



## ASX Announcement

24 April 2018

ASX Code: ARM

### Aurora Minerals Group of Companies

**Diversified Minerals Exploration via direct and indirect interests**

**Predictive Discovery Limited (ASX: PDI) – 27.4%**

- Gold Exploration / Development in Burkina Faso and Cote D'Ivoire

**Peninsula Mines Limited (ASX: PSM) – 23.7%**

- Graphite, Lithium- Gold, Silver and Base Metals Exploration in South Korea

**Aurora Western Australian Exploration – 100%**

- Manganese, Base metals and gold

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## Peninsula Mines: Launches Testing Programme for Value-Added Spherical Graphite Processing in Korea

Peninsula Mines Limited, a company in which Aurora Minerals Limited holds a 23.7% shareholding, today announced that it has launched its value-added graphite processing test-work programme, designed to produce very high-purity spherical graphite to meet end-user specifications and demand in one of the world's largest lithium-ion battery markets, South Korea.

A copy of the announcement is attached.

**For further information please contact:**

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PENINSULA MINES LIMITED

ASX:PSM

## ASX ANNOUNCEMENT

24 April 2018

### PENINSULA LAUNCHES TESTING PROGRAMME FOR VALUE-ADDED SPHERICAL GRAPHITE PROCESSING IN KOREA

*Testing programme to run in parallel with resource drilling of key graphite projects*

- Independent Metallurgical Operations (“IMO”) appointed to manage integrated metallurgical testing programme to generate value-added, very high-purity spherical graphite to match end-user specifications for lithium-ion battery manufacture in South Korea
- High-grade graphite results from Eunha (avg. 7.6% TGC) and Gapyeong (avg. 17.5% TGC) metallurgical samples for processing to generate bulk concentrate for spherical graphite testing
- Drilling planned to target a maiden resource at the Eunha Project, as a first step towards the development of graphite production for Korean down-stream, value-added, processing

Peninsula Mines Ltd (“Peninsula” or “the Company”) is pleased to announce that it has launched its value-added graphite processing test-work programme, designed to produce very high-purity spherical graphite to meet end-user specifications and demand in one of the world’s largest lithium-ion battery markets - South Korea.

This cutting edge and integrated test-work programme has been initiated following the receipt of **high-grade total graphitic carbon (TGC) results, averaging 7.6% TGC**, for additional metallurgical samples from its 100% owned Eunha Graphite Project<sup>D2</sup> in South Korea (see Figure 1 for location). These samples will be added to the bulk composite that produced the initial, high-purity, concentrate results of 97.6% TGC<sup>D1</sup>, to allow Independent Metallurgical Operations Pty Ltd (“IMO”) to generate a >5kg, high-purity (>97% TGC) concentrate sample for down-stream spherical graphite test work.

In addition, the Company has received **very high-grade results averaging 17.5% TGC** from the analysis of samples collected for metallurgical testing from its 100% owned Gapyeong Graphite Project<sup>D3,D4</sup> (see Figure 2 for location). These samples will be composited by IMO to produce a >100kg bulk-sample for initial batch testing, targeting high-purity (>97% TGC) concentrate, prior to further processing to produce a second >5kg concentrate sample for spherical graphite testing.

IMO have been commissioned to manage the value-added processing test work programme that will involve a three-stage process targeting very high-purity (>99.95% TGC) spherical graphite:

- i) IMO generate >5kg, **high-purity (>97% TGC), concentrate** from the Eunha Graphite Project, and other projects (e.g. Gapyeong Graphite Project) for spherical graphite testing.
- ii) High-purity graphite concentrate sample despatched to a German firm specialising in spherical graphite process development and engineering, who will then undertake **Micronisation and Spheroidisation** of flake graphite (to spherical graphite), then,
- iii) **Purification of spherical graphite** – targeting >99.95% TGC purity, followed by electrochemical (battery) testing of purified spherical graphite, to be conducted by the German firm, potentially in collaboration with the Australian CSIRO.

Peninsula’s Managing Director, Jon Dugdale, said, *“Peninsula is pursuing a strategy to mine and process graphite concentrate then produce high-purity, value-added, spherical graphite to feed one of the world’s largest Lithium-ion battery industries in South Korea.”*

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The Company plans to carry out the value-added processing test work programme in parallel with drilling and channel sampling to generate graphite resources, initially at its Eunha Graphite Project, where drilling access has been achieved for both the Eunha North and is close to being finalised for the Roadhouse area (see Figure 1 below). Channel sampling is in progress to determine width, grade and orientation of the graphitic unit(s) and drilling is planned to commence mid to late-May.

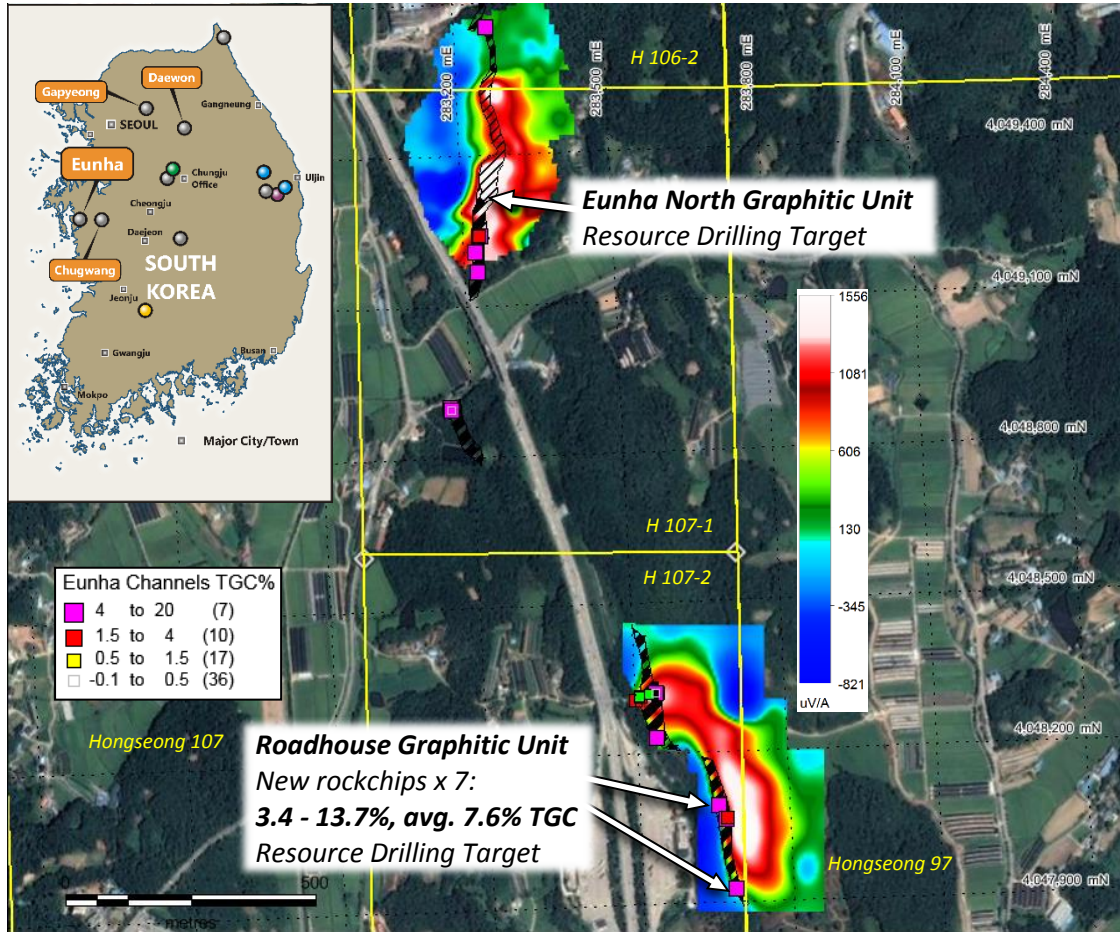


Figure 1: Eunha Graphite Project, rockchip sample locations, graphitic units/EM anomalies<sup>D2</sup>, drilling targets

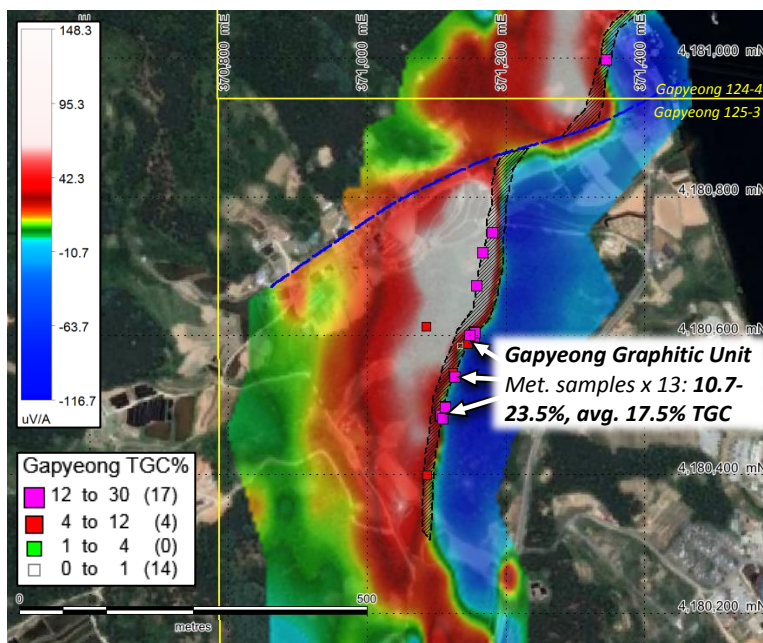
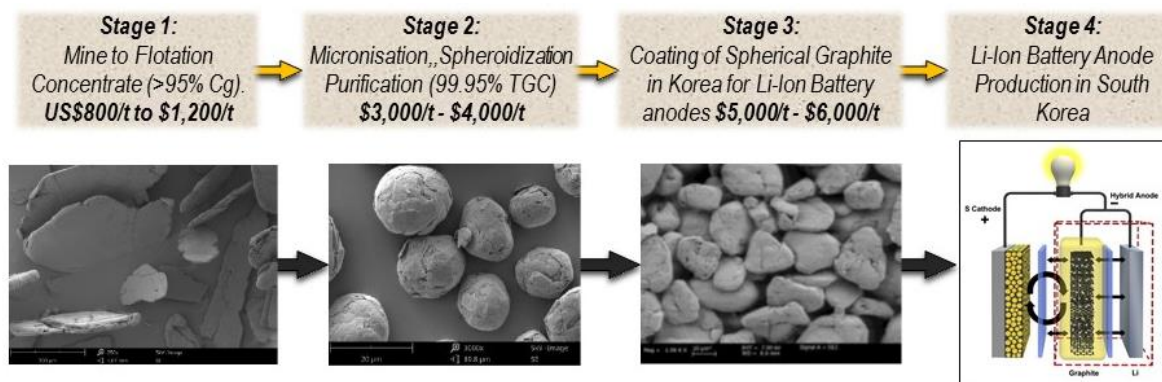


Figure 2: Gapyeong Project, rockchip/metallurgical sample locations, graphitic units/EM anomalies<sup>D3,D4</sup>

### About the Peninsula Mines Limited Graphite Business:

Peninsula Mines Ltd (“Peninsula”) is an Australian listed, exploration/development company focused on developing opportunities for mineral discovery and production in south Korea, where the Company is well established with a network of key contacts, having worked in the Country for over five years.

South Korea is one of the world’s largest producers of lithium-ion batteries, but obtains downstream graphite products, including spherical graphite for Lithium-Ion battery anodes, predominantly from China (see value-chain below). Peninsula has identified the opportunity to mine and process graphite to produce value-added spherical graphite in south Korea, to directly supply lithium-ion battery manufacturers and other graphite end-users in-country.



*Note: US\$ pricing from Benchmark Mineral Intelligence graphite price assessments, February and March 2018.*

Peninsula and its subsidiaries have tenements and tenement applications in south Korea with fine to large and jumbo flake graphite identified. Peninsula intends to progress these and other projects to JORC compliant resource definition and, potentially, development of mining and flake graphite concentrate production for spherical graphite – Lithium-ion battery applications and/or expandable graphite and other markets in Korea.

Peninsula signed a Memorandum of Understanding (“MOU”) with Korean expandable graphite producer, Graphene Korea, in June 2017<sup>D5</sup>, which envisages long-term strategic cooperation with respect to offtake of graphite concentrate and development of graphite mining and processing projects both within and potentially outside Korea.

Peninsula has also secured a Binding Supply Agreement with Canadian listed DNI Metals Inc (“DNI”). Subject to various conditions, DNI will supply up to 24,000 tonnes per year of flake graphite to Peninsula’s 100% owned subsidiary, Korea Graphite Company Limited (“KGCL”), for on-sale to Korean end-users<sup>D6</sup>. Peninsula and DNI are discussing options to cooperate with respect to fast-tracking the development of DNI’s large-flake graphite projects in Madagascar, which are situated close to port access and are saprolite (weathered rock) hosted - with low cost mining and processing potential.

For further information please contact:

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**The material and/or releases referenced in this release are listed below:**

- D1 Eunha Graphite Project Very High grade Graphite Concentrate, ASX: 10/04/18
  - D2 Outstanding EM Conductors Define Graphite Targets at Eunha, ASX: 28/02/18
  - D3 Exceptional EM Conductors Define Drilling Targets at Gapyeong Graphite Project, ASX: 14/03/18
  - D4 New high-grade graphite results confirm resource drilling targets at Gapyeong, 19/03/18
  - D5 Flake-Graphite Offtake & Development MOU signed with Korean End-User, ASX: 14/06/17
  - D6 PSM signs MOU to supply Flake Graphite to Korean End-Users, ASX: 15/08/17
  - D7 Daewon Graphite Excellent Metallurgy and Four New Projects, ASX: 27/06/17
- Full versions of all the company's releases are available at [www.peninsulamines.com.au](http://www.peninsulamines.com.au)

**Forward looking Statements:**

*This release contains certain forward-looking statements. These forward-looking statements are not historical facts but rather are based on Peninsula Mines Ltd's current expectations, estimates and projections about the industry in which Peninsula Mines Ltd operates, and beliefs and assumptions regarding Peninsula Mines Ltd's future performance. Words such as "anticipates", "expects", "intends", "plans", "believes", "seeks", "estimates" "potential" and similar expressions are intended to identify forward-looking statements. These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties and other factors, some of which are beyond the control of Peninsula Mines Ltd, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. Peninsula Mines Ltd cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of Peninsula Mines Ltd only as of the date of this release. The forward-looking statements made in this release relate only to events as of the date on which the statements are made. Peninsula Mines Ltd does not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this presentation except as required by law or by any appropriate regulatory authority.*

**Competent Persons Statement:**

*The information in this release that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Daniel Noonan, a Member of the Australian Institute of Mining and Metallurgy. Mr Noonan is an Executive Director of the Company. Mr Noonan has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Noonan consents to the inclusion in the release of the matters based on this information in the form and context in which it appears.*

*The information in this release that relates to metallurgical test work is based on information compiled and / or reviewed by Mr Peter Adamini who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Adamini is a full-time employee of Independent Metallurgical Operations Pty Ltd. Mr Adamini consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this release that relates to Geophysical Results and Interpretations is based on information compiled by Karen Gilgallon, Principal Geophysicist at Southern Geoscience Consultants. Karen Gilgallon is a Member of the Australasian Institute of Geoscientists (AIG) and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Karen Gilgallon consents to the inclusion in the release of the matters based on this information in the form and context in which it appears.*



**JORC Code, 2012 Edition: Table 1**  
**Section 1: Sampling Techniques and Data**  
*(Criteria in this section apply to all succeeding sections.)*

Criteria	JORC – Code of Explanation	Commentary
Sampling techniques	<p><i>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.</i></p>	<p>A number of rock chip samples were collected from the Eunha and Gapyeong projects for use in generating material from each project site for metallurgical testwork. A total of 7 rock chip samples were collected at the Eunha project from the Eunha North and Road House prospects. These 7 samples will be composited together and processed by Independent Metallurgical Operations (IMO) and added to the initial concentrate sample already generated to provide 5kg sample for spherical graphite testing<sup>D1</sup>.</p> <p>In addition, 13 rock chip samples were collected from various sub-cropping exposures of graphite bearing material from a number of points along the strike length of the Gapyeong structure. These 13 samples will be composited together to produce a bulk sample in excess of 100kg for metallurgical testing by IMO.</p> <p>All 20 rock chip samples were collected with a geology hammer or mallet and coal chisel in prelabelled calico bags from various subcrops along the strike length of each sampled graphitic unit.</p> <p>The samples were initially analysed for a suite of elements by XRF as well as Total Carbon (TC%), Total Graphitic Carbon (TGC%), Total Organic Carbon (TOC%) and Total Inorganic Carbon (TIC%) and sulphur (S %) at NAGROM laboratory in Perth, Australia to establish a bulk composite sample head grade. Post analysis the samples were couriered to IMO's Welshpool laboratory where they were selected for inclusion in the final composite sample for further metallurgical studies.</p> <p>NAGROM operate a LECO analyser: C and S values were determined from sample mass differences, using precision scales, resulting from heating to burn off carbon and sulphur, which were emitted as CO<sub>2</sub> and SO<sub>2</sub>. The analytical results are tabled in Appendix 1 below.</p> <p>The locations of the sample points are shown in Figures 1 and 2 and detailed in the attached appendices.</p>



Criteria	<i>JORC – Code of Explanation</i>	Commentary
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p>	<p>The results released in this announcement are all rock chip sample analyses with all 20 samples intended for use in metallurgical testwork.</p> <p>Sample quality was excellent, fresh to partially oxidised rock.</p> <p>The bulk of the samples were selective grab samples taken to maximise the volume of graphitic material available for the subsequent metallurgical testing.</p> <p>All sample locations were noted from a hand-held Garmin GPS unit.</p>
	<p><i>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.</i></p>	<p>The graphite was evenly distributed within the graphitic unit. The samples were chiseled from the surface subcrops with the aim of generating a sample mass large enough to produce a 4 to 5kg concentrate. All samples were dispatched to Steritech in Brisbane where they were irradiated to meet AQIS custom requirements with respect to samples that may pose a biological risk to Australia. The samples were then forwarded to NAGROM Laboratories in Perth, WA for analysis.</p> <p>The graphitic samples, averaging 4kg to 10kg, were irradiated for Customs purposes before being air dried. Samples post drying were crushed to a nominal top size of 6.3mm using a jaw crusher. The coarse sample was then riffle split to generate a smaller 1kg sub-sample.</p> <p>This 1kg sub-sample was then was pulverised using a LM5 pulveriser until 80% of the sample passed 75 microns. A ~150g subsample of the pulverised material was then randomly selected for analysis with the balance of the coarse material retained for metallurgical studies. All samples were air dried.</p> <p>NAGROM utilised a LECO analyser and gravimetric analyses, where C and S values were determined from mass differences (using precision scales) during the high temperature heating and subsequent CO<sub>2</sub> and SO<sub>2</sub> generation inside the analyser. This method was considered near total for C and S and was the preferred method for accurate graphite sample analysis. Post analysis the coarse reject material was forwarded to IMO for metallurgical appraisal.</p> <p>From these analyses, the Total Carbon, Total Graphitic Carbon (TGC), Organic Carbon and Inorganic Carbon (as carbonate) and Sulphur were reported (Appendix 1).</p>



<b>Criteria</b>	<b>JORC – Code of Explanation</b>	<b>Commentary</b>
Drilling techniques	<i>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</i>	No drilling has been undertaken by the company all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	No drilling has been undertaken by the company all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	All samples were random rock chip samples collected to provide a critical mass of sample for metallurgical testing. All assays should at best be considered indicative of the potential grade of the material present at each sample site. The results of these analyses are not intended for use in any form of Mineral Resource estimation.
	<i>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.</i>	There is potential for sample bias in that only harder more resilient material has survived the weathering to be exposed as sub-cropping material the softer more weathered and oxidized material was not sampled.
Logging	<i>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.</i>	No drilling has been undertaken by the company all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.  Details of each rock chip sample site were noted including location (from Garmin GPS unit) the details of rock type and minerals observed.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	
	<i>The total length and percentage of the relevant intersections logged.</i>	
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	No drilling has been undertaken by the company all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	All rock chip samples were taken with a geology hammer and/or a mallet and chisel. In some cases, a rubber mat was used to help funnel material into a calico sample bag. Samples were then partially dried on the heated hotel room floor prior to packaging and shipment to Australia for analysis. All rock chip samples post





Criteria	JORC – Code of Explanation	Commentary
		air drying were jaw crushed and riffle split to provide a 1kg sub-sample for pulverisation.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	The details of the applicable sample preparation have been discussed more fully in previous sections.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	The Company did not include any Certified Reference Material or sample blanks with these samples and has relied entirely on the labs internal QA/QC procedures. This is not considered material given the samples were collected solely for the purpose of generating metallurgical bulk samples for testing and were not intended for use in any form of resource estimation.
	<i>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.</i>	The samples were collected for metallurgical testing and were not intended to represent the in situ grade at the sampled site.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample size was considered more than adequate to assess TGC content of the graphite mineralisation from the sampled sites at the Eunha and Gapyeong projects.
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<p>All metallurgical samples were rock chip samples collected using a hammer, ± chisel, rubber mat and calico bag.</p> <p>At NAGROM, samples were air dried. Samples post drying were crushed to a nominal top size of 6.3mm using a jaw crusher and a 1kg sub-sample riffle split. The entire sub-sample was then pulverised.</p> <p>The sample was pulverised using a LM5 pulveriser until 80% of the sample passed 75 microns. A ~150g subsample of the pulverised material was then randomly selected for analysis with the balance of the pulverised material retained for future use.</p> <p>The NAGROM analyses utilised a LECO analyser and were gravimetric analyses, where C and S values were determined from mass differences (using precision scales) during the high temperature heating and subsequent CO<sub>2</sub> and SO<sub>2</sub> generation inside the analyser. This method was considered near total for C and S and was the globally preferred method for accurate graphite sample analysis.</p> <p>From these analyses, the Total Carbon, Total Graphitic Carbon (TGC), Organic Carbon and Inorganic Carbon (as carbonate) and Sulphur were reported (Appendix 1).</p> <p>The assays were considered total for the key elements of C and S. Additional XRF analyses of gangue minerals were also undertaken as part of the overall analysis suite (Appendix 1).</p>



Criteria	JORC – Code of Explanation	Commentary
	<p><i>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 derivations, etc.</i></p>	<p>The Company commissioned Southern Geoscience Consultants (SGC) of Perth to undertake moving loop and selected fixed loop electromagnetic (MLEM) surveys across the Eunha graphitic units. The purpose of the surveys was to determine the EM (conductivity) response of the outcropping graphitic unit and map the extent and geometry of the conductive unit along strike and at depth<sup>D1</sup>. These EM images have been included again with this release.</p> <p>The geophysical programme parameters were as follows:  <b>Planning/Supervision:</b> Southern Geoscience Consultants Pty Ltd (SGC)  <b>Survey Configuration:</b> Fixed Loop TEM (FLEM)  <b>TX Loop Size:</b> 120m x 200m (Eunha North) and 150m x 300m (Roadhouse). Three overlapping TX loops at each site.  <b>Transmitter:</b> ZT-30  <b>Transmitter Power:</b> 72V (6 x 12V car batteries)  <b>Receiver:</b> SMARTem24  <b>Sensor:</b> RVR coil – vertical (Z) component  <b>Line Spacing:</b> 50m spacing with 25m infill  <b>Line Bearing:</b> 090°  <b>Station Spacing:</b> 25m and 50m  <b>TX Frequency:</b> 6 Hz (125 msec time base)  <b>Duty cycle:</b> 50%  <b>Current:</b> 10 to 12 Amp  <b>Stacks:</b> 256 stacks  <b>Readings:</b> At least 3 repeatable readings per station  <b>Powerline Frequency:</b> 60 Hz  Data was received on 28 channels from early to late time (shallow to deeper). The anomaly detected on Channel 5 is plotted (see Figure 1) approximating the response from outcrop to ~200m down dip.</p> <p>In addition, SGC was commissioned to undertake fixed loop electromagnetic (FLEM) surveys across the Gapyeong graphitic unit. The purpose of the survey was to determine the EM (conductivity) response of the outcropping graphitic unit and map the extent and geometry of the conductive unit along strike and at depth<sup>D5,D6</sup>.</p> <p>The Gapyeong geophysical programme parameters were as follows:  <b>Planning/Supervision:</b> Southern Geoscience Consultants Pty Ltd (SGC)  <b>Survey Configuration:</b> Fixed Loop TEM (FLEM)  <b>TX Loop Size:</b> 200m x 700m (Gapyeong – 3 overlapping loops). Three overlapping TX loops at each site.  <b>Transmitter:</b> ZT-30  <b>Transmitter Power:</b> 72V (6 x 12V car batteries)  <b>Receiver:</b> SMARTem24  <b>Sensor:</b> RVR coil – vertical (Z) component  <b>Line Spacing:</b> 75m and 100m at Gapyeong  <b>Line Bearing:</b> 090° at Gapyeong</p>



Criteria	JORC – Code of Explanation	Commentary
		<p><b>Station Spacing:</b> 25m and 50m  <b>TX Frequency:</b> 5 Hz for Gapyeong (200msec time base)  <b>Duty cycle:</b> 50%  <b>Current:</b> 5 to 10 Amp  <b>Stacks:</b> 256 stacks  <b>Readings:</b> At least 3 repeatable readings per station  <b>Powerline Frequency:</b> 60 Hz</p> <p>Data was received on 29 channels from early to late time (shallow to deeper) during the Gapyeong survey. The anomaly displayed in Figure 2 shows the channel 25 image (50 msec after TX turnoff) approximating the location of the stronger and deeper parts of the conductive mineralisation down-dip from outcrop.</p>
	<p><i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></p>	<p>The Company has relied solely on the laboratory's own internal QA/QC which do not indicate any issues with the assay results reported herewith.</p> <p>No blind sample repeats have been undertaken at this point in time. The labs routine sample repeats show excellent correlation.</p>
Verification of sampling and assaying	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p>	<p>The graphite intersections reported in this release have been composited independently by company personnel and verified, based on review of sampling and analytical techniques.</p>
	<p><i>The use of twinned holes.</i></p>	<p>No drilling has been undertaken by the company all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.</p>
	<p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p>	<p>Assay results were stored in an Excel database. All results were checked by the responsible geologist on entry to the database.</p> <p>The Company's data was stored in an Excel database and routinely transferred to the Perth Head Office.</p>
	<p><i>Discuss any adjustment to assay data.</i></p>	<p>The data presented in the accompanying Appendix 1 is raw laboratory data. The organic carbon and inorganic carbon content were calculated using the results of the total and graphitic carbon and non-inorganic carbon analyses. This is standard practice in the reporting analyses of various carbon species.</p>
Location of data points	<p><i>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.</i></p>	<p>No drilling has been undertaken by the Company, all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.</p> <p>The layout of the EM loop and station reading points were all taken with a hand-held Garmin GPS unit.</p>



Criteria	<i>JORC – Code of Explanation</i>	Commentary
		All rock chip sample sites were referenced using a hand-held Garmin GPS unit.
	<i>Specification of the grid system used.</i>	All sample sites were surveyed in the UTM WGS84 zone 52N coordinate system.
	<i>Quality and adequacy of topographic control.</i>	<p>Topographic control on sample sites was limited to the accuracy of the hand-held Garmin GPS unit which a best is +/- 10m in elevation.</p> <p>Geophysical measurement locations were determined using a hand-held Garmin GPS60CSx. The accuracy of this unit at most sample sites was +/- 3m to 5m.</p> <p>Topographic control is also available from The National Geographic Information Institute (NGII), 1:5,000 scale digital contour data available for the entire country.</p>
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	<p>All the assay results reported herewith are random rock chip samples taken at various sub-crop exposures along the graphitic units strike length. As noted previously these should only be considered indicative of the potential grade at each sampled site.</p> <p>Further channel sampling is underway along the ridge crest at the Roadhouse prospect. The proposed drilling is planned to be conducted at 80m section intervals. An agreement has been signed with a local land holder who owns fields that cover a large part of the Eunha North EM anomaly. An agreement is being finalised with the family that own a large track of land over the roadhouse anomaly to facilitate access for drilling.</p>
	<i>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.</i>	<p>All rock chip samples were taken where graphitic material was readily accessible from surficial subcrops. None of this sampling work is intended for use in any form of Mineral Resource estimation. The prime aim of the sampling was to generate sufficient mass of sample for metallurgical testwork.</p> <p>The current channel sampling is primarily being undertaken where graphitic exposures were identified at surface. In most cases at the sites of historic trenches/excavations.</p>
	<i>Whether sample compositing has been applied.</i>	<p>Samples were composited after initial assay with the aim of producing a bulk sample for metallurgical testing.</p> <p>The assays for the 20 rock chip samples are summarised in Appendix 1.</p>



<b>Criteria</b>	<b>JORC – Code of Explanation</b>	<b>Commentary</b>
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	As all samples were random spot rock chip samples there is an inherent degree of bias with such sampling. Further, sampling focussed on preserved subcrops meaning areas of more weathered ground were not sampled.
	<i>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.</i>	No drilling has been undertaken by the company all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.
Sample security	<i>The measures taken to ensure sample security.</i>	<p>All samples were collected into pre-labelled calico sample bags. The specific details of each sample and sample site were recorded into a field notebook and later transferred to an Excel spreadsheet. Samples were packed into cardboard cartons and dispatched via Fed Ex Steritech in Brisbane to undergo irradiation for Customs purposes prior to onward shipment to NAGROM Laboratories, Perth.</p> <p>All the Company's graphite samples were declared as surface samples and irradiated as required by AQIS to destroy any soil or airborne pathogens prior to release to NAGROM.</p> <p>All the samples were irradiated at Steritech in Brisbane before shipment to Nagrom. This was considered important by IMO to minimise clay baking onto graphite flakes and to optimise concentrate grade and recovery.</p>
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	<p>The NAGROM Laboratory, Kelmscott has been visited by Company personnel and met full international standards. NAGROM is internationally recognised, particularly in the field of graphite analysis.</p> <p>Similarly, the IMO metallurgical laboratory in Welshpool, Perth, WA has been visited by Company personnel and meets full international standards. IMO are also internationally recognised, particularly in the field of metallurgical evaluations.</p>

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



## Section 2: Reporting of Exploration Results

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

Criteria	JORC – Code of Explanation	Commentary
Tenement and land tenure status	<i>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.</i>	<p>The Company has filed applications at the Eunha Project over blocks Hongseong 97, 98, 106, 107 &amp; 108. The company has completed MDS reports for graphite sub-blocks 97-4, 106-2, 107-1 and 107-2 and these are pending with the Mines Registration Office (MRO). The MRO site visit and inspection of the 107 block was completed on 18 April 2018. A formal response on the grant of the 2 titles is expected around 20 May 2018.</p> <p>The main limitation with the Hongseong 106 &amp; 107 titles at Eunha is the fact that motorway 15 and the Hongseong rest stop lie directly over and adjacent to the trend of the Eunha graphite structures and a buffer of at least 50m in all directions must be maintained around all major infrastructure such as roads and railways (see figure 1).</p> <p>At the Gapyeong Project the Company has submitted applications for two adjoining blocks Gapyeong 125-3 and Gapyeong 124-4. The formal MRO filed inspection for block 125-3 is scheduled for around 18<sup>th</sup> May 2018. The northern 124-4 tenement will take longer to secure.</p> <p>Each Korean tenement block covers a 1-minute graticule and has a nominal area of 276 hectares. The Company has 100% sole rights for graphite over each of these five tenement applications at Eunha and two at Gapyeong. Graphite, like other industrial minerals, is classified as a minor mineral under Korean Mineral Law. In the case of minor minerals such as graphite, each 1-minute graticule block is further subdivided into four 30" x 30" sub-blocks (sub-blocks are only applicable for industrial minerals and road metal and dimension stone quarry permits). The Company must complete and file a Mineral Deposit Survey (MDS) over each sub-block to secure a potential 6-year exploration right for each sub-block. The MDS field inspection has been completed for four sub-blocks so far at the Eunha Project and two at the Gapyeong Project and the relevant report has been filed with the MRO. Additional MDS reports will be filed once additional trenching work is completed and surface exposures have been identified on surrounding sub-blocks.</p> <p>There are no native title interests in Korea. It is a generally accepted requirement that mineral title holders gain the consent of local land owners and residents before undertaking any major exploration activity, such as drilling.</p> <p>The Eunha and graphite structures lie on privately held farm and forest land and on land compulsorily acquired for the construction and subsequent use as motorway 15. Han River Conservation Corporation.</p>



Criteria	JORC – Code of Explanation	Commentary
		<p>The majority of the land at the northern end of the Gapyeong project and along the western margin of the outcropping graphite unit is privately held agricultural or forest land. Along the main ridge where the structure daylight the land is Government owned and held by the North Han River Water Management Board. The bulk of the outcropping graphite structure lies within the 500m wide riparian zone. The Company is seeking clarification from the Local Government authority regarding the approval process to conduct certain activities within the riparian zone. Initial inquiries suggest that drilling activities may be possible across the bulk of the project other than at the northern end within 50m of the northern arm of the Han River.</p>
	<p><i>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.</i></p>	<p>The Company does not anticipate any issues with the grant of the first two sub-blocks 107-1 and 107-2 for which the MRO field review took place on 18<sup>th</sup> April. It may take longer for the more recent 106-1 and 97-4 submissions to be reviewed.</p> <p>Once a MDS application is approved the Company has one year in which to file a prospecting plan and at that point the title holder is granted an initial 3-year exploration period which can be extended to 6 years upon submission of a supplementary application to the Ministry. Further, the Company can convert the exploration licence to a formal mining right application upon the filing of a prospecting report. A recent change to the Korean Mineral Law now requires that a mineral right holder must include details of the defined Mineral Resource with any application for extension to an Exploration Right or for the grant of a full Mining Right. There are minimum Resources requirements that must now be met at each stage of the application process.</p> <p>Upon approval of a Mining Right the Company has 3 years to file and have a Mine Planning Application (MPA) approved. The MPA is submitted to and approved by the Local Government and is akin to local council planning approval. As part of the MPA process, the title holder must secure a “no objection certificate” from the residents of the local village(s). An MPA primarily covers design, implementation, environmental and safety aspects of all surface activities associated with the planned mining venture. The approval of the MPA then grants the mining Right holder a 20-year production period that can be extended further upon application, provided all statutory requirements have been met over the life of the mine. From the date of grant of the Mining Right, the title holder has a 3-year period in which mine production must commence. During this 3-year period, the title holder must make a minimum level of investment on plant and mine infrastructure in the amount of KWon100million (~A\$120,000). In addition, certain minimum annual production levels must be met depending on the</p>



Criteria	JORC – Code of Explanation	Commentary
		<p>commodity being mined and its commercial value. In the case of graphite, it is 50 tonnes concentrate containing 75% TGC.</p> <p>The Company has recently refiled applications over the Hongseong 106 and 107 titles and has filed fresh applications over adjacent blocks Honseong 97, 98 &amp; 108 at Eunha. These applications are valid for up to 6 months. At some future date the Company could again re-apply for a 6 months extension to the application period but there is no certainty that further extensions will be successful. Where possible the Company aims to locate surface mineralisation that will meet the requirements of the Korean Mineral Law for a successful tenement grant and then complete an MDS over each applied tenement within the current application period.</p>
Exploration done by other parties	<i>Acknowledgement and appraisal of exploration by other parties.</i>	<p>In the mid-1970s, Korea Mineral Promotion Corporation (KMPC) completed a programme of surface mapping and sampling at Eunha and identified two main north-south trending structures identified from 9 outcrops sampled along close to 1300m of strike. The graphite beds reported widths ranged from 2-20m and they collected 181 rock chip samples from trench sampling programmes which averaged 6.5% TGC. The Company has been unable to locate any further details on this historic work.</p> <p>In 1971, the Korea Mineral Promotion Corporation (KMPC) completed a programme of surface mapping and sampling at the Gapyeong Project including the collection of 21 samples from surface trenches. They reported grades ranging from 6.8 to 30% TGC. They identified outcropping graphitic schist unit over 700m of strike with widths varying from 5 to 15m and dipping between 60 to 90 degrees to the northwest. They described granitic gneisses, limestones and calcsilicate units.</p> <p>KIGAM has flown airborne radiometrics and airborne magnetics across South Korea as part of an ongoing data capture programme conducted over the last 30 or more years. These surveys cover both the Eunha and Gapyeong project areas. KIGAM has also completed 1:50,000 scale mapping across both the project areas.</p> <p>The Company is currently not aware of any exploration work by other non-Government agencies/parties.</p>





Criteria	JORC – Code of Explanation	Commentary
Geology	<p><i>Deposit type, geological setting and style of mineralisation.</i></p>	<p>The FLEM survey at Eunha has defined a highly conductive graphitic gneiss horizon that strongly contrasts with surrounding non-conductive country rock, composed predominately of biotite feldspar gneiss (Figure 1). The graphite appears to replace the biotite crystals within the granitic gneiss sequence. Several major reverse NW-SE trending fault structure have been interpreted to cut the Eunha project area offsetting the southern road house mineralised zone from the Eunha North zone. Additional WNW-SSE faults are also interpreted to further offset the graphitic units in a reverse fault sense. Similar trending basement structures have been mapped regionally by KIGAM. The Eunha graphitic horizon is interpreted as an isoclinally folded sequence plunging steeply to the north and dipping steeply to the west. This sequence is cut by a series of faults which are interpreted to offset the westerly dipping graphitic units to the east in a reverse fault sense. The planned drill programme aims to confirm this initial interpretation.</p> <p>The FLEM survey at both FLEM anomalies has defined conductive bodies that appear to dip moderately to the east. Surface mapping of the costeans and limited surface outcrops suggest that the isoclinally folded Eunha sequence dips steeply to the west and that the EM has detected graphitic units offset in a reverse sense below easterly dipping reverse faults.</p> <p>At Gayeong the main graphitic schist horizon is exposed along the NE-SW trending ridge crest. There is a marked conductivity contrast between the non-conductive footwall gneisses and the highly conductive Gapyeong graphitic schist horizon (Figure 2). The graphitic schist is locally overlain by limestone and marly hornblende bearing calcsilicate units. These form part of a broader suite of overlying schists and biotite and feldspar bearing gneisses. A FLEM has identified a fault offset of the unit along the northern east-west valley. The Gapyeong structure dips at 60 to 90° to the west-northwest.</p>
Drill hole information	<p><i>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:</i></p> <ul style="list-style-type: none"> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduce Level) – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length</i></li> </ul>	<p>The assays of the 20 rock chip samples are included as Appendix 1.</p> <p>No drilling has been undertaken by the company, all discussions in this release regarding drilling relate to planned drilling programmes at the Eunha Project.</p>



Criteria	JORC – Code of Explanation	Commentary
	<i>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.</i>	No material information has been excluded from this release.  The only drilling the company is aware of is a water bore percussion hole drilled adjacent to channel 1 <sup>D1</sup> , D2. The only drill related assay result is EDH001 a surface grab sample of percussion chips taken at the collar of this hole <sup>D1</sup> .
Data aggregation methods	<i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i>	No data has been cut or truncated.
	<i>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.</i>	All assay values discussed here are raw assays and none of the data values have been cut or truncated.
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	No metal equivalent values have been reported.
Relationship between mineralisation widths and intercept lengths	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	The samples referred to in this release are all isolated random spot samples taken from subcrops along the length of the Eunha and Gapyeong structures. Initial channel work suggests that the Eunha road house structure is approximately 10m wide. KMPC reported widths of 2 to 20m for the structures they historically sampled at Eunha. Further channel sampling work is required to confirm the true width of the Gapyeong structure.  No tonnage or Mineral Resource potential has been commented on in this release.
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	The only drilling the company is aware of is a water bore percussion hole drilled adjacent to channel 1 <sup>D1</sup> , D2. The only drill related assay result is EDH001 a surface grab sample of percussion chips taken at the collar of this hole. Drilling referenced in this release is proposed only.
	<i>If it is not known and only the down hole lengths are reported, there should be a clear statement</i>	The only drilling the company is aware of is a water bore percussion hole drilled adjacent to channel 1 <sup>D1</sup> . The only drill related assay result is EDH001 a surface grab sample of



Criteria	JORC – Code of Explanation	Commentary
	<i>to this effect (e.g. ‘down hole length, true width not known’).</i>	percussion chips taken at the collar of this hole. Drilling referenced in this release is proposed only <sup>D2</sup> .
Diagrams	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	Figure 1 shows the location of the two key EM anomalies recently identified along with the location of the rock chip and channel sampling assayed to date from the Eunha project.  Figure 2 shows the location of Gapyeong EM anomaly along with the location of all the rock chip sampling undertaken to date at the Gapyeong Project.
Balanced reporting	<i>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.</i>	All the rock chip sample assay details discussed in this release are summarised in Appendix 1. The location of past sampling at the Eunha project is shown in figure 1 and discussed more fully in earlier releases <sup>D1,D2</sup> . Similarly, figure 2 shows the location of past sampling at the Gapyeong Project on the EM anomaly and earlier results are discussed more fully in earlier releases <sup>D3,D4</sup> .
Other substantive exploration data	<i>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.</i>	All data considered relevant and material have been included and commented upon in this announcement or included in earlier announcements <sup>D1-D7</sup> .
Further work	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	The petrography completed to date at Eunha indicates that there is a proportion of Jumbo (>500 microns) and Large flake (>180 micron) graphite at Eunha <sup>D7</sup> . This coupled with the results of the EM survey has prompted the initiation of detailed metallurgical tests on an approximately 100 kg composite sample the preliminary results of this testwork were commented upon in an earlier release <sup>D1</sup> . The additional 7 samples discussed in this release will be processed and the resulting concentrate produced will be blended with the existing 3.7kg of Eunha concentrate to provide around 5kg of concentrate sample for spherical graphite testing in Germany. Details of this planned spherical graphite testing are outlined in the body of this release.  A channel sampling programme is currently underway at the road house prospect and this work will continue over the next 4 to 6 weeks.



Criteria	JORC – Code of Explanation	Commentary
		<p>Land holder access agreements have been signed over a land lot at the Eunha North Prospect and surface diamond drilling at this prospect are expected to commence around the third week of May subject to drill rig availability. Negotiations are close to completion over access to drill from a large land holding at the road house prospect with access already granted for the channel sampling programme in progress. It is envisaged that the road house prospect drill programme would follow the Eunha North programme with drilling work commencing in June - July.</p> <p>The work programmes planned for the Gapyeong Project include: producing a &gt;5kg concentrate sample with greater than 97% TGC. This bulk concentrate sample would then follow a similar test regime to the Eunha sample and its suitability for sphericalisation would be assessed through further testwork in Germany.</p> <p>If the metallurgical work is sufficiently encouraging drilling programme would be designed along with a trenching and channel sampling programme. It is envisaged that this resource generation work would take place in the latter half of the year subject to successful access negotiations. To that end negotiations are underway with several local land holders over access for drilling and channel sampling.</p>
	<p><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></p>	<p>The included Figures 1 and 2 show the previously mapped location of the graphite seams and interpreted projections at Eunha and Gapyeong along with the EM geophysical conductors projected to surface on the Google earth satellite image and the location of all rock chip samples assayed to date. The figures also show the surrounding infrastructure.</p>



**Appendix 1: Location and Results for rockchip and channel sampling at Eunha Graphite Project and metallurgical bulk sampling at Gapyeong Project**

Sample ID	Project	Easting	Northing	RL (m)	Sample type	From (m)	To (m)	Interval (m)	TGC%	TC%	TIC%	TOC%	S%
EU0003	Eunha	283224	4049208	38	Grab				13.4	13.5	<0.1	<0.1	<0.1
EU0004	Eunha	283226	4049167	31	Channel	0.00	1.15	1.15	7.7	8.2	0.5	<0.1	<0.1
EU0005	Eunha	283539	4048232	76	Grab				10.7	10.7	<0.1	<0.1	<0.1
EU0006	Eunha	283657	4048093	67	Grab				5.8	5.8	<0.1	<0.1	0.2
EU0007	Eunha	283671	4048065	66	Grab				7.0	7.0	<0.1	<0.1	<0.1
EU0008	Eunha	283674	4048067	63	Channel	0.00	0.9	0.90	3.7	3.7	<0.1	<0.1	<0.1
EU0009	Eunha	283686	4047926	67	Grab				4.9	5.0	<0.1	<0.1	<0.1
GPM0001	Gapyeong	371106	4180485	129	BULK				16.2	17.0	0.8	<0.1	<0.1
GPM0001R	Gapyeong	371106	4180485	129					16.3	16.9	0.8	<0.1	<0.1
GPM0002	Gapyeong	371106	4180485	129	BULK				15.1	15.6	0.5	<0.1	<0.1
GPM0003	Gapyeong	371154	4180605	128	BULK				13.5	13.8	0.3	<0.1	<0.1
GPM0004	Gapyeong	371113	4180498	117	BULK				10.7	11.1	0.4	<0.1	<0.1
GPM0005	Gapyeong	371113	4180498	117	BULK				18.7	18.7	<0.1	<0.1	<0.1
GPM0006	Gapyeong	371113	4180498	117	BULK				19.3	19.3	<0.1	<0.1	<0.1
GPM0007	Gapyeong	371166	4180719	81	BULK				19.3	19.3	<0.1	<0.1	<0.1
GPM0008	Gapyeong	371166	4180719	81	BULK				17.5	17.5	<0.1	<0.1	<0.1
GPM0009	Gapyeong	371180	4180748	65	BULK				23.5	23.6	<0.1	0.1	<0.1
GPM0010	Gapyeong	371180	4180748	65	BULK				20.9	21.0	<0.1	0.1	<0.1
GPM0011	Gapyeong	371180	4180748	65	BULK				17.2	17.3	0.1	<0.1	<0.1
GPM0012	Gapyeong	371344	4180997	70	BULK				17.5	17.6	0.1	<0.1	<0.1
GPM0013	Gapyeong	371344	4180997	70	BULK				18.5	18.6	<0.1	0.1	<0.1
GPM0013R	Gapyeong	371344	4180997	70					18.6	18.7	0.2	0.3	<0.1

TGC Total Graphitic Carbon

TC Total Carbon

TIC Inorganic Carbon

TOC Organic Carbon

S Sulphur