



ASX Announcement

5 February, 2018

BATTERIES AND BEYOND: CORPORATE PRESENTATION

Hexagon Resources Limited (ASX: **HXG**) is pleased to advise that it has posted the attached corporate presentation, “Batteries and Beyond” on its website. This presentation introduces the Company, summarises recent milestones and Hexagon’s evolving graphite marketing strategy.

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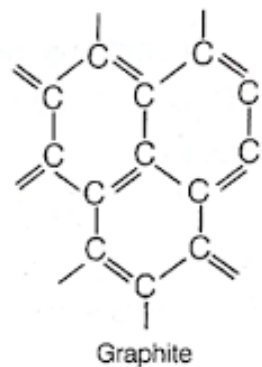


McIntosh Graphite™ *Batteries and beyond...*

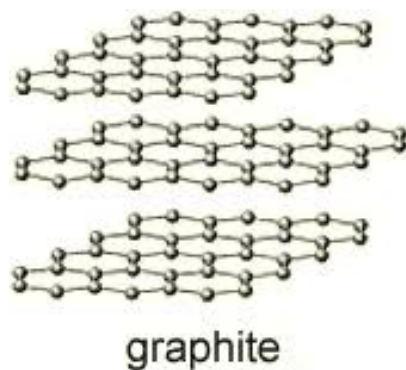
Mike Rosenstreich
Managing Director
January, 2018
Updated – 2 February 2018



ASX:HXG is an emerging speciality materials company currently focussed on developing an advanced high-quality graphite project located in Western Australia.



Plan view: graphite molecule

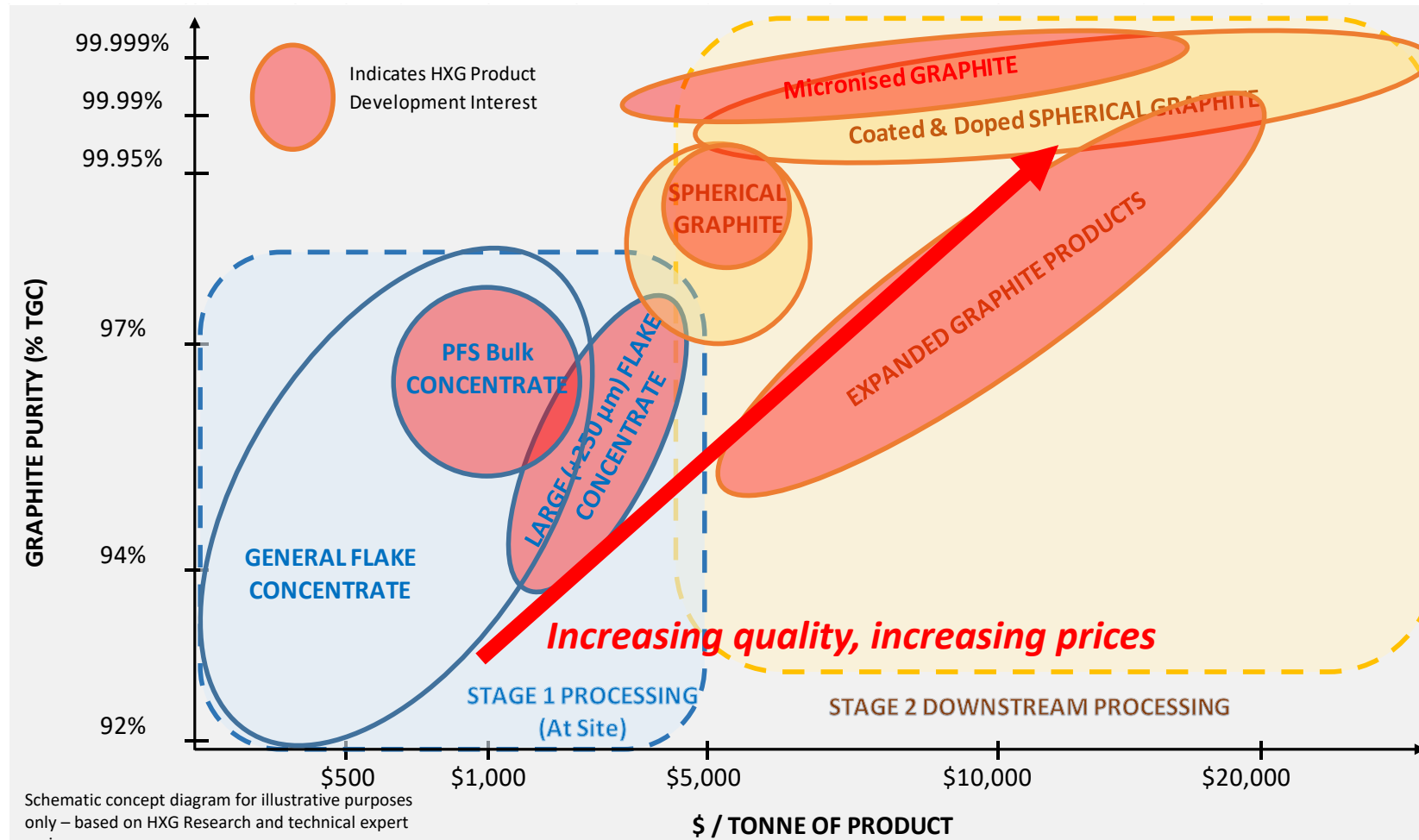


Side view: layers of graphite molecules;
also referred to as graphene layers

Flake Graphite – a speciality mineral with recent upsurge in demand related to energy storage/EV revolution but also increasing demand from a range of high-tech and industrial applications.

Graphite is not a commodity! “Exploration is Product Development”

Product development – a Map of Opportunities



Focus is to meet customers' requirements.

- Primary & Secondary processing (*blue & yellow outlines*)
- Value drivers relate to:
 - ✓ Purity;
 - ✓ Flake size; and
 - ✓ Crystal structure.
- HXG is targeting higher value Primary & Secondary products to exploit its superior purity and flake size.

Graphite Market - for McIntosh products



Traditional markets and batteries

- Traditional graphite markets accounted for an estimated 86% of demand for natural graphite in 2015
- The steel industry, refractories and other industrial applications such as lubricants are the key traditional uses which continue to grow and underpin graphite demand at the lower specification end of the market.

Demand for Lithium-Ion batteries represents a significant, recent addition to traditional markets

- Graphite is an essential ingredient in batteries, representing approximately 15% of the total weight of a battery pack, significantly more than lithium, which represents just 2%*.
- “Graphite demand for batteries is estimated to multiply to more than 800,000 tons a year in 2030 from just 13,000 tons in 2015” *(UBS Longer Term Investments 19 October 2017)*



Source:

* UBS: *UBS Evidence Lab Electric Car Teardown – Disruption Ahead?*

Graphite Market - for McIntosh products



Beyond Batteries.....

Expandable graphite – strong demand growth but declining resources in China, a traditional mainstay supplier

- Expandable graphite created by adding heat and acid to specific, larger flake graphite types
- It is highly priced and has exceptional heat resistant properties
- Used as flame retardant ingredient in building materials and as foil product for shielding in advanced electronics



McIntosh flake graphite expanding with exposure to heat

“Expandable graphite is a highly attractive, specialised market segment being targeted by HXG.”

Demand

- The Chinese Government has mandated flame retardant building materials in all new construction work. Expanded graphite insulation is the preferred material
- Uptake of advanced technology continues to rise

Supply

- China produces the bulk of the world’s expandable graphite*
- Chinese expandable graphite is under pressure with plant closures for environmental reasons** and depleting reserves of suitable flake graphite material

Sources:

*Benchmark Mineral Intelligence

** Roskill: <https://roskill.com/news/graphite-flake-prices-rise-new-round-plant-inspections/>

McIntosh Graphite™ – key value drivers



What appeals to customers is.....

Recent test work has demonstrated new opportunities to produce and sell the 100ktpa of flake concentrate planned by diversifying the customer base across a range of end-uses and customers.

Key attributes include:

- ✓ Purity
- ✓ Flake size
- ✓ Expansion
- ✓ Battery properties
- ✓ Project / supply scale
- ✓ Country of origin

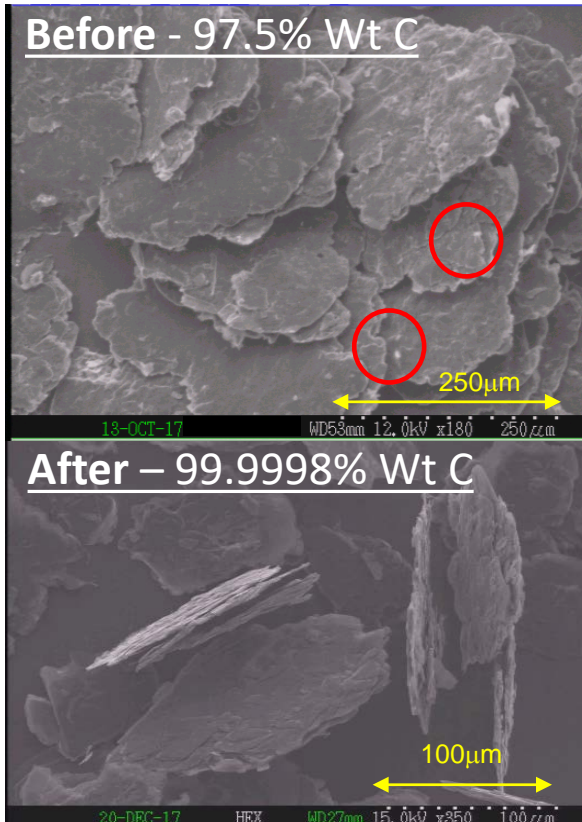


McIntosh Graphite™ – key value drivers



Purity – this is the key value driver

High purity, high value, high margin – McIntosh Graphite “easily purified” to 99.999%



Impurities (circled-top) tend to occur on top of the flakes not embedded into the flake layers making for “easier” purification;

Concentrate grades of 99.9998 wt% C and 99.9991 wt% C were achieved by a proprietary medium temperature thermal purification technique.

Purification test results are important for 3 core reasons:

- **Price premium:** *Five Nines* enables HXG to operate in the “nuclear purity world”. Any extra “Nine” elevates the selling price by an order of magnitude. *Five Nines* flake could have a selling price of around US\$30k per tonne.
- **Low cost:** achieving Five Nines (99.999%) from only “light” purification means low costs compared to acid leach or other thermal refining systems currently used, worldwide.
- **Environmental and Safety:** the use of acids, in particular, hazardous hydrofluoric acid is the dominant purification method with resultant adverse impacts on the environment and worker safety.

“A clean, benign ore-type is a key differentiating factor and outweighs simple mining metrics, such as grade.”

McIntosh Graphite™ – key value drivers



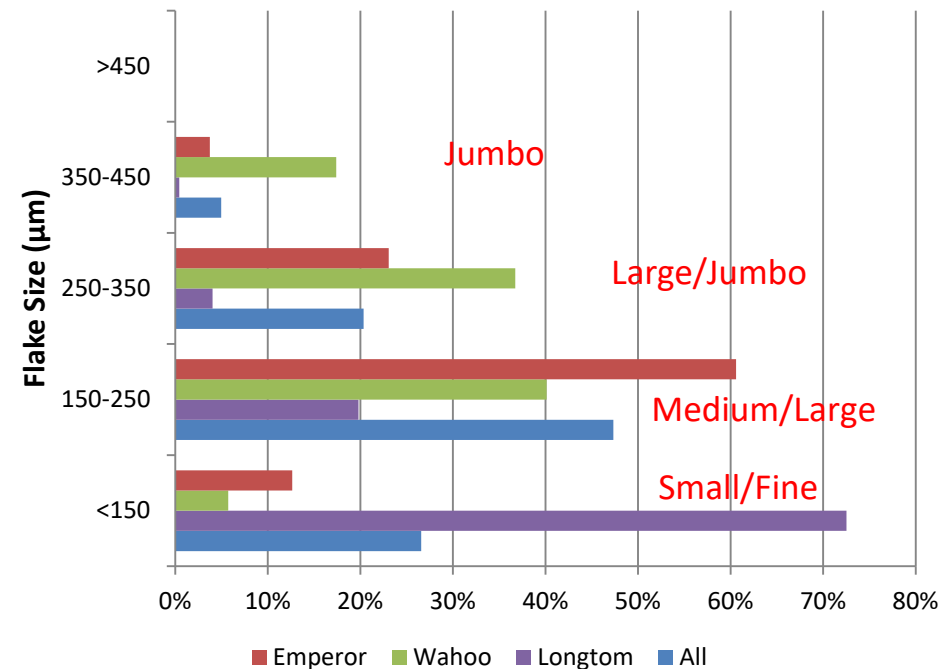
Flake Size

The McIntosh project has a major large flake endowment – only recently recognised.

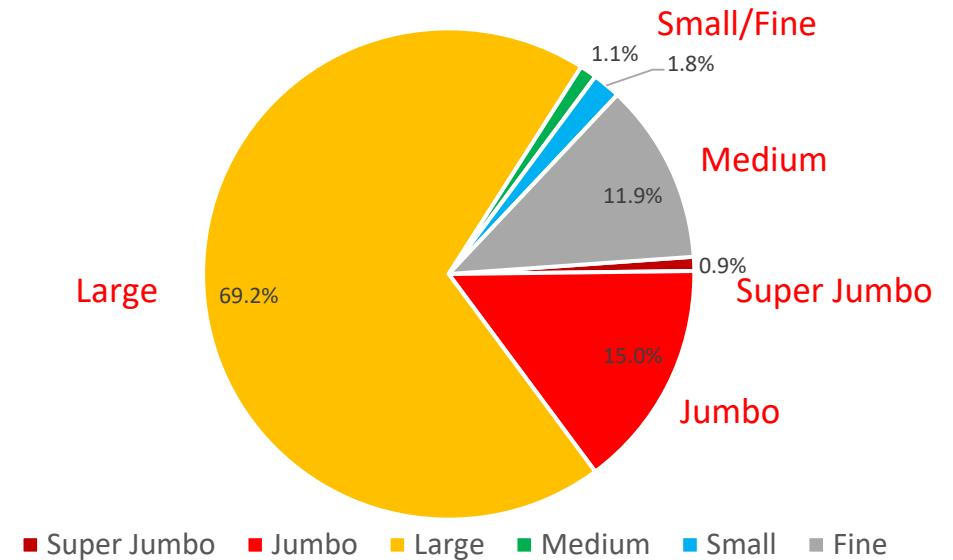
Emperor & Wahoo comprise 70% of the Mineral Resource

85% of Flake in Concentrate sample is Large, Jumbo & Super Jumbo size.

Flake Size Distribution by Deposit



Flake Size Categories - HXGCon1



Based on petrographic examination of flake length from drill core.



USA Sieve Series - ASTM Specification E-11:70 (ISO Standard)

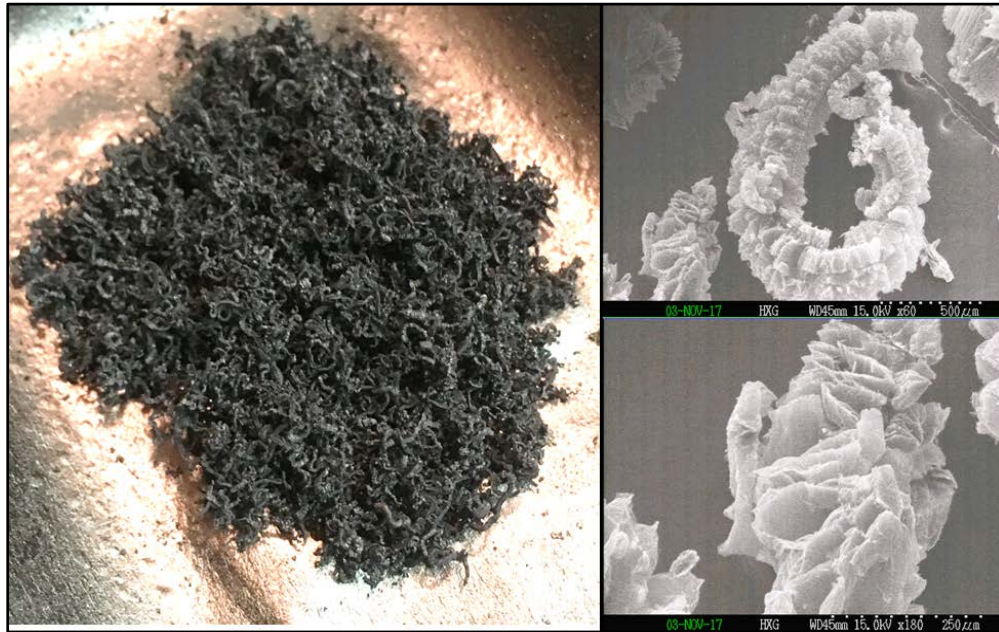
	Fine	Small	Medium	Large	Jumbo	Super Jumbo
Mesh (ASTM)	200	200-100	100- 80	80 - 50	50 - 35	+ 35
Microns	< 75	+75 - 150	+150 - 180	+180 - 300	+300 - 500	+500

McIntosh Graphite™ – key value drivers



Expandability

220% Expansion Factor for +60 Mesh (+250 micron) sized flake.



Expanded graphite “worms” produced from +60 mesh fraction of HXGCON 1 precursor flake: optical (left), SEM (right).

Key Points:

Large proportion of the Mineral Resource comprise large, potentially expandable flake (+78% of concentrate flake was larger than 60 Mesh (250 microns)).

Synthesis of expandable McIntosh flake graphite did not require the use of exotic chemicals or complicated treatments – translates to – Low Costs.

Important growth market due to:

- Declining supply from China; and
- Increased demand as a fire retardant and in electronics.

“A 220% Expansion Factor is well above average and a highly marketable attribute.”

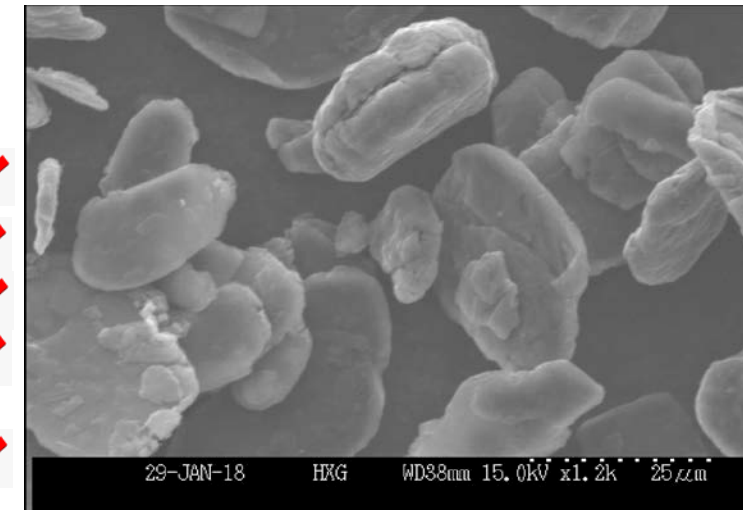
McIntosh Graphite™ – key value drivers



Battery properties

- **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 ³	0.92	1.07
Surface Area	m ² /g	8.9	2 - 5
Reversible Capacity ²	mAh/g	370	>360



HXG Spherical graphite suitable for Li-Ion battery anode material.

*recent work indicates BET Surface Area reducing to between 2 to 4.

- Latest work in the US on concentrate material also highlights positive battery attributes such as “exceptionally low surface area” (BET).
- Suitable for Li-Ion battery anodes and more advanced battery applications.

McIntosh Graphite™ – key value drivers

Project 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.

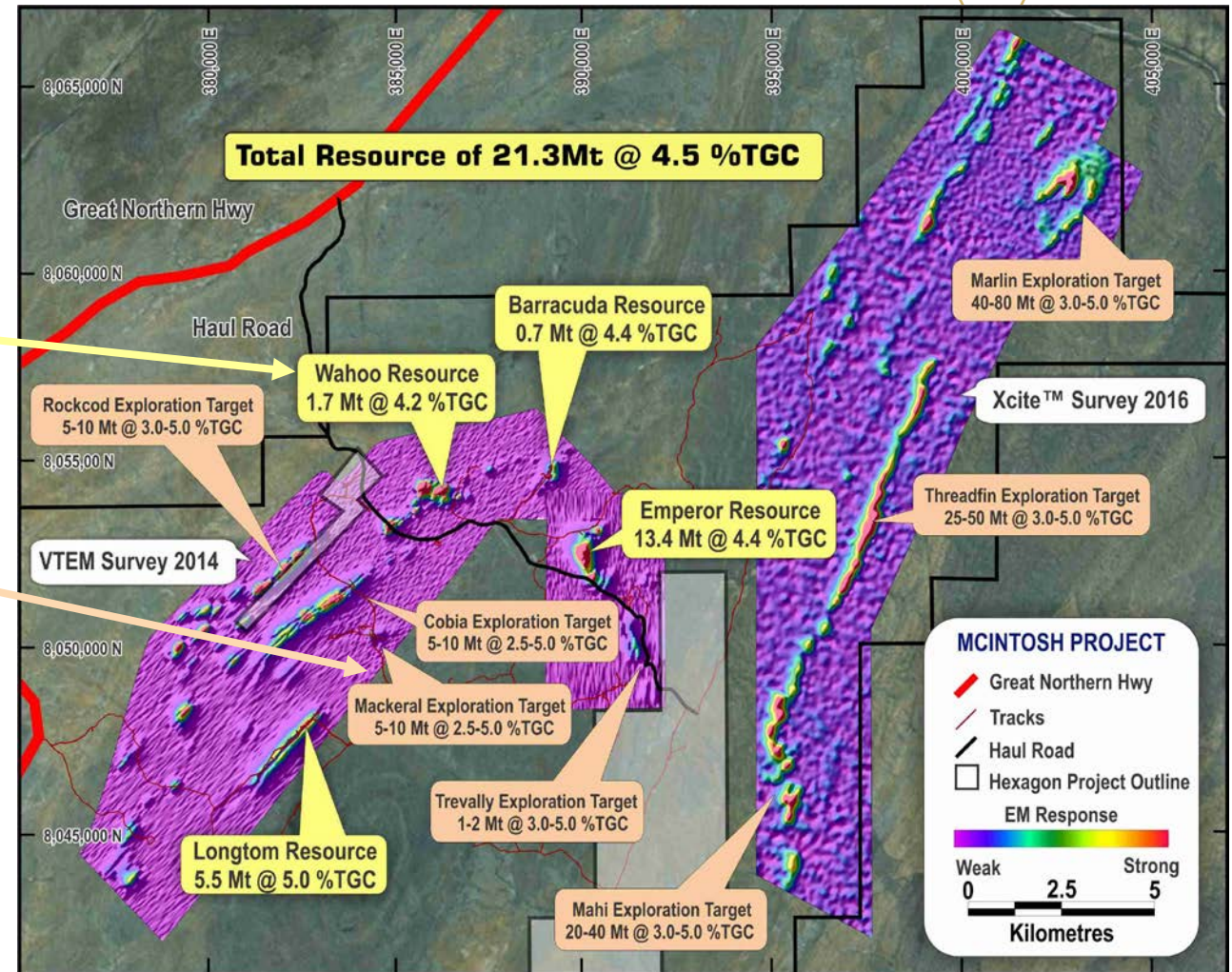
Exploration Target* (additional to JORC Resources)

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

ASX Report 12 April, 2017

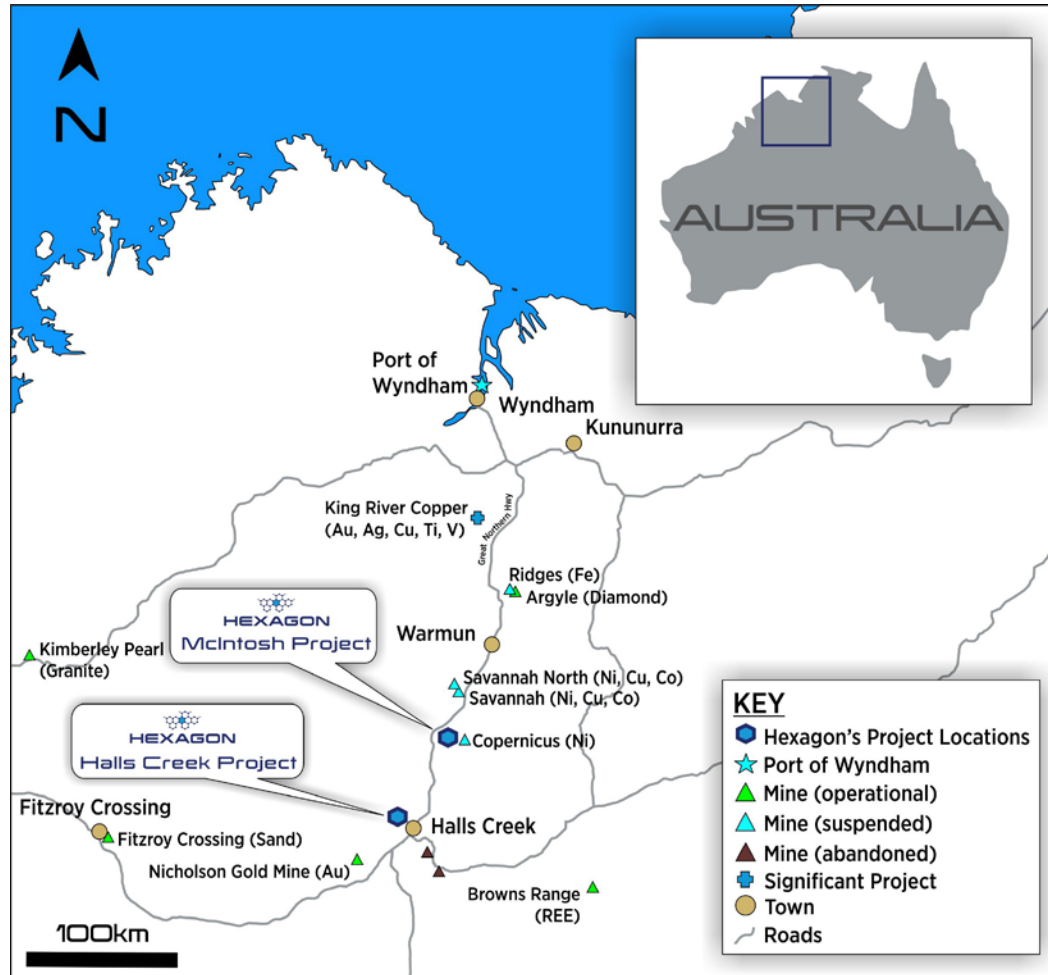
- Excellent correlation between EM “highs” and drilled mineralisation.
- Drilling has excellent potential to increase existing resources and convert “targets” into resources.

***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 Graphite™ – key value drivers

Country of Origin



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

- East Kimberley, WA 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 “long-term supply” from stable, reputable countries with sound environmental and community relations practices.



McIntosh Flake Graphite Project

Well located for transport infrastructure



McIntosh Project – Main Access Road – excellent access across Project.



Great Northern Highway (only 12 km from Project area)



Wyndham Port – with loading and storage facilities; 295km north along Highway

McIntosh Flake Graphite Project - what it might look like



Stage 1: Multi open pit mining, simple flotation to produce high-grade graphite concentrate, which is trucked to nearby port.

McIntosh Flake Graphite Project

Positive Pre-Feasibility Outcomes; but already superseded by recent test results



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 – Key Enhancement Opportunities for FS:

- Higher pricing from new and higher quality graphite products as shown by recent test work.
- Lower operating costs from improved process flow sheet, lower energy comminution and possible Ore Sorting or beneficiation.
- Lower capital costs from use of specific rather than generic quotes, second-hand equipment and benefits of ore-sorting and other plant optimisations.

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
Pre-tax NPV (Discount rate:8%)	AUD Millions	261
Post-tax NPV (Discount rate:8%)	AUD Millions	175
Pre-tax IRR	%	46
Post-tax IRR	%	36
Payback Period	Years	3

“This PFS (May 2017) has been superseded by recent positive test work results, but it remains a valid, conservative platform to move ahead from on the detailed Feasibility.”

Marketing Strategy



Guiding principles

Target market – premium higher purity products;

- McIntosh project's unique, clean ore-type generates high-purity intermediate and final flake graphite products covering a range of end uses, which sell at premium prices.

How?

1. Increasing demand for graphite in battery and technology applications;

- Rapid growth market and underpinned by ongoing solid demand in industrial sectors.

2. Displace higher cost synthetic graphite from a range of current applications across the battery sector and steel industry;

- Refined McIntosh graphite exceeds synthetic purity levels and often has enhanced “side” attributes e.g. can be more conductive.

Demand growth and displacement of synthetic by high purity McIntosh graphite to sell c.100ktpa.

Marketing Strategy



Product development

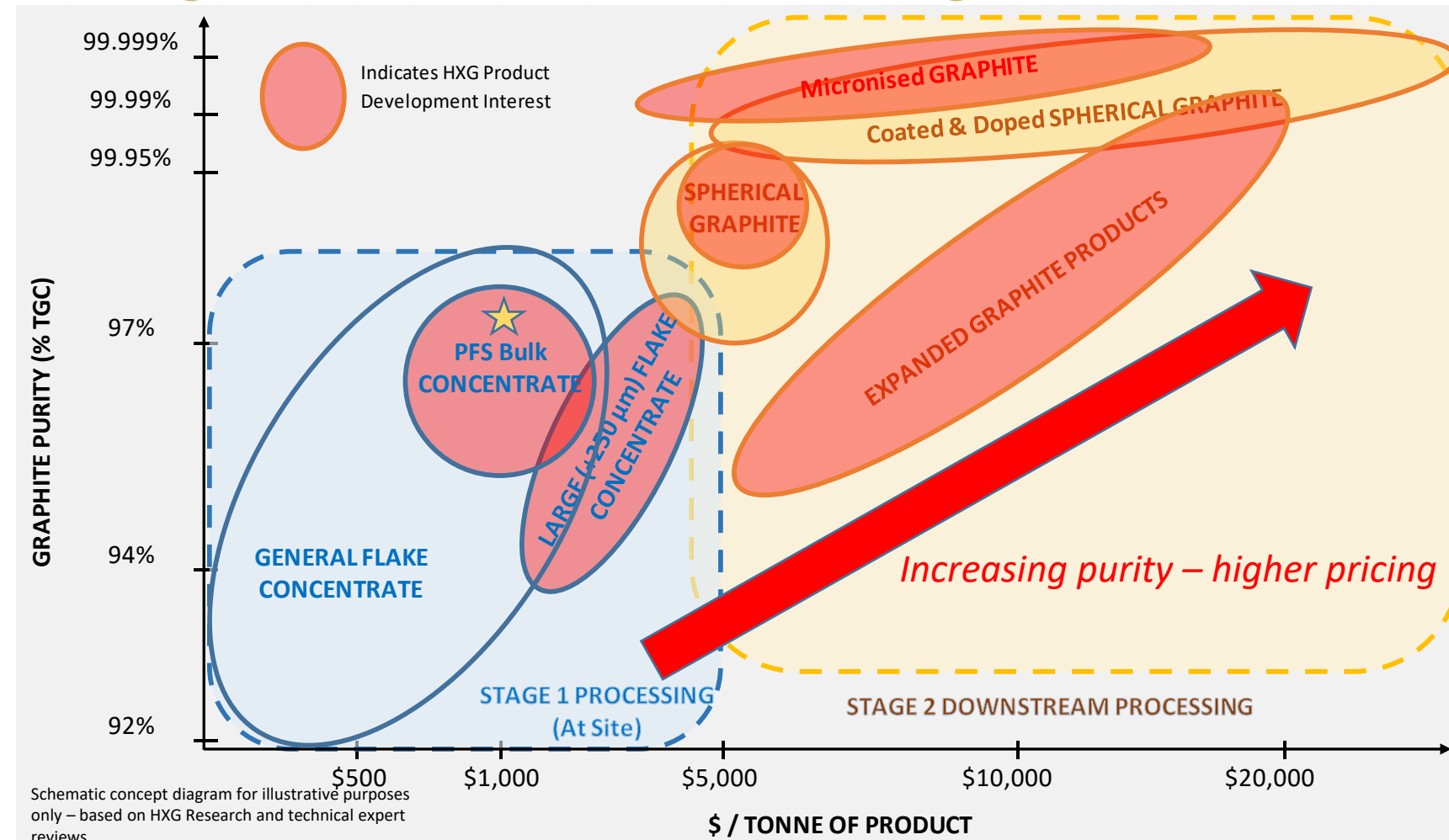
Downstream = additional “value-add” processing to meet the customers’ needs

Downstream Process Being Tested	Potential End Uses
Milling (Micronising) & Spheroidisation	Li-Ion battery anode material Some speciality battery applications
Expanded / Expandable Graphite	Advanced battery applications Foils and shielding in electrical goods Fire retardant in building materials High-specification gaskets and seals
Purification	Many end uses require high to ultra high purity graphite – this includes battery anode and expandable graphite material. The 5-Nines purity elevates product into the nuclear industry with major price increments.

This is highly simplified, but reflects recent test work results which have lead to new, higher margin end-use opportunities to be assessed.

Marketing Strategy

Marketing Plan for McIntosh Products – HXG Target Markets



Originally: planned to produce a single Bulk Concentrate as per May 2017 PFS. ★

Now: a portfolio of products which is the key to selling 100kt concentrate per year:

- Large flake & expandability drives diversification.
- High-purity is a means to achieve premium pricing.
- McIntosh material “starts” clean so a big comparative advantage cost wise.

“New marketing strategy comprises more products sold at premium prices.”

Marketing Strategy



Offtake & project finance MoU (non-binding) executed 1 February, 2018

30% of Production under MoU with China National Building Materials Group-General Technology

MoU is a positive first step in a long-term relation building via qualification test work – planned to culminate in binding offtake commitments and possible project financing and prepayment facilities.

CNBM-GT MoU endorses Hexagon's large scale production strategy with demonstrated interest in at least 30% of all stage 1 production.

CNBM-GT's parent company is one of China's largest companies and a major global building materials supplier with ownership in spherical and expandable graphite production.

The MoU covers:

1. Primary concentrate offtake comprising:
 - 500 tonnes of Super Jumbo ($>425\ \mu\text{m}$) sized flake concentrate;
 - 4,000tpa Jumbo (300 – 425 μm) sized flake concentrate;
 - 20,000tpa large (250-300 μm) sized, expandable flake concentrate; and
 - 5,000tpa small to medium (75~150 μm) sized flake concentrate.
2. Intent to negotiate project finance and offtake prepayment facilities to construct the project.

Marketing Strategy

Product diversification and price enhancement

A simple example -

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

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

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

Marketing – (*very simplistically*):

- Sell 6 tonnes as a premium product at say c.US\$3,000/t = US\$18k of revenue
- Sell 4 tonnes as “standard” LiB anode use for say c.US\$800/t = US\$3.2k of revenue
- Generated US\$21.2k in revenue to cover US\$8k of Operating costs = US\$13.2k margin or 62% operating margin.

* Assume 1 A\$=US\$0.8



Pilot Plant Facility – bulk concentrate sample



Project Milestones and Time Lines



Next steps.

1. Update Stage 1 process flow sheet and undertake test work.
2. Continue on Stage 2, downstream test work – aim to expand the product mix and improve the specifications.

Core objective is to leverage recent outstanding test work results to progress offtake and financing discussions, note:

- Recent results have had an impact in attracting off-take and financing attention – first non-binding offtake MoU signed recently with major Chinese group;
- Off-take is a long term investment by both parties; hence staged process via MoU and qualification test work; and
- Financing discussions are in progress at both the Project and Hexagon levels, both as debt and/or equity

Positive new test work outcomes driving the marketing strategy toward product diversification and premium priced products.

Hexagon Resources Ltd

Meet the Board - focussed on marketing and production

Charles Whitfield – Chairman, contributes:

- Debt and ECM experience via senior roles with a range of international investment banks;
- Deep insight on specialty metals markets specifically lithium as executive Director of Galaxy Resources for 3 years to late 2016 guiding the turn-around; and
- Strong commercial and offtake / product marketing skills.

Mike Rosenstreich - Managing Director, contributes:

- Strong technical, project development and operational skills across a wide range of commodities and mining/processing styles;
- Highly experienced in a range of commodity markets and underlying offtake arrangements as well as project financing following 6 years with Rothschild's resource finance group; and
- Corporate management having floated and run a base metals production company with staff of 150, turn-over +\$100mpa as well as several ASX listed Company directorships.

Garry Plowright - Non-Executive Director, contributes:

- Strong background in mining law and administration;
- Relevant experience in land access strategies and negotiations in Western Australia with native Title and Traditional Owner groups for major development projects; and
- International experience in mine development.



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

Shares on Issue	248.2M
Options on issue (unlisted)	32.4M
Share price (17/1/18)	A\$0.22
12 Month high/low	A\$0.31/A\$0.08
Market Capitalisation	A\$55M
Top Twenty	43%
Cash (31/12/17)	A\$1.1M



Hexagon (ASX: HXG) Summary



McIntosh Graphite™; Batteries and beyond.....

- ✓ **Emerging, large scale Australian graphite project** - *Long-term, reliable supply*
- ✓ **Diverse range of premium priced graphite products:**
 - **high purity easily achievable to *Five Nines*** - 99.999 wt% C.
 - **large flake size across +70% of the Resources**
 - **amenable to expansion and Li-Ion batteries (beyond the anode) and other high-tech applications**

Easy purification & Easy Expansion means low costs and makes this a premium priced product.
- ✓ **Large scale graphite production** - 100ktpa of high-grade graphite flake concentrate for maybe 50 years
- ✓ **Realistic marketing strategy targeting high-growth sectors e.g. batteries and displacement of synthetic graphite;**
- ✓ **Recently signed MoU for 30% of stage 1 production and project financing with subsidiary of large Chinese group, CNBM;**
- ✓ **Made in Australia** - “McIntosh Flake Graphite”; a safe, stable jurisdiction.
- ✓ **Green credentials** with no toxic chemicals, strict environmental guidelines and a key input into renewable energy sector.
- ✓ **Experienced team** – *in terms of technical development, project financing and product marketing.*

Aiming to be an industry leader in terms of quality, scale, low-costs and high-margins

Important Notices



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 (referred to above) managed and compiled the test work outcomes reported in this announcement. A highly qualified and experienced researcher at NAmLabs planned, supervised and interpreted the results of the test work. 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 and the NAmLabs principals have 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 have consented to the inclusion of this information in the form and context in which it appears in this report.

Technical Detail - references to Hexagon Website and recent ASX Reports

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, in particular: May 31, 2017 on PFS Results, August 16, 2017 on Battery Test Work, November 6, 2017 on Large Flake endowment and November 23, 2017 on Expandability test work; all of which contain the full JORC Tables on reporting of test work results.

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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