

#### **ASX ANNOUNCEMENT**

6 NOVEMBER 2017

# AMENDED MCINTOSH LARGE & JUMBO GRAPHITE FLAKE **ENDOWMENT WITH UPDATED JORC TABLE**

Hexagon Resources Ltd (ASX: HXG) is pleased to provide an updated version of the report "McIntosh Large & Jumbo Graphite Flake Endowment" lodged on 3 November, 2017 with an updated JORC Table and Competent Persons attribution.

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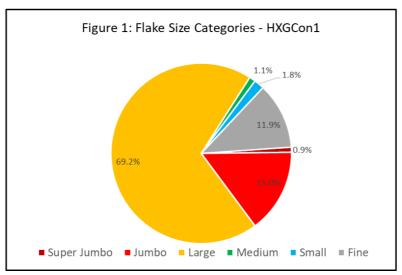
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# MCINTOSH LARGE & JUMBO GRAPHITE FLAKE ENDOWMENT

# (Amended Version with JORC Table 1)

Hexagon Resources Ltd (ASX: **HXG**) is delighted to provide a further update on the latest results from its current test work program and the impact on its product development strategy for its flagship, Western Australian, McIntosh Graphite Project, namely:

1. McIntosh graphite concentrate contains a significant proportion of larger flake sizes with 85% of flake greater than 180 microns (Large, Jumbo and Super Jumbo). This opens up significant commercial opportunities that had not been previously pursued.



- 2. Systematic mineralogical review, Scanning Electron Microscopy (**SEM**) scans and multielement assay profiles confirm the ore type is clean and simple to process, yielding highgrade graphite concentrates.
- 3. New partnership with a well credentialed US corporation which specialises in graphite-battery technologies across the value chain from research, test work and commercial battery cell manufacturing.
- 4. Next phase of downstream processing test work is to focus on graphite expansion and non-chemical purification of the graphite concentrate. This additional processing will focus on production of an ultra-pure, graphite concentrate which opens opportunities to produce a portfolio of premium priced products for all of the planned 100ktpa concentrate production.
- 5. Hexagon's product and marketing strategy has progressed from producing one high-grade, "Small" flake sized concentrate as feed-stock into the Chinese dominated spherical graphite market to focus on more niche markets for higher purity graphite materials suitable for a range of battery types and battery applications as well as other uses for the larger flake products including the expandable graphite sectors and for a variety of advanced metallurgical applications.



#### 1. BACKGROUND

Hexagon recently partnered with a US company, referred to as "NAmLab<sup>1</sup>" which specialises in graphite-battery technologies; from research, to test work and commercial manufacturing. NAmLab has been certified by the US Department of Defense to be ISO 9001:2008 compliant in Quality Systems and importantly, has a commercial production arm.

The objective of this partnership is to undertake test work to characterise end use opportunities for McIntosh graphite concentrate with particular focus on higher purity products, aimed primarily at the advanced battery materials trade and other applications such as high-purity larger flake graphite products. There are many niche markets that this test work is assessing, with a view to diversify Hexagon's product range further and increase its exposure to premium graphite pricing opportunities. The partnership with NAmLab provides a credible technical partner to execute the test work that understands the relevant end-use specifications and ultimately, through its commercial links can assist in the marketing process.

Hexagon has recently reported on the evolving nature of its product development and marketing strategy, underpinned by sound test work. The underlying objectives are diversification to enable the sales of c. 100ktpa of graphite concentrate as outlined in the Pre-feasibility Study<sup>2</sup> and premium pricing for higher purity graphite materials.

Predicting processing performance is essential to consistently meeting offtake specifications. To achieve this the Company has commenced on two distinct test work programs – at opposite ends of the commercialisation path:

- At the "downstream" end, detailed test work examining the properties of McIntosh graphite
  concentrates relevant to end-users such as purity, flake size and flake morphology as well as
  various specific attributes relevant to advanced battery material; and
- "upstream" gathering of mineralogical, elemental and flake size data from drill core samples to create a geo-metallurgical model (Geo-Met Model) for the McIntosh Mineral Resource.

This announcement provides an update on outcomes from these ongoing test work programs.

#### 2. "DOWNSTREAM" TEST WORK IN THE UNITED STATES

In September, 25kg of two McIntosh graphite concentrate samples were despatched to NAmLab. The graphite flake concentrate samples included;

- HXGCon1 generated from batch test work completed in 2016 on a 100kg composite sample of drill core; and
- HXGCon2 and 3 which is the product of the pilot program completed in July 2017.

Both samples were generated using the PFS style process flow sheet and therefore do not include any of the planned process modifications (which will aim to optimise desirable flake characteristics). Refer Appendix 1 & 2 for further details.

The key preliminary results to emerge are:

a. Large Flake - the presence of a significant proportion of Large (>180 $\mu$ m) and Jumbo (>300 $\mu$ m) sized flake in HXGCon 1 as shown in Figure 1 and 2. Note, 16% of flake classified as Super Jumbo

<sup>&</sup>lt;sup>1</sup> Hexagon Resources does not wish to disclose the name or specific location of the laboratory testing facilities in order to maintain its competitive advantage. For competitive reasons graphite companies do not typically disclose details of the laboratories doing their product test work.

<sup>&</sup>lt;sup>2</sup> Report to ASX 31 May, 2017



and Jumbo and 69% of flake classified as Large with only 14% classified as Small or Fine (refer to Table 1). Importantly the pilot program (HXGCon2 & 3) actually targeted a c. 100 micron flake size product. Therefore, sample HXGCon1 is the more relevant in terms of concentrate flake size distributions.

This result is very positive. Previous sizing work had indicated that only 30% of flake in concentrate was greater than 150 microns (Medium & Large). Flake size hasn't been a priority until recently due to the previous strong focus on a single flake product destined for the battery anode market and the preconception that approximately 106 microns was the target feed size for a spheroidisation plant. Further work is underway to better understand this flake morphology including the relationship of flake thickness with the various flake size fractions.

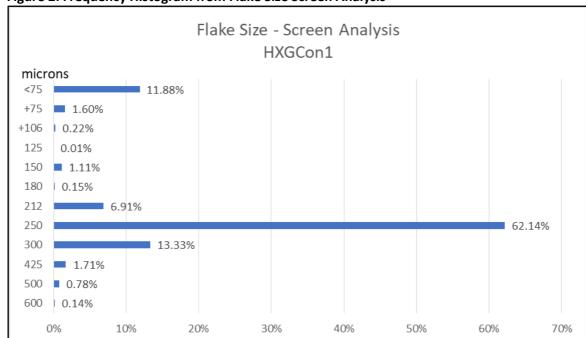


Figure 2: Frequency Histogram from Flake Size Screen Analysis\*

Table 1: HXGCon1 Flake Size Analysis

Microns	Mesh (ASTM)	Size Classification	Weight %
>500	>35	Super Jumbo	0.9%
300-500	50 - 35	Jumbo	15.0%
180-300	80 - 50	Large	69.2%
150-180	100 - 80	Medium	1.1%
75-150	200 - 100	Small	1.8%
<75	<200	Fine	11.9%
			100%

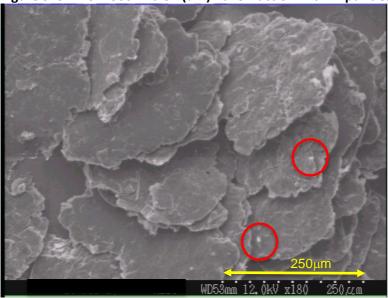
SEM examination of the flakes in various size fractions highlights the large and clean nature of the graphite flakes in the HXGCon1 concentrate as shown in Figure 3.

This updated test work on the concentrates highlights the strengthening potential for the production of premium priced products attributable to large flake size and high-purity.

<sup>\*</sup>Screen Analysis by RX-29 Ro-Tap Test Sieve Shaker/cross referenced by laser diffraction method (Microtrac S3500).



Figure 3: SEM of +300 micron (um) flake fraction with impurities circled.



b. **High-graphite grade and purity** - Confirmation of the high total graphitic carbon (TGC) grades of the concentrates with assays of +97% and up to 98.3% TGC as presented in Table 2.

Table 2: Summary of Graphite Concentrate assays\*

No.	TGC (%)*	Sample Source
HXGCon 1	97.6	2016 Batch test work
HXGCon 2a	98.3	2017 Pilot program split 1/3
HXGCon2b	97.4	2017 Pilot program split 1/3
HXGCon3	97.7	2017 Pilot program split 1/3

<sup>\*</sup>Loss on Ignition (LOI950) method.

SEM observations indicate that the impurities occur on the flake surface, not intercalated within the graphite layers. NAmLab considers that this is very encouraging in that purification will be simple and amenable to "light" purification methods. This is directly linked to the cost inputs and the Company's objective is to be a cost leader in this area to drive profit premiums.

c. Surface Area, Tap Density and Scott Volume determinations were also included in the concentrate characterisation tests. NAmLab concluded that the surface areas (by BET determination) were exceptionally <u>low.</u> A low surface area for concentrate material is regarded as an excellent attribute for batteries, which could be linked to a variety of post-processing criteria, including the increased safety of lithium-ion batteries.

Measurements of Tap Density (packed density) and Scott Volume (flow or an apparent density) were average and low respectively. Tap Density relates to charge density for anode utilisation and the impact of the low Scott Volume is largely around packaging to reduce freight costs for example by utilisation of vibrating tables and vacuum bagging.

The next stage of the test work will focus on graphite flake expandability and purification. Positive expansion characteristics for the McIntosh graphite would be a strong endorsement for a highly sought after product and the product diversification strategy being proposed. The objective of the purification test work will be to test the ability to produce an ultra-pure graphite concentrate through several purification techniques. Given that the McIntosh graphite concentrate is already high-grade and doesn't contain significant amounts of known deleterious elements, NAmLab and Hexagon consider this should make purification relatively straight forward and cost effective. This work will



commence imminently and could be a key input factor and differentiating feature to further improve the "premium" specifications.

#### 3. UPSTREAM - GEO-MET MODEL INPUTS

A robust Geo-Met model is necessary to provide the geological and spatial framework for ongoing metallurgical test work.

In August, 2017 approximately 100, 3kg to 4kg samples of drill core from the Emperor, Wahoo and Longtom deposits were collected from within each of the geological domains defined for each deposit. A testing program has commenced examining:

- multi-element scans, including possible deleterious elements as well as total graphitic carbon content;
- mineralogical associations and textures of graphite and gangue minerals;
- petrographic determinations of graphite flake length; and
- flake size distributions for each sample from sieve measurements.

To date, very encouraging preliminary results have been received but only for the first 20 samples from the Emperor deposit. These early findings relate to:

- a. **Flake Size** the objective is to understand the <u>insitu</u> flake size distribution around the deposit. The samples assessed petrographically to date, demonstrate that the graphite flakes appear to be discrete, oriented and fairly large with approximately 85% of flakes having lengths greater than 150 microns as summarised in Figure 4.
  - It is especially pleasing to see that upstream flake size analysis almost exactly correlates with an independent study in the downstream, presented in Figure 2, above. That study indicates as much as 86.1% of flake being greater than or equal to 150 microns in size.
- b. Clean Mineralogy the internal gangue minerals consist mainly of discrete coarse biotite and muscovite with some minor weathered muscovite or sericite present. These minor constituents are important in terms of liberation, amenability to recovery by flotation and purification, however, the concentrate grades already achieved and the SEM scans indicate this is unlikely to be problematical.
  - The contained sulphides, comprising mainly magnetic pyrrhotite, are also generally coarse grained and disseminated. These properties offer a variety of process techniques to remove/recover the sulphides, possibly into a saleable sulphide concentrate.
  - The photomicrographs presented in Figures 5 and 6 illustrate the coarse graphite flake size, the clean gangue mineralogy and the large grained, disseminated sulphides.
- c. Favourably Low Levels of Deleterious Elements whilst determining whether an element is present in sufficient concentration to be "deleterious" very much depends on the end use, testing by Hexagon of both the whole rock samples and finished concentrates, has not identified any concerning concentrations of elements currently considered to be deleterious to utilisation in advanced battery materials.
  - Analytical scans in this study have identified extremely low to non-detectable concentrations of Cd, Co, Cr, Cu, Mo, Ni, Pb, V and Zn, considered to be "typical" deleterious elements from the whole rock samples. A low to zero presence means these elements will either not report to a concentrate or will be easier to remove from the concentrate during secondary processing into the value-add product. This is consistent with the concentrate assays highlighting the lower processing risk because the deleterious elements are largely not present to start with.



Graphite Flake Length - 20 Samples Emperor by Petrographic Analysis >450 350-450 4.0% 250-350 23.4% 150-250 58.4%

Figure 4: Flake Length Distribution – Emperor Deposit.

14.2%

20%

10%

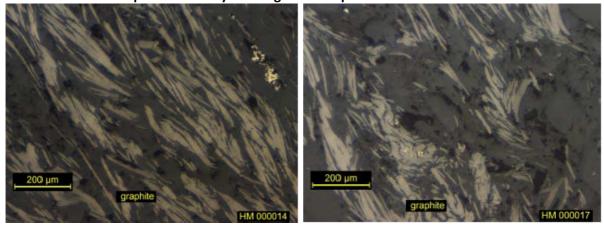
Figure 5 and 6: Photomicrographs illustrating large, clean orientated graphite flakes-cream colour. Disseminated black spots are mainly coarse grained sulphides.

40%

50%

60%

30%



#### 4. COMMENTARY

<150

0%

Two test work streams are in progress: at the downstream end, designed to assess what high-tech applications McIntosh graphite concentrate is suitable for; and at the upstream end, to provide sufficient understanding of the variations within each deposit to ensure steady, consistent plant performance to maintain reliable "in-spec" production.

Independently both test work programs are converging on similar observations; some new and others confirming established results, including:

- a. A genuine large flake population; sizing analysis of concentrate sample indicates 85.1% of graphite flake is greater than 180 microns (Large, Jumbo and Super Jumbo) and the petrographic estimates (more subjective) indicate 86% of flake is greater than 150 microns;
- b. Clean, easy to process ore type as indicated by the mineralogical observations;
- Impurities tend to aggregate on top of flake graphite concentrate as opposed to being intergrown particles of gangue and graphite mineral, indicating "easier" purification;



- d. High-grade and purity graphite concentrate observed through assaying, SEM and petrographic studies; and
- e. Favourable battery related attributes of the concentrate material with <u>several unique and very positive aspects</u>, such as low surface area of concentrate.

The test work about to commence on purification of the concentrate is an important aspect of the product development strategy for two core reasons:

- Environmental and Safety: purity is a key requirement for most battery and other advanced graphite applications. In the battery sector, the use of acids, in particular, hazardous hydrofluoric acid is the dominant technique with resultant adverse impacts on the environment and worker safety. Hexagon and NAmLab are testing several thermal purification routes, considered to be environmentally friendly and utilising well-established furnace related industrial equipment and techniques.
- Price premium: production of a range of ultra-high purity intermediate products will generate
  a significant price premium, in some applications by orders of multiples. This includes purified
  spherical graphite, for example, which is one of the products Hexagon is targeting.

Purification of the concentrate is regarded as a means to secure high-value offtake for all of the planned 100ktpa of planned graphite concentrate from McIntosh through a diversified range of products.

The partnership with NAmLab is an important relationship for Hexagon to gain a deeper understanding of the technical merits of the McIntosh concentrate and product development and also to leverage off NAmLab's commercial contacts with end-users to secure off-take arrangements.

Hexagon's Managing Director, Mike Rosenstreich said "these flake size results are exactly what we had been aiming to achieve and present a possible game changer in terms of product specification and revenue assumptions. The finding that mineral impurities lightly "pepper" the surface of flake as opposed to being inter-grown with flake could create additional momentum for Hexagon achieving cost leadership. More work is required but we are very excited by the technical skills and market insights contributed by our new American partner."

"All of this work is having a positive impact to shape our product development and marketing strategy further toward product diversification and premium priced products. Our objective is to define a portfolio of high-purity graphite products targeted at the advanced battery sectors comprising lithium-ion and other advanced battery types, as well as other high-end graphite applications."

#### 5. COMPETENT PERSONS' ATTRIBUTIONS

#### **Exploration Results and Mineral Resource Estimates**

The information within this report that relates to exploration results, Exploration Target estimates, geological data and Mineral Resources at the McIntosh Project is based on information compiled by Mr Shane Tomlinson and Mr Mike Rosenstreich who are both employees of the Company. Mr Rosenstreich is a Fellow of The Australasian Institute of Mining and Metallurgy and Mr Tomlinson is a Member of the Australian Institute of Geoscientists. They both, individually have sufficient experience relevant to the styles of mineralisation and types of deposits under consideration and to the activities currently being undertaken to qualify as a Competent Person(s) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and they consent to the inclusion of this information in the form and context in which it appears in this report.



#### **Metallurgical Test Work Outcomes**

The information within this report that relates to metallurgical test work outcomes and processing of the McIntosh material is based on information provided by a series of independent laboratories. Mr Rosenstreich (refered to above) managed and compiled the test work outcomes reported in this announcement. Mr Noel O'Brien provided overview and technical guidance on the planning of the programs and the interpretation of the results generated. Mr O'Brien is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr O'Brien has sufficient experience relevant to the styles of mineralisation and types of test work under consideration and to the activities currently being undertaken to qualify as a Competent Person(s) as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and he consents to the inclusion of this information in the form and context in which it appears in this report.

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#### Appendix 1: JORC Table 1 Summary

- The majority of the samples in the reported test work originate from the Emperor Deposit.
- Geology interpretation was undertaken based on a combination of geological logging data from drill holes, surface mapping and modelled conductive plates from the VTEM survey of 2014.
- Drilling method the drilling method used is a combination of reverse circulation "RC" and diamond. The mineralisation for Emperor is defined by 9 RC drill holes for a total of 1,134 m, 21 diamond drill holes for a total of 2,940.5 m and 9 RC precollar / diamond tail holes for 1,369.3 m. The mineralisation for Longtom is defined by 37 RC drill holes for a total of 4,146 m, 1 diamond drill hole for a total of 54.9 m and 4 RC precollar / diamond tail holes for 620.6 m. The mineralisation for Wahoo is defined by 26 RC drill holes for a total of 2,023 m and 11 diamond drill holes for a total of 1,257.8 m. The mineralisation for Barracuda is defined by 35 RC drill holes for a total of 2,883m and 3 diamond drill holes for a total of 294.0m.
- Sampling one-metre drill chip samples were collected throughout the RC drill programme in sequentially numbered bags. Core samples from diamond drill holes were collected based on geology and a minimum interval of 1m and a maximum of 2m.
- Sub-sampling analysis was undertaken at ALS laboratory where samples initially undergo a coarse crush using a jaw crusher to better than 70% passing 6mm. Samples exceeding 3 kg were spilt using a Jones Riffle Splitter 50:50. Pulverising was completed to 85% passing 75μm in preparation for analysis.
- Sample analysis method all samples were sent to ALS for preparation and for Total Graphitic Carbon (TGC), Total Carbon and Total Sulfur (S) analyses. A 0.1 g sample is leached with dilute hydrochloric acid to remove inorganic carbon. After filtering, washing and drying the remaining sample is roasted at 425°C to remove organic carbon. The roasted residue is analysed for carbon using a high temperature LECO furnace with infrared detection for percentage units.
- Duplicate analysis and analysis of Certified Reference Material (standards) and blanks was completed and no issues identified with sampling reliability or contamination.
- Estimation methodology grade estimation was undertaken using Surpac software to model graphitic mineralisation using a nominal 3% TGC cut-off grade and to estimate TGC by ordinary kriging at Emperor, Longtom and Wahoo and inverse distance (cubed) at Barracuda.
- Resource Classification classification is based on confidence in geological and grade continuity using the drilling density, geological model, modelled grade continuity and conditional bias measures (slope of the regression and kriging efficiency) as criteria. Indicated Mineral Resources are defined where the drill spacing is sufficient to assume geological and grade continuity and where diamond drill samples have been assessed for graphite quality. As a general rule, drill spacing of 40 m by 40 m or less resulted in an Indicated classification for Emperor and Wahoo and areas with broader spacing are classified as Inferred. For Longtom drill spacing of approximately 25 m by 100 m or less resulted in an Indicated classification and areas with a broader spacing are classified as Inferred. The results from metallurgical test work at the McIntosh project have been considered for Mineral Resource classification. The likelihood of eventual economic extraction was considered in terms of possible open pit mining, likely product specifications, possible product marketability and potentially favourable logistics to port and it is concluded that graphite at the McIntosh Project is an Industrial Resource in terms of JORC Code Clause 49.
- Cut-off parameters the Mineral Resource is reported above a 3% TGC cut-off grade.
- Mining modifying parameters planned extraction is by open pit mining and mining factors such as dilution and ore loss have not been applied.
- Metallurgical methods no metallurgical assumptions have been built into the resource model. Data from mineralogy and preliminary metallurgical test work has been considered for Mineral Resource classification. The latest mineralogical examination of drill samples indicates that graphite occurs across a range of sizes from fine to very large flake, with the majority (80%) being in the size range of 150 to greater than 450 microns. Results of metallurgical test work on core samples collected from Emperor and Wahoo indicate a potentially saleable product into the advanced battery market, such as lithium Ion batteries. Recent screen size



analysis of concentrate indicates 84% of the graphite flake is greater than 180 microns. The convergence of these two data sets indicates the presence of predominantly larger flake material at the Emperor Deposit. ALS recently completed pilot processing program of a 2.5 tonne bulk composite sample collected from diamond core drilling at Emperor and generated 100kg of concentrate to provide samples for potential offtake companies. This material achieved a high graphite grade of 97.6% TGC but because it was targeting a flake size of c. 106 microns, this sample was not representative of the potential recoverable flake size distribution. This is because at that time the Company's marketing focus was solely on a product for the lithium ion battery anode market and the perceived optimum feed size for those plants of c. 106 microns.

The latest assaying and sizing work was undertaken at an ISO 9001:2008 accredited laboratory in the US, highly experienced in graphite applications and test work, utilising conventional assaying and sizing techniques.

The test work currently being undertaken comprises two distinct programs:

- 1. What is referred to as the "Upstream" test work is aimed at understanding the broad mineralogical associations, textures and flakes size distributions around the Mineral Resources to create a geometallurgical model. Such a model will provide geological and spatial context for further sampling and processing test work.
- 2. What is referred to as the "Downstream" test work is to examine the downstream or secondary processing responses to develop a marketing strategy based on the technical attributes of the material and to match it with end-users requirements.



# Appendix 2: JORC Table 1 Emperor Resource

**Section 1 Sampling Techniques and Data** 

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Criteria Sampling techniques	JORC Code Explanation  • Nature and quality of sampling • Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	<ol> <li>Reverse Circulation</li> <li>RC drilling used high pressure air and a cyclone with a rotary splitter.</li> <li>Samples were collected at one-metre intervals.</li> <li>Approximately 50% of samples were not submitted for assay due to the visual non-mineralised nature of the material collected. All graphitic intervals were submitted for analyses.</li> <li>Duplicate and standards analysis were completed and no issues identified with sampling reliability.</li> <li>Samples were sent to the ALS laboratory in Perth for assay preparation and then sent to ALS in Brisbane for Total Graphitic Carbon (TGC) analyses.</li> <li>All samples were pulverised to better than 85% passing 75µm with a 10 g aliquot taken for assay.</li> <li>Sampling was guided by Hexagon's protocols and QA/QC procedures.</li> <li>RC drilling samples of 3 to 5 kg weight were shipped to the laboratory in plastic bags; samples were pulverised and milled for assay.</li> <li>Diamond Drilling</li> <li>Drill samples in this program were collected based on geology, varying in thickness from 0.1 m to 2 m intervals. Sampling was completed so samples could be composited to one metre intervals within the geological units.</li> <li>Core samples were quarter split HQ3 core using a diamond bladed saw and sent to the ALS laboratory in Perth for assay preparation and then sent to ALS in Brisbane for Total Graphitic Carbon (TGC) analyses.</li> <li>All samples were pulverised to better than 85% passing 75µm with a 10 g aliquot taken for assay.</li> <li>Duplicate samples, CRM standards and blank material were used during the drill programs. Duplicates collected after each 50 samples.</li> </ol>
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).	<ul> <li>each 50 samples. Standards were inserted for samples ending in *00,*20,*40,*60 and *80 and blanks for samples ending in *01,*21,*41,*61 and *81.Sampling was guided by Hexagon's protocols and QA/QC procedures.</li> <li>1. Reverse Circulation</li> <li>RC drill holes (total of 2,154 m from 18 holes) – completed with face sampling hammers and collected through a cyclone Sample recovery was estimated at a percentage of the expected sample, sample state recorded (dry, moist or wet) samples tested with 10:1 HCl acid for carbonates and graphite surface float.</li> <li>RC drilling was completed by Egan drilling using an X400 drill rig and United Drilling Services using a DE840 drill rig.</li> <li>2. Diamond Drilling</li> <li>Diamond drill holes (total of 2,940.5 m for 21 holes) – collected HQ<sub>3</sub> core using a 3m core barrel and drilled by Terra Drilling using a Hanjin Powerstar 7000 track mounted rig Core orientation was recorded using a Reflex EZ Sho instrument.</li> <li>RC pre-collars were drilled with HQ<sub>3</sub> diamond tails for a total</li> </ul>
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.     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.	of 1,369.3 m from 9 holes.  1. RC Drilling  • A face sampling hammer was used to reduce contamination at the face.  • 1 m drill chip samples, weighing approximately 2 kg were collected throughout the drill programme in sequentially numbered bags.  • Split samples were recovered from a cyclone and rigmounted cone splitter. The sample recovery and physical state were recorded.  • Every interval drilled is represented in an industry standard chip tray that provides a check for sample continuity down hole.  2. Diamond drilling  • Core recovery was excellent. Recoveries were measured for each run between core blocks and measurements recorded. Core was photographed and logged for RQD and geology.



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.	<ul> <li>Analysis from one pair of twin holes drilled at Hexagon's Longtom resource (an adjacent and similar style graphite deposit) noted a lower graphite content in the RC samples when compared with diamond core. Insufficient work has been completed on comparing RC and diamond methods to rule out drilling by RC.</li> <li>All RC and diamond drilling (100%) was logged for geology in the field by qualified geologists. Lithological and mineralogical data was recorded for all drill holes using a coding system developed specifically for the Project. Primary and secondary lithologies are recorded in addition to texture, structure, colour, grain size, alteration type and intensity, estimates of mineral quantities, graphite intensity and sample recovery. The oxidation zone is also recorded.</li> <li>No adjustments have been made to any assay data</li> <li>Geological logging is qualitative in nature.</li> <li>Diamond drilling logging also recorded recovery, structure and geotechnical data.</li> <li>Diamond core was orientated using the Reflex orientation tool.</li> <li>Core was photographed both dry and wet.</li> </ul>
Sub-sample techniques and sample preparation	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.	<ul> <li>All samples marked with unique sequential sample number</li> <li>RC drilling samples were bagged at the drill site in calico bags with a second outer plastic bag to prevent loss of fines. The sample sizes are considered to be appropriate to the grain size of the material being sampled.</li> <li>1m RC drilling samples were submitted to either Actlabs Canada or ALS laboratories in Perth. The samples were riffle split on a 50:50 basis, with one split pulverised and analysed for Total Graphitic Carbon (TGC), Total Carbon (TC) and Total Sulphur (TS) using a LECO Furnace, and the other split held in storage.</li> <li>For RC samples, standards and field duplicates were inserted at an approximate rate of 1 in every 20 samples collected. Duplicate assay results exhibit good correlation with the original assays and no consistent bias is evident.</li> <li>Sample preparation: <ol> <li>Coarse crush using a jaw crushed to better than 70% passing 6mm.</li> <li>For samples exceeding 3kg received mass, riffle split using a Jones Riffle Splitter 50:50</li> <li>Pulverise up to 3kg of coarse crushed material to better than 85% passing 75µm particle size</li> <li>Small aliquot (~10g) taken for assay.</li> </ol> </li> <li>Diamond Drilling <ol> <li>Diamond drill core was cut into half core (used for metallurgical testing) and the remaining half sawn into quarter core using diamond blade core-saw. Quarter core was used for samples and duplicates. Core cutting was carried out under consignment at Westernex in Perth.</li> <li>Duplicate assay results exhibit good correlation with the original assays and no consistent bias is evident.</li> <li>Sample preparation: <ol> <li>Coarse crush using a jaw crushed to better than 70% passing 6mm.</li> <li>For samples exceeding 3 kg received mass, riffle split using a Jones Riffle Splitter 50:50</li> <li>Pulverise up to 3 kg of coarse crushed material to better than 85% passing 75µm particle size</li> <li>Small aliquot (~10 g) taken for assay.</li> </ol> </li> <li>Sampling procedures and sam</li></ol></li></ul>
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.  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)	<ul> <li>industry good practice:</li> <li>The assaying and laboratory procedures used are industry standard and are appropriate for the material tested.</li> <li>Sampling was guided by Hexagon's protocols and QA/QC procedures.</li> <li>For RC samples, standards and field duplicates were inserted at an approximate rate of 1 in every 20 samples collected.</li> <li>Field duplicates were inserted into diamond core samples at a rate of 4 every 100 samples, standards at a rate of 4 every 100 samples and blanks at 2 every 100 samples.</li> </ul>
	checks) and whether acceptable	a rate of 4 every 100 samples, standards at a rate of 4 every



		Statistical analysis of standards blanks and duplicates
		<ul> <li>Statistical analysis of standards, blanks and duplicates during the QAQC process showed that the data was satisfactory.</li> </ul>
		No issues were identified with sampling reliability
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.	<ul> <li>Hexagon QA/QC checks show that all samples are within acceptable limits. No adjustments to assay data have been made based on the analysis of duplicates, standards and blanks.</li> <li>Standards from ALS laboratory were found to be acceptable.</li> <li>Duplicate analysis was completed and no sampling issues were identified.</li> <li>CSA verified several graphite intersections in core and RC chip samples during a visit to Hexagon's warehouse during January 2015.</li> <li>During a site visit in October 2015, a geological consultant from CSA verified that the diamond drilling, geological logging and sampling practices were of industry standard. The consultant also verified graphite intersections in core samples.</li> <li>Analysis from one pair of twin holes drilled at Hexagon's Longtom resource noted a lower graphite content in the RC samples when compared with diamond core. It is suggested that RC samples are biased due to the loss of fine material. The majority of samples used in the estimation for Emperor are diamond core.</li> <li>The Hexagon database is hosted in a SQL backend database, ensuring that data is validated as it is captured and exports are produced regularly. Assay results are</li> </ul>
		merged into the database from the lab certificates limiting transcription or mapping errors from occurring.
Leastless of D.		No adjustments have been made to the results.
Location of Data points	Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.     Specification of the grid system used.     Quality and adequacy of topographic control.	<ul> <li>45 drill hole collars were surveyed using Differential GPS by a surveyor from Savannah Nickel mines for the 2015 program and a contract surveyor (MNG survey) from Broome. The degree of accuracy of drill hole collar location and RL is estimated to be within 0.1 m for DGPS. 3 collars were surveyed using a handheld Garmin 62S and Garmin 76c Global Positioning System (GPS) with a typical ±5 m accuracy. Topography from contours generated from a LiDAR survey was used to validate collar points and assign RL values to the 3 holes surveyed by GPS that had an RL &gt;2 m different to the topography.</li> <li>Downhole surveys completed for all holes where possible (48 holes). EZshot survey data was used where downhole surveys were not successful. All holes used in the resource have been downhole surveyed using a gyro by ABIM Solutions.</li> <li>Topographic control was adequate for the purposes of Mineral Resource estimation.</li> <li>The map projection used is the Australia Geodetic MGA 94 Zone 52.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill spacing on an approximate 40 m by 40 m grid throughout the majority of the deposit, dropping to 40 m across strike by 80 m along strike to the south of the deposit.</li> <li>Geological interpretation and mineralisation continuity analysis indicates that data spacing is sufficient for definition of a Mineral Resource.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Holes generally drilled dipping at -60° targeting the fold hinge and limbs.</li> <li>Diamond drill core has been orientated using a Reflex ACE tool 9Act II), with α and β angles measured and positioned using a Kenometer. MapInfo software was used to calculate dip and dip direction for each structure.</li> <li>The relationship between the drilling orientation and the orientation of key mineralised structures is not considered to have introduced a sampling bias.</li> </ul>



Sample Security	The measures taken to ensure sample security.	Unique sample number was retained during the whole process     RC and diamond samples were placed into calico bags and then into self-sealing plastic bags prior to being put into bulka bags. The bulka bags were then transported by road. RC samples were sent to the ALS laboratory in Brisbane for preparation and analysis and diamond core samples were sent to ALS in Perth for preparation and then to ALS in Brisbane for analysis. A small amount of core samples were sent to Actilabs.     Drill core transported to Westernex was secured on pallets with metal strapping and transported to Perth by road train.     The sample security is considered to be adequate.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Sampling techniques and data collected methods have been audited by CSA during a site visit in October 2015</li> <li>Field data is managed by an independent data management consultancy Rocksolid Solutions.</li> <li>All data collected was subject to internal review</li> </ul>

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.	Drilling at the Emperor deposit occurred on exploration leases E80/3864 and E80/4841. These tenements are held by McKintosh Resources Pty Ltd who is a wholly owned subsidiary of Hexagon Resources. Hexagon Resources are the managers of exploration on the project.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The East Kimberley has been largely explored for base metals and diamonds with no active previous exploration for graphite. Graphite had been noted by Gemutz during regional mapping in the Mabel Downs area for the BMR in 1967, by Rugless mapping and RAB drilling in the vicinity of Melon Patch bore, to the east of the Great Northern Highway in 1993 and has been located during nickel exploration by Australian Anglo American Ltd, Panoramic Resources Ltd and Thundelarra Resources Ltd over the last 20 years.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The McIntosh Project graphite schist horizons occur in the high grade terrain of the Halls Creek Mobile Zone of Western Australia. The host stratigraphy is the Tickalara Metamorphic which extend for approximately 130 km along the western side of the major Halls Creek Fault. The metamorphic rocks reach granulite metamorphic facies under conditions of high-temperature and high pressure although the metamorphic grade in the McIntosh Project area appears to be largely upper amphibolite facies with the presence of key minerals such as sillimanite and evidence of original cordierite.</li> <li>Hexagon has identified potential graphite schist horizons based on GSWA mapping and EM anomalism over a strike length in excess of 15 km within the project area, with potential for an additional 35 km strike length of graphite bearing material from lower order EM anomalism.</li> </ul>
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 drillholes:	21 diamond drill holes for 2,940.5 m and 18 RC drill holes for 2,154 m and 9 RC precollar diamond tail (RD) holes for 1,369.3 m completed at the Emperor deposit. Hole locations tabulated in an Appendix to this announcement report.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques,	Data compiled in Excel and validated in Datashed by an external data management consultancy.



	maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	<ul> <li>RC samples were all 1 m in length, diamond core samples vary between 1m and 2 m samples.</li> <li>Metal equivalents are not reported as this is an industrial mineral project where the mineral properties define grade (e.g. flake size and purity).</li> <li>A nominal 3% Total Graphitic Carbon cut-off has been applied in the determination of significant intercepts</li> </ul>
Relationship between mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drillhole 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.	<ul> <li>Mineralised widths at Emperor are estimated to be typically between 5 m and 70 m, compared with RC samples of 1m width. There is a very close relationship between the graphitic schist unit and Total Graphitic Carbon (TGC%) assays. The presence of graphitic schist is clearly evident in both the RC chips and diamond drill core so that the assay widths can be clearly related to the geological logs.</li> <li>The graphitic schist horizon has been interpreted as an anticlinal fold. Angled drill holes (generally 60°) have targeted the mineralised unit with the priority to intersect the limbs perpendicular to the strike of the graphitic schist horizon, although in some areas this was not possible and holes were drilled down dip. However interpreted EM data and the width of intersections where holes were drilled perpendicular to the unit have allowed for a good indication of unit thickness to be made and applied in areas where the information is not available.</li> </ul>
Diagrams	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 drillhole collar locations and appropriate sectional views.	Not relevant as Mineral Resource being reported.
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.	Exploration results are not being reported for the Mineral Resources area.
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.	<ul> <li>The September 2014 VTEM Supermax survey over the McIntosh Flake Graphite Project covered a total of 642 line kilometres and identified a total of 12 high-priority anomalies. Five of these were previously identified by induced polarisation (IP) and historical electromagnetic (EM) techniques and confirmed to be flake graphite schist by geological field mapping, petrographic analysis, rock chip sampling and exploration drilling.</li> <li>VTEM geophysical work was carried out by Geotech Limited with the data validated and processed by Southern Geoscience Consultants (SGC).</li> <li>Test work and petrographic examinations to gather data on the mineralogy, flake size distributions and elemental associations are being undertaken and reported progressively. The methods comprise petrographic examination-including systematic flake length estimates, screen sizing analyses, assaying (as above).</li> <li>Metallurgical test work is underway and being reported progressively on McIntosh concentrate material produced from previous test work. This work examines downstream processing opportunities based on understanding the technical attributes of the flake comprising the concentrate material. This includes simulating downstream processing for battery anode material (Spheroidisation) to generate battery related parameters. As well, tests were completed assessing flake size in the concentrate, flake morphology, purity as well as a range of other test work also examining flake size and morphology, purity, surface areas, particle size distribution and other aspects.</li> <li>This work is being undertaken by several different laboratories and test work facilities in Australia and oversea that have been reviewed and assessed for their experience by Hexagon.</li> </ul>



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).  The nature and scale of planned further work (e.g. tests for lateral extensions or large-scale step-out drilling).	<ul> <li>Further diamond core drilling has been recommended to twin and verify existing RC holes at Emperor. This core is planned to be assayed for TGC and examined petrographically to assess graphite flake characteristics.</li> <li>Additional dry density work on core to be carried out on mineralised and background domains.</li> <li>Estimate S% content into resource model</li> <li>Program to assess moisture content of Emperor material.</li> <li>Multi-element analysis of mineralisation and waste material.</li> <li>Continuation of the test work programs gathering mineralogical data to formulate a geometallurgical model, primary processing test work to improve the Stage 1 process flow sheet and continue the downstream processing test work on material derived from the stage 1</li> </ul>
		process flow sheet.

Section 3 Estim	ation and Reporting of Mineral Re	sources
Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.  Data validation procedures used.	<ul> <li>Primary data was captured into spreadsheet format by the supervising geologist, validated and subsequently loaded into Hexagon's database.</li> <li>Database extracted as an .mdb access file from Datashed and validated before importing into Surpac.</li> <li>Additional data validation by Optiro; included checking for out of range assay data and overlapping or missing intervals.</li> </ul>
Site Visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	<ul> <li>Numerous site visits were completed by S. Tomlinson during the 2015 and 2016 drilling period. The diamond and RC drill rigs were inspected, sampling procedures checked, RC chips and diamond core logged.</li> </ul>
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>Geological interpretation based on lithology logging, structural logging, geochemical sampling, prospect scale surface mapping and modelled VTEM data collected during the 2014 VTEM Supermax survey.</li> <li>Drill coverage to ~40 m by 40 m.</li> <li>Mineralisation wireframe produced based on soft 3% TGC cut-off grade delineating ore/waste boundary. Internal dilution in the main mineralised envelope has been modelled as two domains. Further modelling of mafic intrusive bodies have also been modelled.</li> <li>The base of oxidation and mafic intrusives were also modelled as part of the Emperor resource.</li> <li>Confidence in the grade and geological continuity is reflected in the Mineral Resource classification.</li> </ul>
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The Emperor resource extends 480 m north-northwest to south-southeast. The mineralisation occurs within an anticline of the hosting graphite schist units ranging in thickness between 5 m and 70 m.</li> <li>Mineralisation is open along strike and at depth along the fold limbs.</li> </ul>
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products.</li> <li>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> </ul>	<ul> <li>The resource was modelled using Geovia's Surpac v6.7 modelling software.</li> <li>Drill hole sample data was flagged from interpretations of the top and base of the mineralisation horizon.</li> <li>Samples were composited to 1 m down hole length.</li> <li>Top grade cuts were not required (low coefficient of variation and no outlier grades)</li> <li>Statistical analysis was completed to investigate low correlation variances, boundary conditions between domains, and fresh/oxide.</li> <li>TGC mineralisation continuity was interpreted from variogram analyses to have a horizontal range of 170 m (north-west to south-east).</li> <li>The maximum extrapolation distance is 20 m along strike and 20 m across strike.</li> <li>Grade estimation was into parent blocks of 40 mE by 20 mN by 5 mRL. Block size was selected based on kriging neighbourhood analysis.</li> <li>Total Graphitic Carbon (TGC) estimated by Ordinary Kriging (OK) for mineralised domains (1 to 4) at the parent block scale.</li> <li>The search ellipses were oriented within the plane of the mineralisation.</li> </ul>



	to the case of blade model of the control of the co
	<ul> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</li> <li>The estimation passes were used; the first search was based upon the variogram ranges in the three principal directions; the second search was two times the initial search and the third search was four times the initial search, with reduced sample numbers required for estimated in the first pass for domain 1 (main envelope) and 49% for domain 4.</li> <li>The estimated TGC block model grades were visually validated against the drillhole data, and by northing, easting and elevation slices.</li> <li>There is no production data and so no reconciliation has taken place.</li> <li>Sulphur will be estimated into the model, as sulphide minerals have the potential to affect metallurgical processes for recovering graphite. The available metallurgical testwork results indicate that the sulphide minerals do not present any issues in recovering graphite. Sulphur is not correlated with TGC.</li> </ul>
Moisture	<ul> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> <li>The Emperor deposit is above the water table. Down hole dipping during the 2015 field season did not intercept water.</li> <li>Moisture content has not been tested</li> </ul>
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.      The Mineral Resource is reported above a 3% TGC cut-off grade to reflect current commodity prices and open pit mining methods.
Mining factors or assumptions	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous.</li> <li>It is assumed that extraction will be by open pit mining and that the mineralisation is economic to exploit to currently modelled depths.</li> <li>Mining factors such as dilution and ore loss have not been applied.</li> <li>No assumptions about minimum mining widths or dilution have been made.</li> </ul>
Metallurgical factors or assumptions	<ul> <li>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous.</li> <li>A 99% graphite concentrate was produced from a process of crushing and grinding material from the McIntosh project. See results in metallurgical test work conducted by ALS Global in Adelaide. Refer to announcement released 18 January 2016.</li> <li>Metallurgical testwork on Emperor material shows that the sulphides present are easily liberated from the graphite by flotation.</li> <li>The results from metallurgical testwork have been considered for Mineral Resource classification.</li> </ul>
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.</li> <li>No assumptions have been made regarding waste and process residue</li> <li>Environmental studies are being completed as part of the McIntosh Pre-Feasibility study.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the</li> <li>Dry density was assigned a value of 2.85 t/m³ (fresh) and 2.65 t/m³ (oxide) based on 25 dried core samples and water emersion technique carried out by SGS.</li> <li>Geophysical gamma density data was also obtained but has not been included in the resource.</li> </ul>



	deposit.  Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>Mineral Resources have been classified on the basis of confidence in geological and grade continuity using the drilling density, geological model, modelled grade continuity and conditional bias measures (slope of the regression and kriging efficiency) as criteria.</li> <li>The results from metallurgical testwork have been considered for Mineral Resource classification. The likelihood of eventual economic extraction was considered in terms of possible open pit mining, likely product specifications and possible product marketability.</li> <li>Measured Mineral Resources - none defined.</li> <li>Indicated resources have been defined in the centre of the deposit where material was estimated in the first pass estimation. Drill spacing for indicated material is generally 40 m by 40 m.</li> <li>Inferred material occurs in the northern and southern limits of the deposit where drilling data is sparser (to 40 m by 80 m), but still sufficient to assume continuity of mineralisation. Confidence for the resource in these areas is also from the VTEM survey completed over the area.</li> <li>The classification considers all available data and quality of the estimate and reflects the Competent Person's view of the deposit.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	CSA carried out a site visit in 2015.
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person.      The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation.	<ul> <li>The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code (2012 Edition).</li> <li>The Mineral Resource is a global estimate of tonnes and grade.</li> <li>Relative tonnages and grade above the nominated cut-off grades for TGC are provided in this announcement. Volumes of the collated blocks sub-set by mineralisation domains were multiplied by the dry density value to derive the tonnages. The contained graphite values were calculated by multiplying the TGC grades (%) by the estimated tonnage.</li> <li>No production data is available to reconcile results with.</li> </ul>