



**ASX ANNOUNCEMENT**

**6 NOVEMBER 2017**

## **AMEC PRESENTATION**

Hexagon Resources Ltd (ASX: **HXG**) is pleased to provide a copy of the presentation given by its Managing Director, Mike Rosenstreich to the Investor Briefing held in Perth on Saturday, 4 November. This well attended event was hosted by the Association of Mining and Exploration Companies (AMEC), a national organisation that Hexagon has recently joined.

**Attached:**

1. Presentation Slides (Including Competent Persons Attribution)
2. JORC Table 1 in reference to technical information included in the presentation.

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# McIntosh Graphite; Progress on Product Development

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Important product diversification to achieve  
portfolio of premium priced products

Mike Rosenstreich  
4 November 2017, Perth, WA  
AMEC Investor Briefing



# McIntosh Graphite; Progress on Product Development

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## Presentation Outline

1. Hexagon Resources Limited (ASX:HXG)
2. McIntosh Project Outline.
  - Strategic location
  - Development Plans
  - Prefeasibility Study (May 2017) outcomes
3. Product Development & Marketing
  - Graphite – natural graphite applications
  - McIntosh Graphite – new findings
4. Next Steps Toward Development
5. Summary – HXG a compelling investment opportunity

# Hexagon - Introduction



Hexagon Resources Limited (ASX:HXG) is a junior exploration company listed on the ASX.



HXG – Head Office, Perth



## Focussed on strategic & energy related minerals 2 key projects in Western Australia

- McIntosh Graphite Project
- Halls Creek Gold/Base metals project

Shares on Issue	248M
Options on issue (unlisted)	32.4M
Share price (2/11/17)	A\$0.12
12 Month high/low	A\$0.31/A\$0.08
Market Capitalisation	A\$30M
Top Twenty	43.6%
Cash (30/9/17)	A\$0.8M
Investments (2M BMRL shares)	A\$1.3M

**Board of Directors:** (from Left); M. Rosenstreich, Charles Whitfield, Garry Plowright and Rowan Caren (Company Secretary)

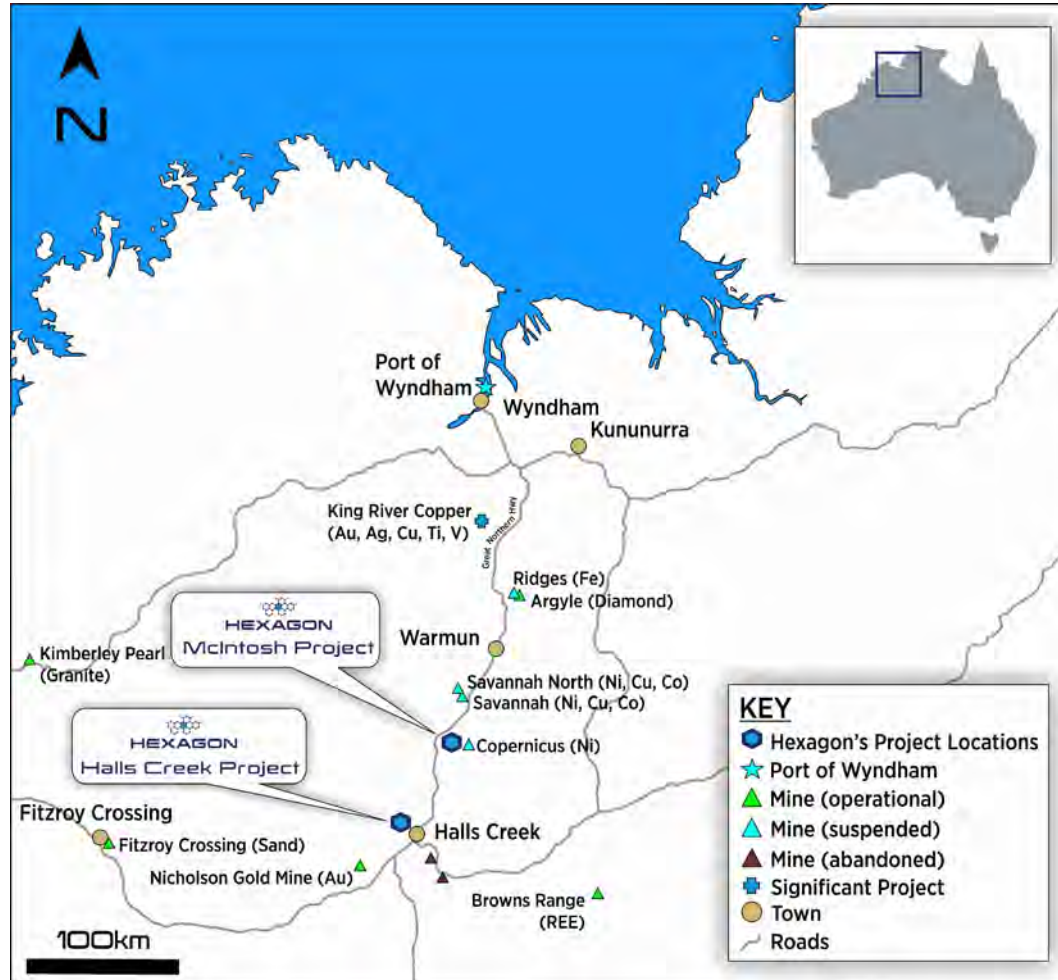


Six month share price



# Project Locations - Western Australia

## The McIntosh Flake Graphite Project.....



**McIntosh Flake Graphite Project - is well located “politically” & geographically:**

- East Kimberley is an established mining area.
- Project & Port access is well positioned to key customer groups – gateway to Asia and shipping routes to Europe, Middle East and USA.
- Western Australia has an established and stable mining regulatory environment.
- Excellent relationships with all key stakeholders.

**Customers are attracted by “supply” from stable, reputable countries with good environmental practices.**

# Resource Inventory

## Geology & Resources-Large Scale.....

Scale is important – it demonstrates long-term supply capability.

JORC Classification	Tonnes (Mt)	TGC (%)	Contained Graphite (kt)
Total Indicated & Inferred	21.3	4.5%	964

ASX Report 25 May, 2017; Cut-off is 3%TGC and rounding errors may occur.

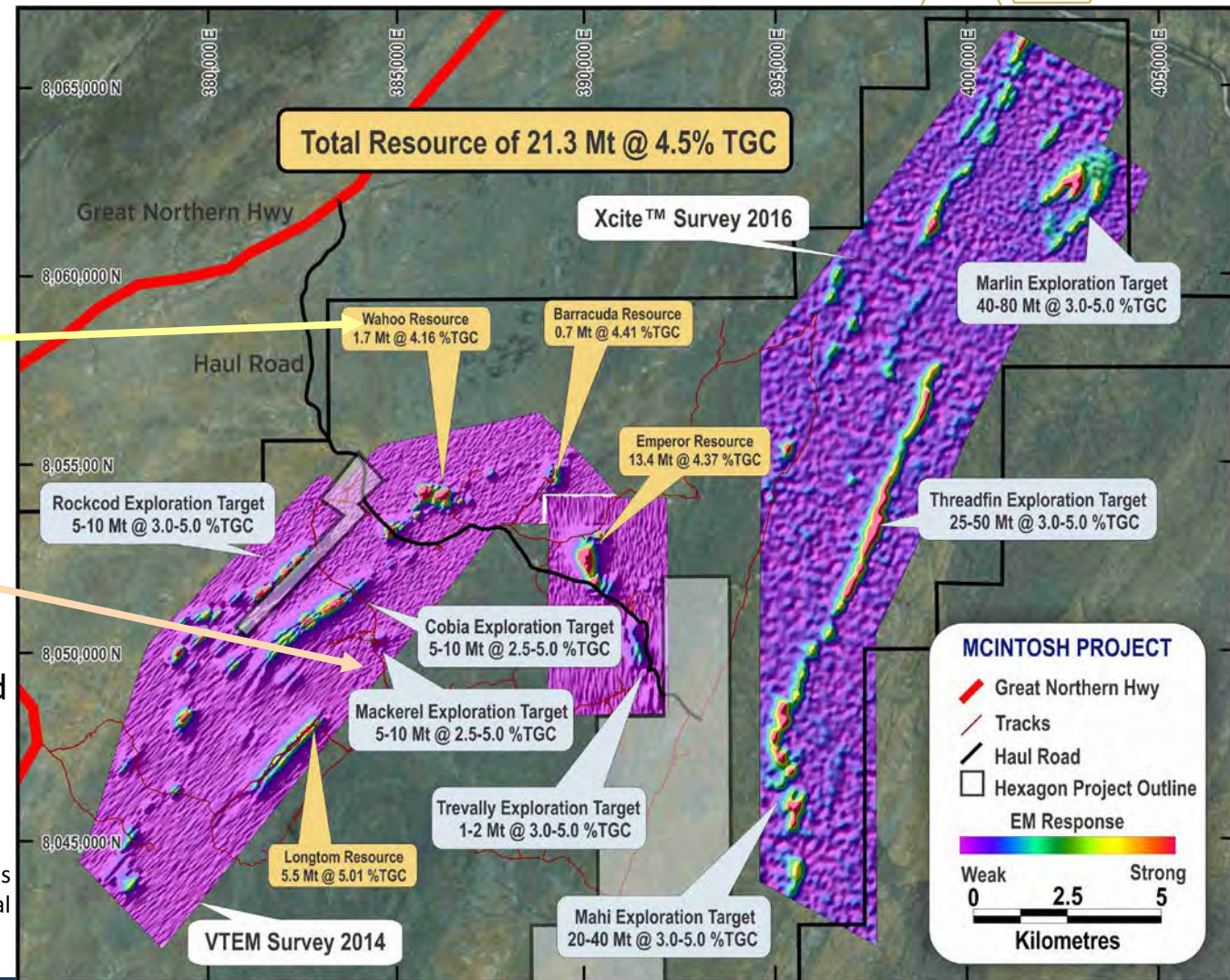
### Exploration Target\* (additional to JORC Resources)

Prospect	Tonnage Range (Mt)	Grade Range TGC (%)
Total	110 - 220	2.5 – 5.0

ASX Report 12 April, 2017

- Excellent correlation between EM “highs” and drilled mineralisation.
- Drilling has excellent potential to increase existing resources and convert “targets” into resources.

**\*Cautionary Statement:** The potential quantity and grade of the Exploration Targets is conceptual in nature, there has been insufficient exploration work to estimate a mineral resource and it is uncertain if further exploration will result in defining a mineral resource.





# McIntosh Project - what it might look like





# McIntosh Project - what it might look like





# McIntosh Project - what it might look like





# McIntosh Project - what it might look like



Safety



Environmental Management



Site rehabilitation



Indigenous & Community Engagement





# McIntosh Project - Development



## Positive Pre-Feasibility Outcomes...

PHYSICALS	Unit	Annual Average	Life of Mine (LOM)
Ore Mined	Mt	2.4	14.3
Strip Ratio	W:O	4.3	4.5
Total Mined	Mt	11.3	79.3
Total Mined	Mbcm	4.1	28.7
Head Grade	% TGC	4.25	4.25
Plant Recovery	%	87-93	93
Concentrate	Kt	82.0	573.7
Concentrate Grade	% TGC	98	98

### PFS – Initial development scenario

- **PFS Outcomes:**
  - ✓ are positive
  - ✓ Identified many opportunities to reduce operating costs and capital costs.

**Excellent basis to undertake Feasibility Study and downstream processing test work (Stage 2 Project).**

PFS FINANCIAL OUTCOMES	Unit	Life of Mine (LOM)
Site Operating Costs	AUD/t Conc	987
Realisation Costs (FOB)	AUD/t Conc	51
Total Operating Costs	AUD/t Conc	1,038
Start-up Capital (Incl 15% Contingency)	AUD Millions	148
Sustaining Capital	AUD Millions	24.9
Revenue	AUD Millions	1,197
Revenue	AUD/t Conc	2,087
EBITDA	AUD Millions	654
EBITDA Margin	%	51
<b>Pre-tax NPV (Discount rate:8%)</b>	AUD Millions	<b>261</b>
Post-tax NPV (Discount rate:8%)	AUD Millions	175
<b>Pre-tax IRR</b>	%	<b>46</b>
Post-tax IRR	%	36
Payback Period	Years	3

# Product Development & Marketing

## Graphite – *what's it good for.....*



### **Graphite:**

Part of the energy metal trend as a key component of batteries as:

- Anode (-) material
- Speciality cathode (+) along with Li and Co

Also used in

- Steel industry
- High performance seals and gaskets
- Electric shielding
- Plastics
- Pencils
- Lubricant



# Product Development & Marketing

## Graphite & batteries; *lets get it right!*

- Graphite is used in many different types of batteries.

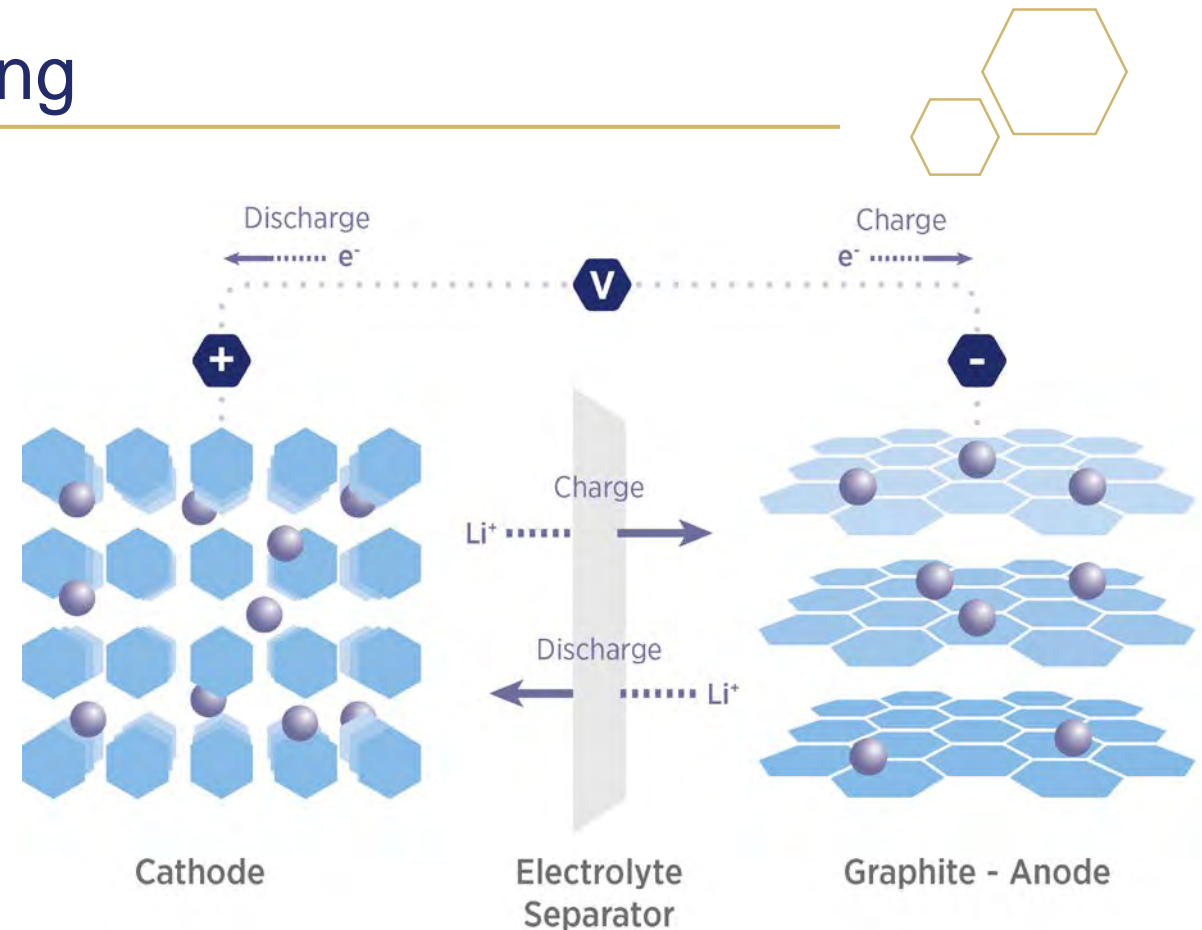
### LIB, GLIB or NGLIB!

- Graphite-Lithium Ion or Nickel-Graphite-Lithium Batteries!
- Anode is Graphite - c.7x more graphite in a GLIB than Li & Co.
- Cathode is Nickel – with a “sprinkling” of Li & Co.

Anode graphite is an approximately, 30:70 mixture of natural flake graphite to synthetic, respectively.

Spherical graphite from natural flake graphite is cheaper than synthetic graphite and as quality issues are overcome the proportion of natural in battery anodes is increasing.

100% of natural spherical graphite for batteries currently supplied from China.



- Cathode is c.40-50% of the cell cost.

- Anode is c.30% of cell cost;
- Graphite is c.50% of Anode Cost
- Graphite is c.15% of the cell cost.

# Product Development & Marketing

High demand for high purity, quality flake concentrates



## McIntosh Flake Graphite Concentrate

### Product Spec's

1. 98% total graphitic carbon<sup>1</sup>
2. No notable deleterious elements
3. Excellent flake morphology
4. Maximum Reversible Capacity of ~370 mAh/g –across the entire flake size range.
5. Conductivity: 99.82-126.8 ( $\Omega \cdot \text{cm}$ )<sup>-1</sup>

**Promising for the battery, expandable & graphene markets**

<sup>1</sup> TGC assay by double LOI method

**McIntosh flake Concentrate; the “complete package”, ultra pure, high-grade with peak electrical properties from simple, clean, onsite processing.**

### Stage 1 Processing

(Concentrate production)

### Stage 2 Processing

(Intermediate Customer)

### Battery Industry

**HXG Aim – ultra high purity advanced battery materials eg 99.99% spherical graphite product (for Li-ion Battery production).**

### Expandable Graphite Manufacturing

**HXG Aim: High purity, large flake expanded Graphite.**

(for high-performance gaskets, conductive fillers, electrical shielding)

**TARGET- End-User Customer**

**c. 10 – 20 X  
Value Uplift**



# Product Development & Marketing

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**Stage 1 Processing**  
(Concentrate production)

**Stage 2 Processing**  
(Intermediate Customer)

**Spheroidisation**

**Purification**

**[Coating]**

### Technical aspects-include:

- Spheroidisation
- Yield
- Spherical size distribution
- Surface quality
- Crystallinity
- Electrical properties

**Intercalation**  
(Expansion & Insertion e.g. sulphate)

### Technical aspects-include:

- Expansion ratio
- Flake size/thickness
- Crystallinity

### Battery Industry

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### Expandable Graphite Manufacturing

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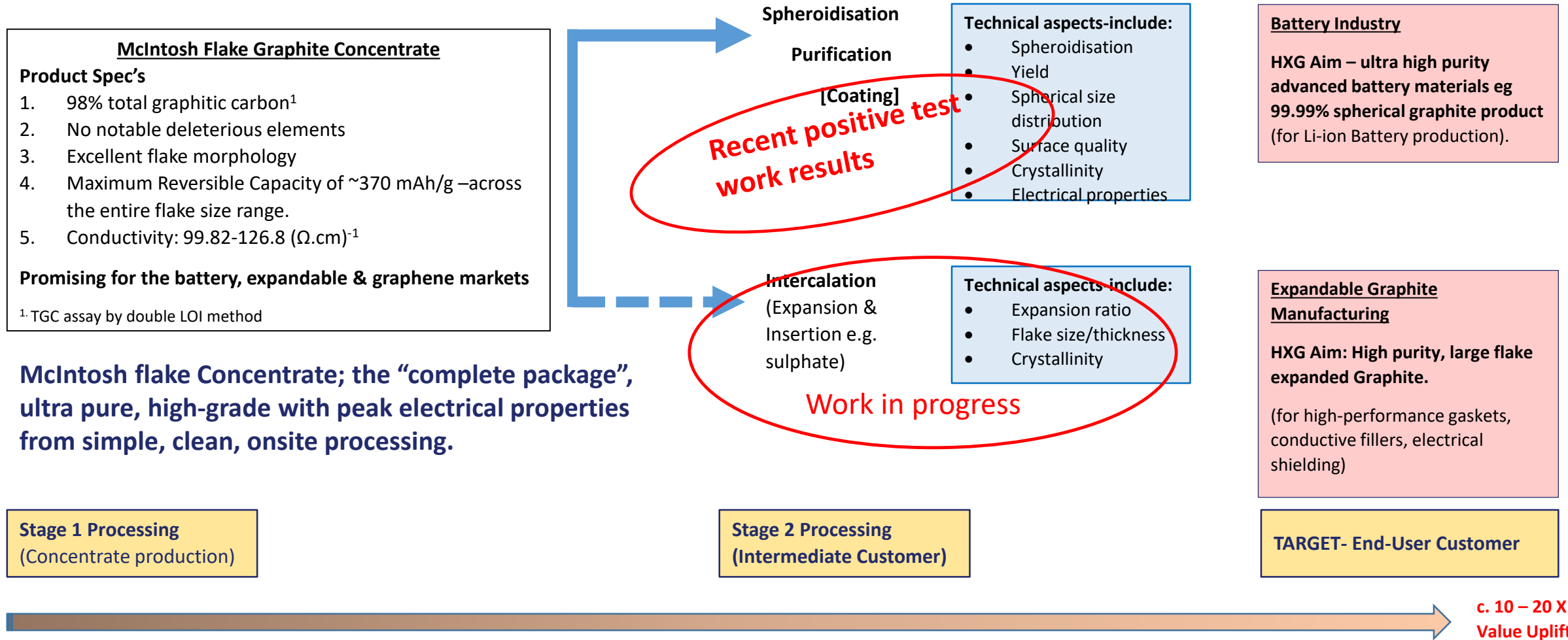
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# Product Development & Marketing

High demand for high purity, quality flake concentrates



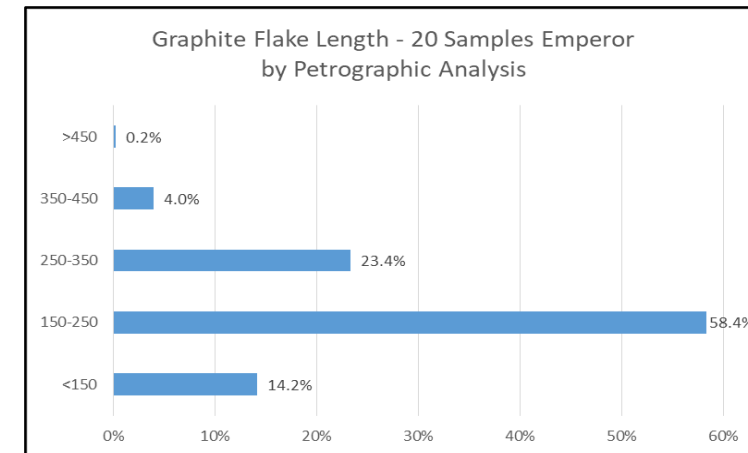
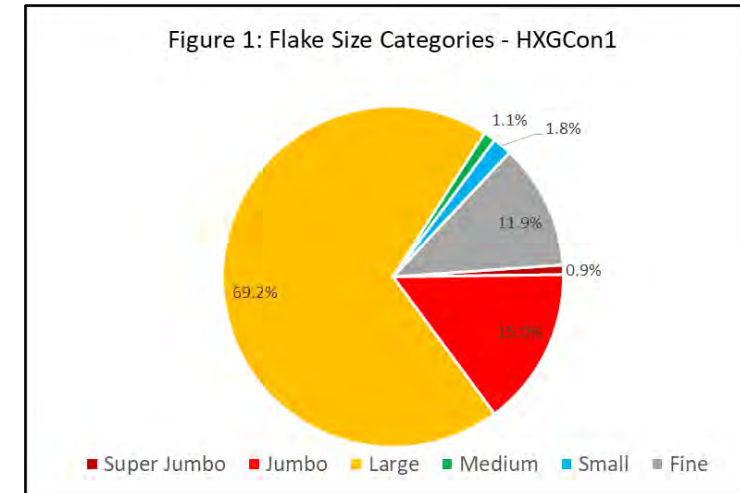


# Product Development & Marketing



## Major new advances (Refer ASX Report 3 November 2017)

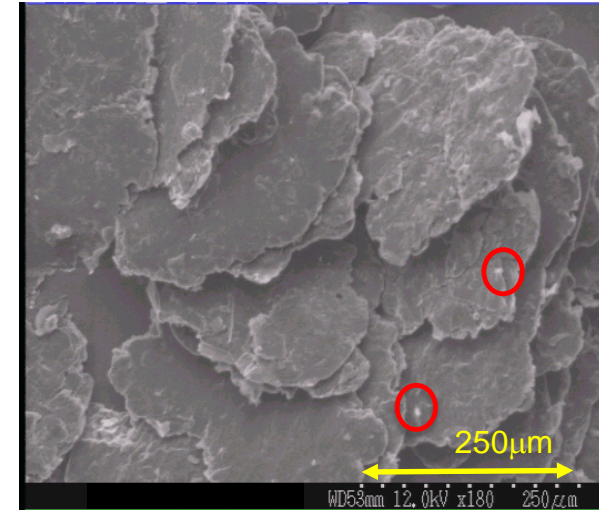
- A genuine and significant proportion of larger flake sizes in the McIntosh concentrate;
  - ✓ Super Jumbo – 0.9%
  - ✓ Jumbo – 15%
  - ✓ Large – 69.2%
- Confirmed by latest petrographic size determinations from drill core; 85% > than 150µm (Medium, Large, Jumbo and Super jumbo sizes)
- Previous sizing work indicated that only 30% concentrate flake was greater than 150µm (Medium & Large).
- Flake size hasn't been a focus until recently due to the previous strong focus on a single flake product destined for the battery anode market and the preconception that approximately 106µm was the target feed size for a spheroidisation plant.



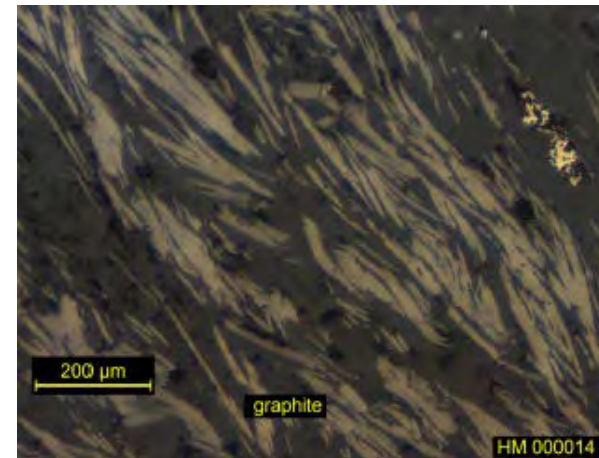
# Product Development & Marketing

## Major new advances (Refer ASX Report 3 November 2017)

- Large clean graphite flakes.
  - SEM observations indicate the impurities (circled) occur on the flake surface, not intercalated within the graphite layers. This is very encouraging that purification will be simple and amenable to “light” and low cost purification methods.
- High purity – latest concentrate assays – 97.4 to 98.3% TGC.
- Clean, simple, coarse grained mineralogy – simple processing & high recoveries.
- Favourably low levels of deleterious elements.
- Partnership with US Company – to fast track product development and marketing.
  - NAmLab specialises in graphite-battery technologies across the value chain; from research, to test work and importantly, commercial manufacturing.



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



Photomicrograph illustrating large, clean orientated graphite flakes-cream colour. Disseminated black spots are mainly coarse grained sulphides.



# Product Development & Marketing



## Value adding with additional processing of flake concentrate

- Pre-Feasibility - examined only production of a high-purity flake concentrate for the lithium ion battery market.
- Recent battery test work results for spheroidised material are highly encouraging – the sample “passed” on all the key preliminary assessment criteria.

Parameter Tested	Units	McIntosh Sample (average)	Reference Material	
Yield	%	58	c.50%	✓
Particle Size (D50)	Microns (µm)	15.3	15.1	✓
Particle Size Distribution (D90/D10)	Ratio	2.2	2.4	✓
Tap Density	g/cm <sup>3</sup>	0.92	1.07	✓
Surface Area	m <sup>2</sup> /g	8.9 <sup>1</sup>	2 - 5	✓
Reversible Capacity <sup>2</sup>	mAh/g	370	>360	✓

- Latest work in the US on concentrate material also highlights positive battery attributes such as “exceptionally low surface area” (BET).

# Product Development & Marketing



## Current status – *what does it all mean?*

- Clean ore with simple coarse mineralogy
  - High recoveries and low processing costs
- High proportion of Large/Jumbo flake
  - Opportunity to create large flake concentrate and expandable graphite.
  - High-value materials – attract price premiums.
- High purity concentrate
  - Lower purification costs – attracts premium pricing
- Excellent battery properties – with several unique aspects
  - Product focus on the high-growth advanced battery materials sector
- Credible, expert partner to undertake product development and assist on marketing

### Current test work – focussed on:

- Expandability of graphite
- Purification.

### Core Objectives:

- ✓ Create 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
- ✓ Leverage off the clean mineralogy of the deposit to drive low processing and purification costs
- ✓ Underpin off-take of entire 100ktpa planned production.



# Product Development & Marketing

## Product diversification and price enhancement

### A simple Example -

**Objective** – produce c. 100ktpa of high grade flake graphite concentrates:

- 60 % Small-Medium (c.100 microns) sized flake concentrate for the battery market; and
- 40% Large (>180 microns) sized flake concentrate for expandable graphite sector, *a premium priced product*.

**Assume** – conservatively, Opex of US\$800\*/t concentrate. So to produce 10 tonnes costs US\$8k.

**Marketing** – (very simplistically):

- Sell 4 tonnes as a premium product at say c.US\$3,000/t = US\$12k of revenue
- Sell 6 tonnes as “standard” LiB anode use for say c.US\$800/t = US\$5k of revenue
- Generated US\$17k in revenue to cover US\$8k of Operating costs = US\$9k margin or 53% operating margin.

\* Assume 1 A\$=US\$0.8



# McIntosh Project - Development Outlook

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## The Next Steps...

### Stage1 Project in WA:

#### 1. **Complete Feasibility** study including:

- Enhanced process flow sheet to further preserve flake size, reduce operating and capital costs; and
- Verify diverse product streams suitable for different end-users; a range of advanced battery materials, expandable graphite.....

#### 2. **Finance and offtake** – in progress; looking at equity e.g. in Project, off-take related finance and JV/Technical partnerships.

#### 3. **Permitting and Approvals** – Mining Lease applications and NT negotiations in progress.

### Stage 2: Downstream Processing

#### 1. Further test work in progress – expandable graphite & purification for product specifications.



# McIntosh Graphite – “Made in Australia”



## Compelling investment opportunity

### Sound Project Fundamentals:

1. Quality product - purity, large flake and no known deleterious elements.
2. Scale – in terms of annual production rates and long-term supply.
3. Sound financial returns as shown by PFS numbers with significant scope to improve.
4. Solid, credible product development and marketing strategy with expert US partner & experienced management.

### Exciting Graphite Demand Dynamics:

1. Solid traditional demand base plus the rapid growth of energy storage/battery uses and other hi-tech applications e.g. expandable graphite.
2. Increasing supply concerns from traditional suppliers especially in regard to OH&S and environmental issues.

### Safe Reliable Jurisdiction & Well Located:

1. Western Australia is ranked 3<sup>rd</sup> on the Fraser Institutes 2016 Global Investment Attractiveness Index.
2. On the door-step of SE Asia; Easily accessible shipping logistics from Northern Australian port.

# Important Notices



## Competent Person

### *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 (referred 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.

## Technical Detail

This Report aims to provide a high level summary of various technical aspects of the Company's projects. For more details on the underlying technical parameters the reader is referred to the ASX Reports on the Hexagon Resources Limited website, [www.hexagonresources.com](http://www.hexagonresources.com).

## Forward-Looking Statements

This document includes forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Hexagon Resources Limited's planned development and exploration programmes and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may," "potential," "should," and similar expressions are forward-looking statements. Although Hexagon Resources Ltd believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.





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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

Criteria	JORC Code Explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	<p><b>1. Reverse Circulation</b></p> <ul style="list-style-type: none"> <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> </ul> <p><b>2. Diamond Drilling</b></p> <ul style="list-style-type: none"> <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. 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> </ul>
<b>Drilling Techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<p><b>1. Reverse Circulation</b></p> <ul style="list-style-type: none"> <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> </ul> <p><b>2. Diamond Drilling</b></p> <ul style="list-style-type: none"> <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 Shot instrument.</li> <li>RC pre-collars were drilled with HQ<sub>3</sub> diamond tails for a total of 1,369.3 m from 9 holes.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<p><b>1. RC Drilling</b></p> <ul style="list-style-type: none"> <li>A face sampling hammer was used to reduce contamination at the face.</li> <li>1 m drill chip samples, weighing approximately 2 kg were collected throughout the drill programme in sequentially numbered bags.</li> <li>Split samples were recovered from a cyclone and rig-mounted cone splitter. The sample recovery and physical state were recorded.</li> <li>Every interval drilled is represented in an industry standard chip tray that provides a check for sample continuity down hole.</li> </ul> <p><b>2. Diamond drilling</b></p> <ul style="list-style-type: none"> <li>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.</li> </ul>



		<ul style="list-style-type: none"> <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> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li><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></li> <li><i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li><i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Sub-sample techniques and sample preparation</b>	<ul style="list-style-type: none"> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><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></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<p><b>1. RC Drilling</b></p> <ul style="list-style-type: none"> <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 style="list-style-type: none"> <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> </ul> <p><b>2. Diamond Drilling</b></p> <ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 sample preparation represent industry good practice:</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <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>



		<ul style="list-style-type: none"> <li>Statistical analysis of standards, blanks and duplicates during the QAQC process showed that the data was satisfactory.</li> <li>No issues were identified with sampling reliability</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <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 merged into the database from the lab certificates limiting transcription or mapping errors from occurring.</li> <li>No adjustments have been made to the results.</li> </ul>
Location of Data points	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <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 <math>\pm 5</math> 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 <math>&gt;2</math> 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 style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><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></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>Holes generally drilled dipping at <math>-60^\circ</math> targeting the fold hinge and limbs.</li> <li>Diamond drill core has been orientated using a Reflex ACE tool 9Act II), with <math>\alpha</math> and <math>\beta</math> 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>





<b>Sample Security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Unique sample number was retained during the whole process</li> <li>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.</li> <li>Drill core transported to Westernex was secured on pallets with metal strapping and transported to Perth by road train.</li> <li>The sample security is considered to be adequate.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <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>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> </ul> <p>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.</p>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>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.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques,</li> </ul>	<ul style="list-style-type: none"> <li>Data compiled in Excel and validated in Datashed by an external data management consultancy.</li> </ul>



	<p><i>maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></p>	<ul style="list-style-type: none"> <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>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <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 drillhole collar locations and appropriate sectional views.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Not relevant as Mineral Resource being reported.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration results are not being reported for the Mineral Resources area.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <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. This work is being undertaken by several different laboratories and test work facilities in Australia and overseas that have been reviewed and assessed for their experience by Hexagon.</li> </ul>



<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> </ul>	<ul style="list-style-type: none"> <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 process flow sheet.</li> </ul>
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### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>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.</li> </ul> <p>Data validation procedures used.</p>	<ul style="list-style-type: none"> <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>
<b>Site Visits</b>	<ul style="list-style-type: none"> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <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> </ul> <p>The factors affecting continuity both of grade and geology.</p>	<ul style="list-style-type: none"> <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>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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>





	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Three 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 estimation.</li> <li>• Approximately 70% of the block grades were 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 input drillhole data, comparisons were carried out 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>
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• The Mineral Resource is reported above a 3% TGC cut-off grade to reflect current commodity prices and open pit mining methods.</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <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>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <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>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <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>
<b>Bulk density</b>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Dry density was assigned a value of 2.85 t/m<sup>3</sup> (fresh) and 2.65 t/m<sup>3</sup> (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>



	<p><i>deposit.</i></p> <p><i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></p>	
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>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).</i></li> </ul> <p><i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></p>	<ul style="list-style-type: none"> <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>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• CSA carried out a site visit in 2015.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <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>