

31 January 2017

ASX Announcement December 2016 Quarterly Activities Report

Lanka Graphite Limited (ASX: LGR, "Lanka", "the Company") is pleased to report on activities on its Sri Lankan graphite exploration projects for the period to 31 December 2016.

Highlights

- **Reconnaissance geological mapping confirms further locations of historical workings and identifies structural targets for vein graphite deposits in two of Lanka Graphite's licences in southwestern Sri Lanka**
- **Very Low Frequency (VLF) electromagnetic surveys identify zones of elevated conductance below and between old shafts and adits**
- **VLF anomalies extend away from known occurrences of vein graphite, suggested strike extensions**
- **Results will be used to determine targets for Fixed Loop, Time Domain Electromagnetic Survey (FLEM)**
- **Graphene production patent awarded to Lanka Graphite research partner, National Taiwan University of Science and Technology**

Operations

Exploration Licences

New targets

During the quarter, Lanka Graphite announced results from an ongoing VLF geophysical survey and geological mapping exercise undertaken over its Exploration Licences.

Geological mapping identified old pits, shafts and adits on Exploration Licences (EL) 236 and 237. The mapping also highlighted structural and lithological trends possibly related to vein graphite mineralisation.

The VLF survey targeted three grids in EL236 and two grids in EL237 where there are historical graphite workings. The results suggested the presence of graphite mineralisation between and beyond the extend of the mine workings, indicating that the mineralisation may extend beyond historical mining areas. Several conductors detected in the surveys have no historical workings and may be related to untested graphite mineralisation under cover.

Geological model

Sri Lanka has a long history of graphite mining dating back to the early 1800s when peak production in the first two decades of the 20th century, reaching 33,410 long tons (33,944 tonnes) in 1916.

Sri Lankan graphite occurs predominantly as veins ranging in thickness from veinlets less than 1mm thick to more than 1m thick. The veins are often zones and contain more than one type of graphite, e.g. flaky, needle or massive, related to the depositional conditions. The veins pinch and swell and also can abruptly end. They can have limited extent and be better described as lenses. Sometimes veins can occur in clusters.

Geological mapping

Reconnaissance geological mapping was completed by Sri Lanka's Geological Survey and Mines Bureau (GSMB) over portions of EL236 and EL237. Several historical graphite pits, shafts and adits were identified and mapped. The distribution of graphite occurrences and geological information will help Lanka prioritise targets for follow up.

EL236 Zone 3 – Dodangoda area, Wallawita

Geological mapping in the three grids 03,31 and 35 of EL236 identified charnockitic gneiss, garnet sillimanite schist and garnet hornblende biotite gneiss. Structural mapping in grid 03 showed that the predominant joint direction is NNE-SSW and NE-SW, while mapping in grids 31 and 35 indicated a E-W and N-S joint direction.

Needle-type graphite particles were found in the Ridiwita area where historical vertical pits were found, mostly filled in with sediment and covered with vegetation.

EL237 Zone 2 – Gonagala-Ruwanella area

Geologically, this study area is interpreted to be in the Wannu Complex, close to the marginal zone of the Highland Complex. The mapped grids are mainly composed of para-gneisses including garnet sillimanite biotite gneiss, charnockitic gneiss, granitoid gneiss and garnetiferous quartzofeldspathic gneiss. Government mapping showed the grid straddles the Gonagala Antiform, which is flanked by north-south trending shear zones. Old pits and shafts were mapped near the eastern part of the grids, near the antiformal axis.

The grids mapped in EL237 in the Ruwanwella division of Sabaragamuwa province in an area of several abandoned graphite pits, adits and shafts.

Geophysical Surveying

VLF surveying was undertaken over the graphite prospects Walallawita (EL236) and Ruwanwella (EL237) by Water Supply Consultants (PVT) Ltd using a Geonics EM-16 VLF receiver. The survey report included the VLF electromagnetic data.

All VLF survey lines were oriented N-S, spaced 200m apart and used 100m station spacing. The Walallawita survey consisted of 11 x 1km long survey lines and Ruwanwella was 6 x 2km long survey lines.

Survey results were mixed. The quadrature responses for both survey blocks were negligible due to the low response signals, and were not used in the review. The tilt angle data were also of mixed quality. The tilt angle VLF data acquired at Walallawita are useful in identifying conductive trends, but the Ruwanwella tilt angle VLF data are noisy and difficult to interpret.

Geophysical Interpretation

At Walallawita, three parallel conductive trends with NW-SE strike directions were interpreted from the VLF survey data. Historic mine locations are offset from the strongest interpreted conductor location by approximately 100m and it is recommended to check the coordinates of the historic mine sites to ensure they are correct.

At Ruwanwella, numerous anomalous VLF responses were identified in the VLF tilt angle data. There appears to be a dominant NW-SE trend from these anomalous VLF responses but these trends may not represent the true graphite vein orientations because conductors oriented NW-SE are electrically well coupled with the primary EM field generated by the NWC transmitter in Australia, whereas the NE-SW oriented conductors are electrically null coupled. More detailed information at this prospect is required to better identify and interpret the conductor locations and orientations.

Future geophysical surveys

The VLF surveys are essentially a semi-quantitative approach; to define testable targets and explore for blind graphite veins away from historical workings, Lanka proposes to complete modern high-powered fixed-loop, time domain, electromagnetic surveys (FLEM).

Lanka is reviewing all the new data and will integrate it with existing geological information to rank targets for FLEM follow up.

Graphene Production Patent Awarded

During the quarter, Lanka Graphite's research partner, the National Taiwan University of Science and Technology was granted a graphene production patent in Taiwan.

This granted patent relates to a method of producing graphene via Liquid Phase Exfoliation (LPE), which uses intercalating molecules to produce a modified graphene from the vein graphite that has historically been mined from workings found within Lanka Graphite's exploration licences in Sri Lanka. From trials and research conducted at NTUST, results have shown that the graphene produced via this patented technology is suitable for application in thermal management, electrical devices, energy storage and conversion, and for battery anodes.

This was a key element in the project, which is aiming to develop a scalable production method to produce high-quality graphene using the raw vein graphite samples from Lanka Graphite.

Corporate

Annual General Meeting

At the Company's Annual General Meeting of shareholders, held on 30 November 2016, all resolutions put to the meeting were passed on a show of hands. Resolutions were as follows:

1. Adoption of Remuneration Report
2. Re-Election of Alison Coutts
3. Issue of Convertible Notes
4. Approve additional 10% placement capacity.

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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