LANKA GRAPHITE LIMITED
THE NEW BLACK GOLD

ACN 074 976 828
Suite 32, Level 18, 101 Collins Street
MELBOURNE VIC 3000

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New vein graphite targets verified on Lanka Graphite exploration tenements

Highlights

- **Lanka Graphite identifies several vein graphite targets at historical sites resulting from exploration mapping across EL307 and EL308**
- **Mapping continues to define the presence of old graphite workings and to interpret geological controls.**
- **Results of the mapping will underpin detailed geophysical surveying and it is anticipated that this will identify targets for core drilling in 2016.**

Lanka Graphite Limited (ASX: LGR) is pleased to announce the second set of results from an ongoing reconnaissance geological mapping exercise being undertaken by GSMB Technical Services (Pvt) Ltd over its Exploration Licences in southwestern Sri Lanka, completed in January 2016.

Geological mapping has identified more than 20 existing pits, shafts and adits on Exploration Licences (EL) EL307 and EL308. The mapping also highlighted structural and lithological trends that may be related to vein graphite mineralisation.

Lanka Executive Chairman Mr Jitto Arulampalam said, "The reconnaissance mapping continues to yield encouraging results in our campaign to identify economic vein graphite resources in Lanka's tenements in southwestern Sri Lanka. In conjunction with previous mapping and VLF survey results from EL266, 267 and 268, these results will help to focus a detailed geophysical surveying phase to enable drilling planning."

Geological model

Sri Lankan graphite generally occurs as high-purity veins (>95%), ranging in thickness from veinlets less than 1 mm thick to massive veins more than 1 m thick. The veins are usually located in the hinge zones of antiforms within highly metamorphosed, granulite facies, rocks of the Precambrian Basement terrain that underlies much of Sri Lanka.

Vein graphite mineralisation is commonly associated with pegmatites and vein quartz, both related to tensional zones of open space in fold hinges and cross cutting structures. The graphite veins follow linear, sub-vertical, zones aligned with the axes of antiforms and are considered to have been derived from CO_2 in late hydrothermal fluids, produced during metamorphism.

Graphite was also deposited in secondary fractures at right angles or at steep angles to the strike of the antiformal hinge zones, although not all such fractures are so infilled. These types of secondary fracture veins can form the bulk of the graphite resource in a deposit in Sri Lanka.

Given that Sri Lanka was previously a major world supplier of high-quality vein graphite, extensive mining and prospecting for graphite occurred in the country over the past two centuries. Old shafts, adits and prospecting pits are therefore a common starting point for present day exploration.

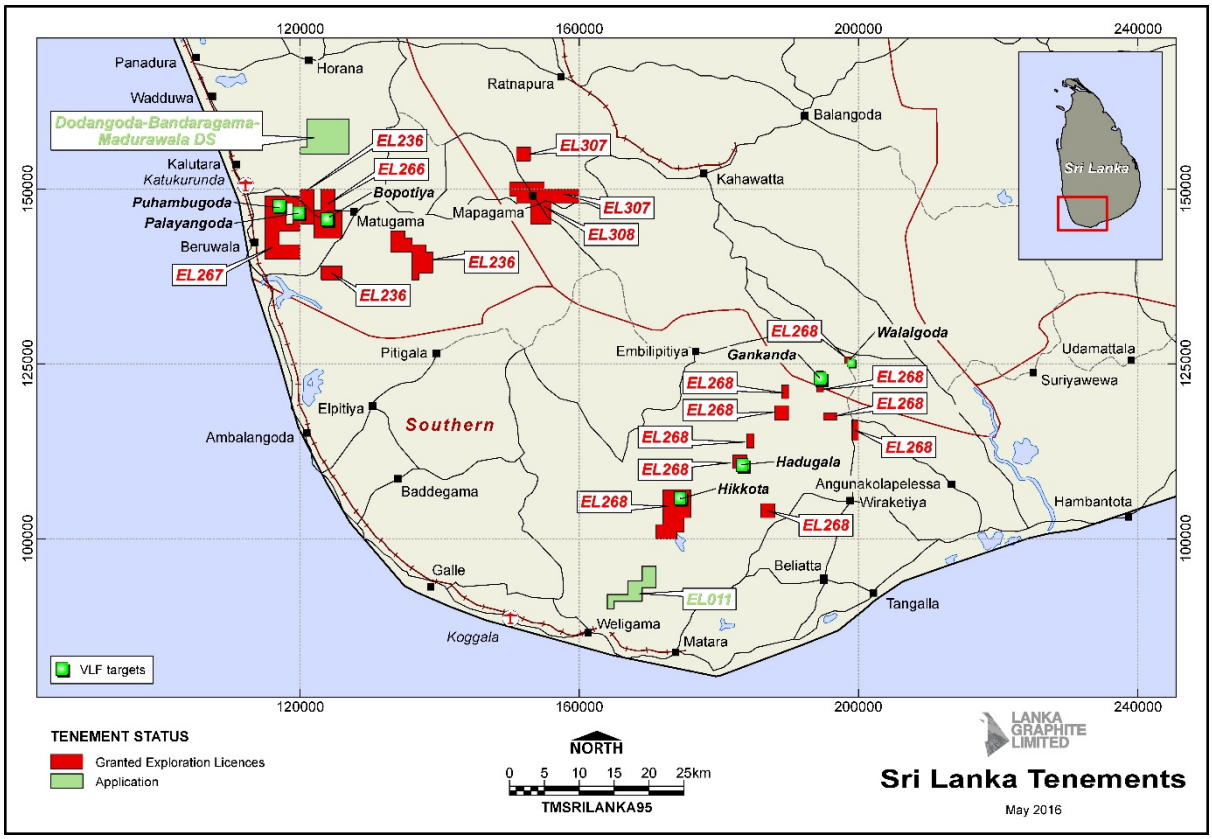

Figure 1: Location of Lanka's tenements in south-western Sri Lanka. VLF survey grids reported in November 2016 shown as green squares

Geological mapping

Reconnaissance geological mapping has been completed by GSMB over portions of EL307 and 308, which are located near Mapagama in the Ratnapura District (Figure 1). Twenty two historical graphite 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 geological information will assist in prioritising targets for follow-up.

EL307

Reconnaisance geological mapping was carried out on grids 3, 4, 6 and 7 of Zone 2 of EL307 in the Paragala area, north of Mapagama where seven old workings were identified (Table 1). The target area is underlain by rocks of the Highland Complex and consist of granulite grade metamorphic rocks such as charnockite gneiss, sillimanite gneiss and bitoite-hornblend gneiss. The rocks generally strike

northwest to southeast and follow synformal and antiformal structures, and prominent shear zones crosscut by faults, fractures and major joints with strike west-northwest (Figure 3). Graphite-bearing veins were mapped and noted to trend northeast, which is a similar direction to that inferred by the alignment of old shafts and pits.

EL308

Reconnaisance geological mapping was carried out on grids 6, 7, 11, 12, 16 and 17 of EL308 around the abandoned Nugahena graphite mine located in Zone 1 (Figure 4), where fifteen old workings were identified (

Table 2). The target area is underlain by rocks of the Highland Complex and consist of granulite grade metamorphic rocks including charnockite gneiss, sillimanite gneiss and bitoite-hornblend gneiss. Flake graphite was observed in some of the charnockite outcrops, in addition to needle vein graphite in a road cutting in the Nugahenagama area.

The rocks underlying grid 12 are tightly folded and generally strike north-northwest with interpreted prominent shear zones parallel to the regional structural grain and which are interpreted to be cross cut by east-northeasterly trending faults, fractures and major joints (Figure 4). The alignment of old shafts and pits suggests that the graphite-bearing veins trend north-northwest.

Table 1: Summary of old workings identified in the Kirimatihena mine area, EL307

Locality	Easting	Northing	Working type	Shape	Size	Type of Fill
1	152173	155500	Ventilation shaft	Round	1 m	Debris
2	152117	155520	Main adit	Rectangular	2 x 1.5 m	Soil/Water
3	152109	155500	Ventilation shaft	Round	1.5 m	Debris
4	152101	155541	Adit	Rectangular	1 x1 m	Debris
5	152197	155513	Adit	Round	1 m	Debris
6	152186	155499	Adit	Rectangular	1.5 x 1 m	Debris
7	152204	155492	Adit	Collapsed	-	Debris

Table 2: Summary data for old workings identified in the Nugahena mine area, EL308

Locality	X	Y	Working type	Shape	Size	Type of fill
3	154465	146297	Shaft	Round	4 m	Debris
4	154220	146325	Shaft	Rectangular	5 m x 3 m	Debris/water
5	154263	146231	Vein	Vein	0.1 m	Cover by road
7	154267	146166	Vent. shaft	Round	1 m	Debris
8	154272	146166	Vent. shaft/adit	Rectangular	1 m x 1.5 m	Debris
9	154275	146166	Vent. shaft/adit	Round	4 m	Debris
10	154275	146156	Vent. shaft	Round	1.5 m	Debris
11	154286	146137	Shaft/adit	Rectangular	1 m x 1.5 m	Debris

12	154292	146138	Shaft/adit	Round	1.5 m	Debris
13	154263	146175	Main Shaft	Rectangular	5 m x 4 m	Debris
14	154270	146184	Adit	Rectangular	1 m x 0.8 m	Debris
15	154272	146247	Shaft	Rectangular	4 m x 3 m	Debris

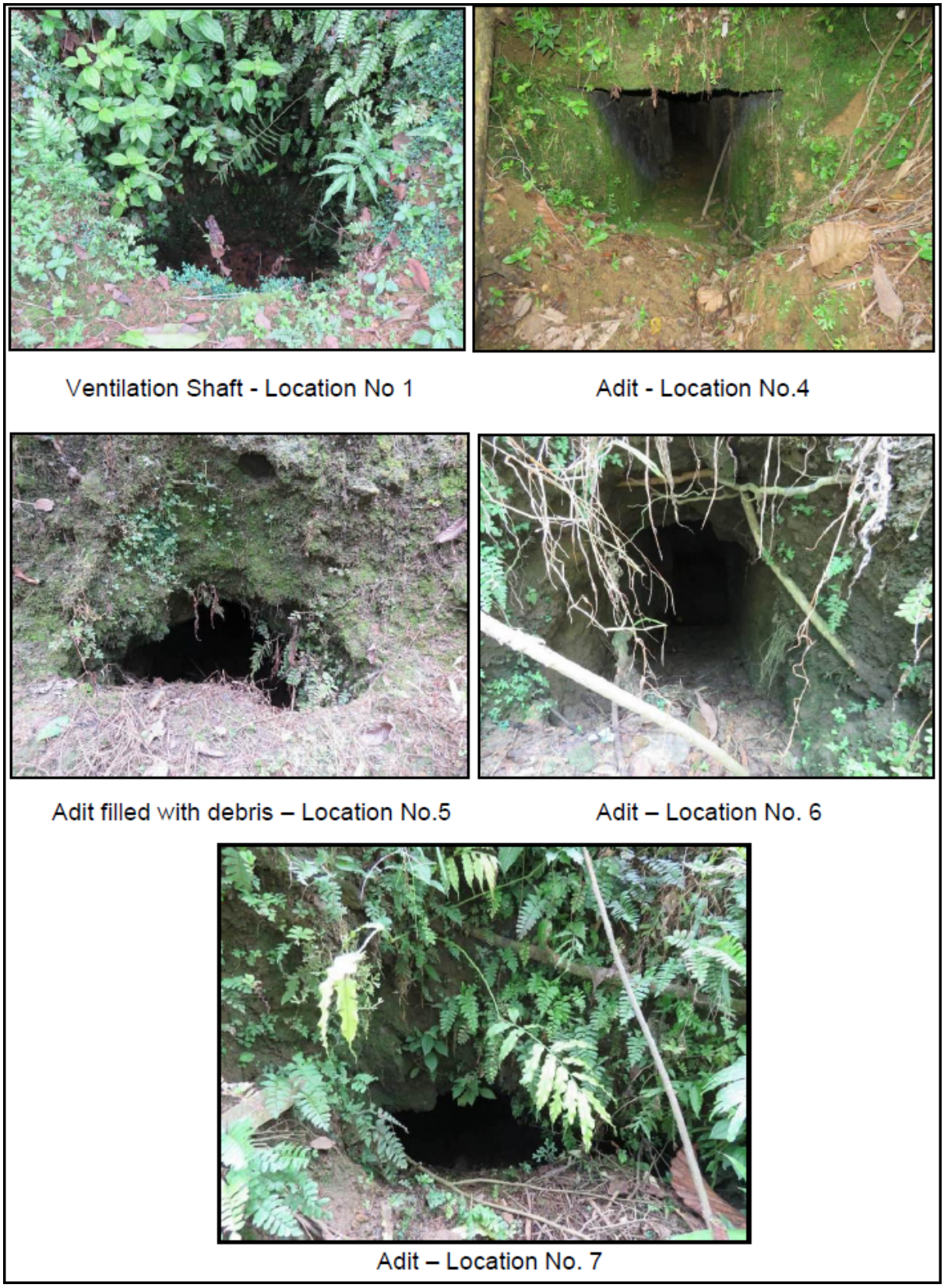

Figure 2: Abandoned adits and shaft in the Kirimatihena graphite mine area at Paragala

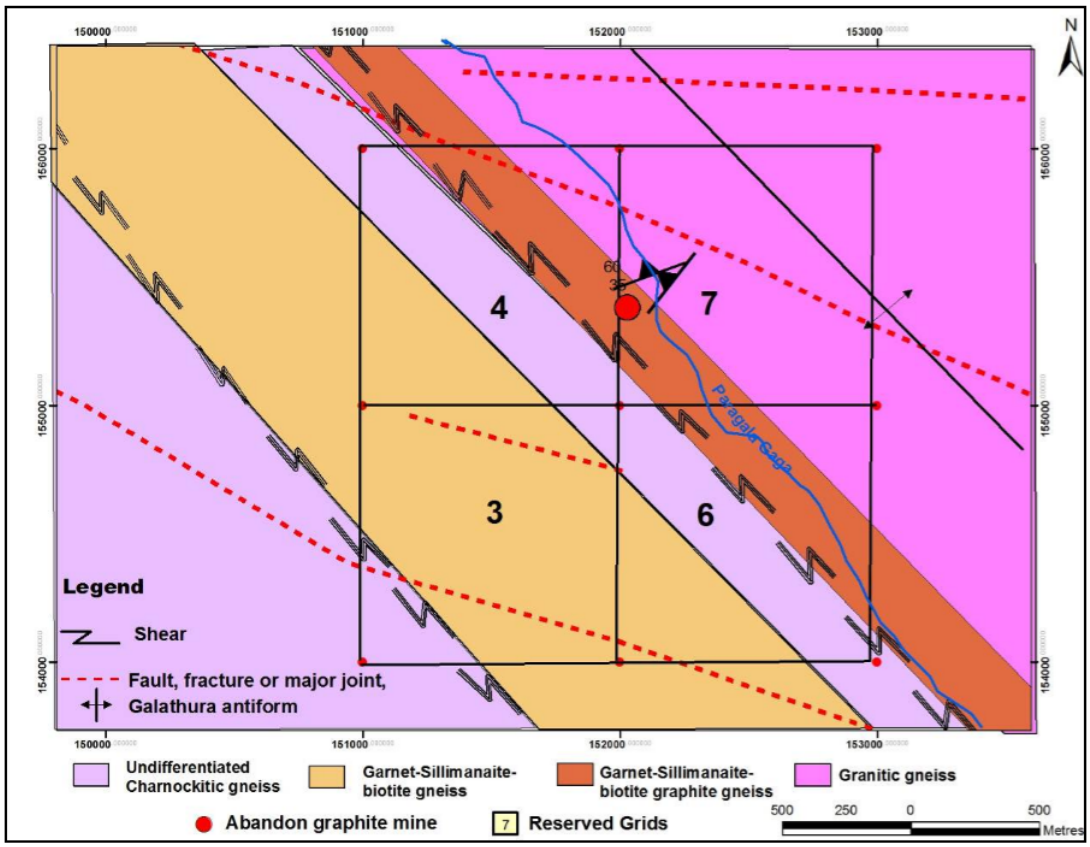

Figure 3: Geological map of the abandoned Kirimatihena graphite mine in grid 7 of EL307.

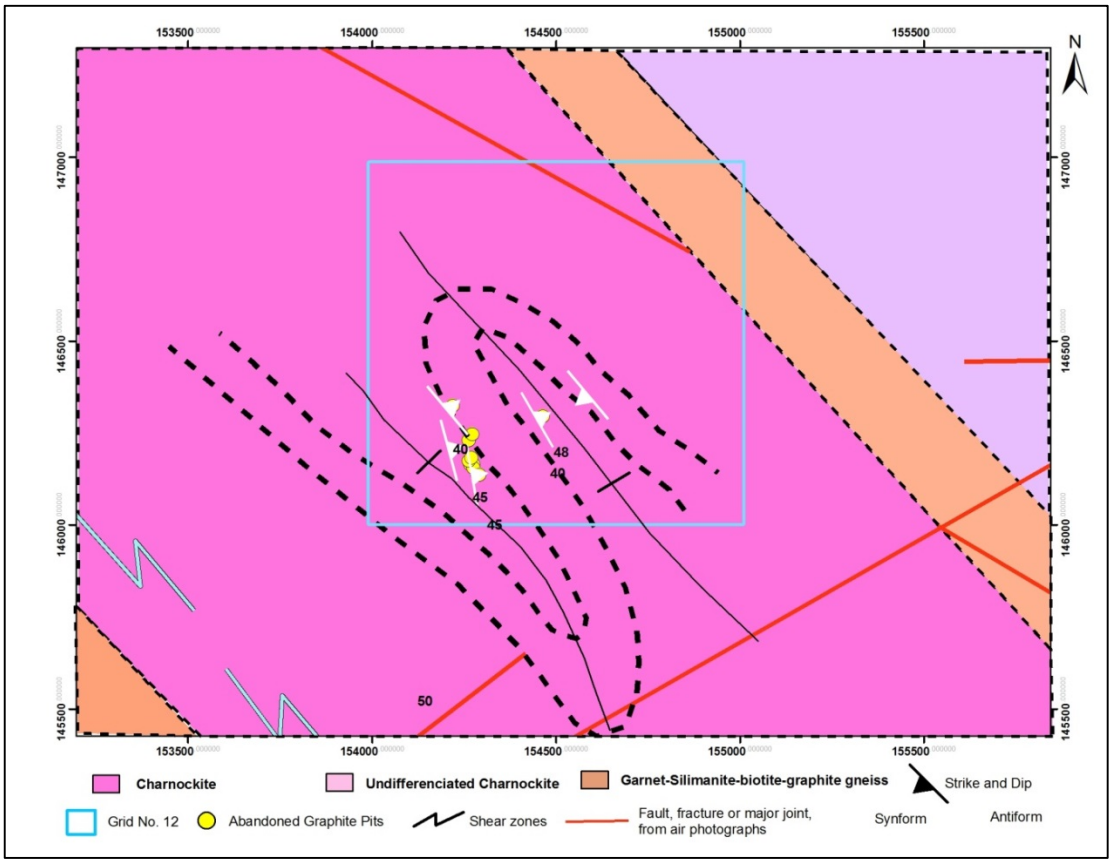

Figure 4: Geological map of the abandoned Nugahena graphite mine in grid 12 of EL308.

Future exploration

Lanka proposes to continue reconnaissance geological mapping to verify the presence of old graphite workings and to interpret geological controls.

Following completion of the reconnaissance geological mapping programme, Lanka will review all the new data and integrate it with existing geological information to rank targets for FLEM follow-up.

Lanka proposes to complete high-powered fixed loop, time-domain, electromagnetic surveys (FLEM) to define testable targets and also explore for blind graphite veins away from historical workings.

FLEM data provides high resolution data that can be modelled in 3D, to produce geophysical models of the conductive targets. These conductor models can then be used to assist in drill planning.

Bibliography

GSMB (2016a). Report on the geological mapping of graphite occurrences around Paragala and Pimbura areas in Ayagama DS Division and around Mapagama and Jatuwangoda in Kalawana DS Division in Ratnapura District. Unpublished report, EL307, January 2016.

GSMB (2016b). Report on the geological mapping of graphite occurrences in Kukulegama, Pitigalakanda, Kalawana areas in Kalawanda DS in Ratnapura District. Unpublished report, EL308, January 2016.

Justyn Stedwell
Company Secretary

For further information regarding this release or other company enquiries please contact:
Peter Taylor
Investor Relations
Ph: 0412 036 231
Email: peter@nwrcommunications.com.au

Competent Persons' Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by GSMB (Pvt) Ltd and reviewed by Dr. Andrew Scogings, a Competent Person who is a Member of both the Australian Institute of Geoscientists and Australasian Institute of Mining and Metallurgy. Dr. Scogings is a full-time employee of CSA Global Pty Ltd and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration, and to the activity he is undertaking, to qualify as a Competent Person in terms of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code 2012 Edition)[1]. Dr. Scogings consents to the inclusion of such information in this announcement in the form and context in which it appears.

[1] Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The JORC Code, 2012 Edition. Prepared by: The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia (JORC 2012).

About Lanka Graphite Limited

Lanka Graphite Limited (ASX:LGR) is an ASX listed graphite exploration company that is focused on exploration of a number of historic and new exploration and mining tenements in Central and South Western Sri Lanka. Historical 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 believed to be suited for graphene derivation. Lanka Graphite will continue exploration of its granted tenements with the intention to develop high grade graphite production that can supply nearby Asian end user companies particularly focussed on new technology graphene applications.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data – Lanka Graphite Reconnaissance Mapping

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report. • In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	• No samples were collected for analytical purposes, as representative veins were not accessible in the mostly filled old shafts and adits.
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	• Not applicable, as this was a reconnaissance geological mapping exercise.
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples.	• Not applicable, as this was a reconnaissance geological mapping exercise.

Criteria	JORC Code explanation	Commentary
	• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. • The total length and percentage of the relevant intersections logged.	• Not applicable, as this was a reconnaissance geological mapping exercise.
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken. • If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. • For all sample types, the nature, quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. • Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• Not applicable, as this was a reconnaissance geological mapping exercise.
Quality of assay data and laboratory tests	• The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether	• Not applicable, as this was a reconnaissance geological mapping exercise.

Criteria	JORC Code explanation	Commentary
	acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• Not applicable, as this was a reconnaissance geological mapping exercise.
Location of data points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• The co-ordinate survey system in Sri Lanka is based on the Transverse Mercator Projection with the origin of the projection being 200,000m south and 200,000m west of Pidurutalagala or 7° 00' 01.729" N and 80° 46' 18.160" E. • The EL and grid descriptions are: EL 307 (grids 3, 4, 6 and 7) and EL 308 (grids 6, 7, 11, 12, 16 and 17). •
Data spacing and distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• Not applicable, as this was a reconnaissance geological mapping exercise.
Orientation of data in relation to geological structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	• Not applicable, as this was a reconnaissance geological mapping exercise.
Sample security	• The measures taken to ensure sample security.	• Not applicable, as this was a reconnaissance geological mapping exercise
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	• Not applicable, as this was a reconnaissance geological mapping exercise.

Section 2 Reporting of Exploration Results – Lanka Graphite Reconnaissance Mapping

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The targets surveyed are within granted tenements EL307 and EL308. These are referenced on a map in the accompanying text. • The prospects are located in southwestern Sri Lanka. • The tenements are in good standing and no known impediments exist.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	• There is evidence of old workings assumed to be for graphite, however no recorded assay results or vein widths. The spoil heaps are often small which suggests limited excavation. • The Sri Lankan geological Survey has mapped the target areas at 1:100,000 scale (Sheet 16, Colombo-Ratnapura, 1996; Sheet 19, Aluthgama-Galle, 2000).
Geology	• Deposit type, geological setting and style of mineralisation.	• Exploration is targeting vein graphite. • Sri Lankan graphite generally occurs in the form of veins, ranging in thickness from veinlets less than 1mm thick to massive veins over 1m thick. The veins are usually located in the hinge zones of antiforms within granulite facies zones of the Precambrian Basement terrain that underlies much of Sri Lanka. Secondary fractures associated with structural hinge zones can also act as tensional areas suitable for graphite deposition. • Vein graphite deposition is commonly associated with syngenetic formation of pegmatites and vein quartz. When associated with vein graphite formation the pegmatites and quartz veins can contain graphite within the rocks. • Target zones for vein graphite in Sri Lanka are focussed on tightly folded anticlines and synclines with the former being the prime target zones. • Old shafts, adits and prospect pits are used to identify target areas for present day prospecting.

Criteria	JORC Code explanation	Commentary
		•

Drill hole Information	• A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:
	  ○ easting and northing of the drill hole collar
	  ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
	  ○ dip and azimuth of the hole
	  ○ down hole length and interception depth
	  ○ hole length.
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.
		• Not applicable, as this was a reconnaissance geological mapping exercise.

Data aggregation methods	• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	Not applicable, as this was a reconnaissance geological mapping exercise.
Relationship between mineralisation widths and intercept lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill-hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’).	• Not applicable, as this was a reconnaissance geological mapping exercise. Based on other locations in Sri Lanka, it is likely that graphite veins are narrow (up to approximately 1m in width) and steep dipping.
Diagrams	• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being	• These are included in the body of the text

Criteria	JORC Code explanation	Commentary
	reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced reporting	• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	• Apart from the geology mapping data, there are no assay values of graphite grades.
Other substantive exploration data	• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	• Lanka has completed reconnaissance geological mapping and identified old workings on the tenements.
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	• Additional site visits to verify old workings on ELs. • FLEM surveys are recommended for the area to better define existing conductors, model the conductors to assist in drill planning, and to identify new conductors for follow-up work.