EL267 Bopotiya graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) (LHS) overlain on a Fraser filtered VLF tilt angle survey data image.

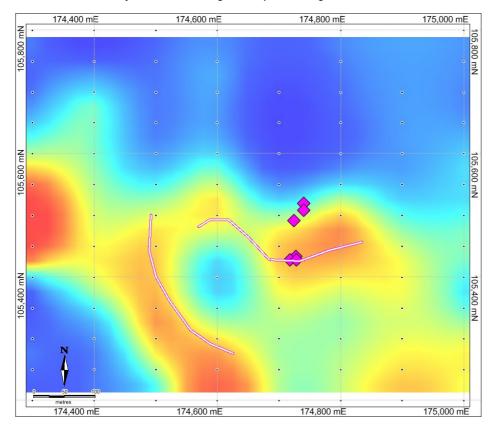


Figure 6. EL268 Hikkota graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) (LHS) overlain on a Fraser filtered VLF tilt angle survey data image.

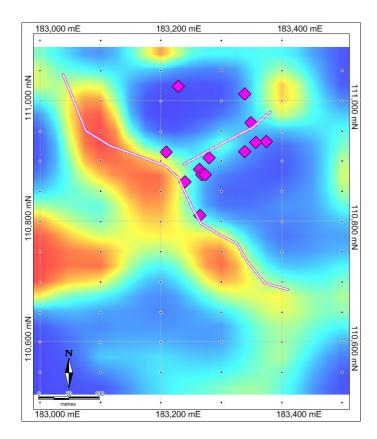


Figure 7. EL268 Hadugala graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) (LHS) overlain on a Fraser filtered VLF tilt angle survey data image.

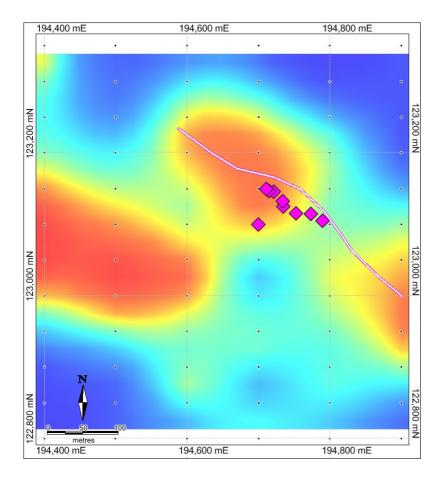


Figure 8. EL268 Gankanda graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) overlain on a Fraser filtered VLF tilt angle survey data image.

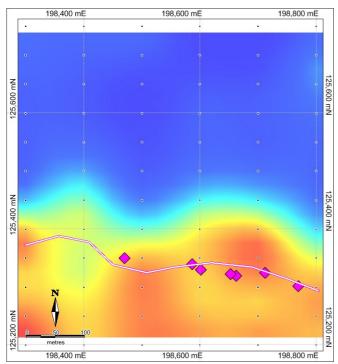


Figure 9. EL268 Walalgoda graphite prospect map with the VLF survey stations (black and white dots), the interpreted conductor location traces (pink and white lines) and known historical graphite mine workings (pink diamonds) overlain on a Fraser filtered VLF tilt angle survey data image.

#### **Annual General Meeting**

At the Company's Annual General Meeting on 27 November 2015, all resolutions put to shareholders were passed by a show of hands.

### **About Lanka Graphite**

Lanka Graphite Limited (ASX:LGR) is an ASX listed graphite exploration company that is focused on exploration of a number of historic and new mining tenements in Central and South Western Sri Lanka. Historic mining at a number of the granted tenements produced very high grade 'lump' or vein style graphite with grades >95%C. High purity vein graphite was historically produced from Lanka's tenements at a grade that is also well suited to graphene derivation. Lanka Graphite will commence exploration of its granted tenements with the intention to develop high grade graphite production that can supply nearby Asian end user companies particularly focused on new technology graphene applications.

# Justyn Stedwell Company Secretary

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