

#### ASX ANNOUNCEMENT

24 July 2019

#### JULY CORPORATE PRESENTATION

Hexagon Resources Limited's (ASX: HXG, Hexagon or the Company) July Corporate Presentation follows.

A copy is also available on the company's website.

Michael Rosenstreich Managing Director

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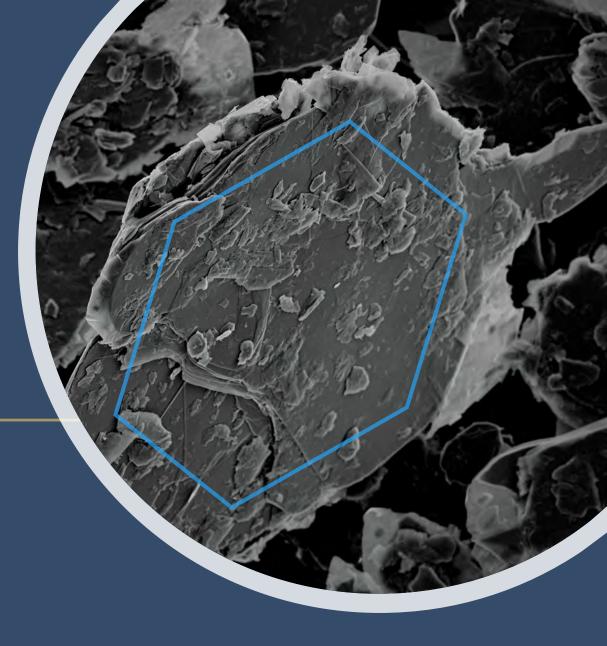


# Building a premium-quality graphite business

July 2019

www.hexagonresources.com

ASX: HXG



### **Important Notices**



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The purpose of this presentation is to provide background information to assist in obtaining a general understanding of the Company's proposals and objectives. This presentation may contain some references to forecasts, estimates, assumptions and other forward looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein. This presentation is not to be considered as a recommendation by the Company or any of its subsidiaries, directors, officers, affiliates, associates or representatives that any person invest in its securities. It does not take into account the investment objectives, financial situation and particular needs of each potential investor. Investors should make and rely upon their own enquires and assessments before deciding to acquire or deal in the Company's securities. If you are unclear in relation to any matter or you have any questions, you should seek advice from an accountant or financial adviser.

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### **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 and Halls Creek Projects is based on information compiled by Mr Mike Rosenstreich who is an employee of the Company. Mr Rosenstreich is a Fellow of The Australasian Institute of Mining and Metallurgy and has 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 he consents 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 Michael Chan and Mr Rosenstreich (referred to above) managed and compiled the test work outcomes reported in this announcement. Mr Chan as well as a highly qualified and experienced researcher at NAmLab planned, supervised and interpreted the results of the metallurgical test work. Mr Chan is a Metallurgical Engineer and a Member of the Australasian Institute of Mining and Metallurgy. Mr Chan and the NAmLab principals have sufficient relevant experience relevant to the style 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.

#### **REFERENCES TO MINERAL RESOURCES**

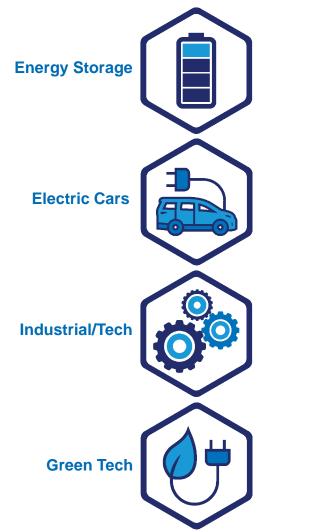
Mineral Resource Estimate of 23.8 Mt at 4.5% C reported in accordance with the JORC Code 2012 Edition was announced on 5 April 2019. Hexagon confirms that it is not aware of any new information or data that materially affects the Mineral Resource information included in the referenced market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Refer Attachment 2 to this presentation.

#### **REFERENCES TO EXPLORATION TARGET**

Exploration Target of 50 to 100 Mt at 2.0 to 4.5% C reported in accordance with the JORC Code 2012 Edition was announced on 5 April 2019. Hexagon confirms that it is not aware of any new information or data that materially affects the Exploration Target information included in the referenced market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Refer Attachment 3 to this presentation.

# **Clear Business Strategy**

To build a world-class graphite company focused on supplying high-margin processed material to end users



- Tier-1 jurisdictions for upstream graphite projects (Australia and contiguous USA)
- High-quality graphite sources with well understood and valued technical properties
- Innovative downstream flowsheet to produce downstream ultra-high-purity graphite products
- Focused on high-growth, premium graphite sectors (energy-storage and tech-industrial sectors)
- Utilising state-of-the-art, eco-friendly, low-cost, transformation technologies



# **Clear Business Strategy**

### Key milestones achieved









1. Upstream development – natural flake graphite sources

#### Australia – McIntosh Graphite Project in Western Australia

- Positive PFS completed. Feasibility Study in progress
- MRE of 23.8 mt @ 4.5% C (JORC) with large flake endowment
- Fully funded to development via JV with established mining industry leader

#### USA – Ceylon Graphite Project in Alabama (Charge Minerals LLC)

- Located in the historic, past-producing Alabama Graphite Belt
- Exposed graphite mineralisation in historical pit and extensions
- Fast-track-to-market strategy in progress

#### 2. Downstream Transformation – the *Advanced Particle Business*

- Valuable technical properties and characteristics 99.99% C purity, highly crystalline, enhanced electrochemical, and electrical outcomes, etc.
- Strong, robust financials highlighted in recent Downstream Scoping Study

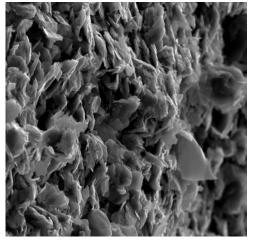
### 3. Marketing & Commercial

- Engaged with major end users in battery and advanced industrial sectors
- Increased marketing presence in the USA (as well as Asia/Europe)
- Work activities and funded budget through FY2020

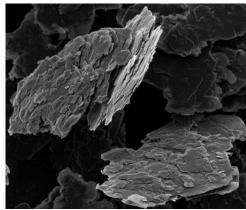
# Graphite Market 101

### Key elements

Synthetic Graphite



Natural Flake Graphite



### **Synthetic Graphite**

- Precursor material is a by-product from petroleum (+coal) refining (petcoke + other varieties)
- Produced by "graphitisation process" involves heating for ~3 weeks at 2,500 to 2,800 °C; synthetic graphite quality is related to time, temperature and feedstock
- Advantage consistent quality which is critical for high-end applications such as batteries and electrodes
- Disadvantage high-quality material is expensive

### **Natural Flake Graphite**

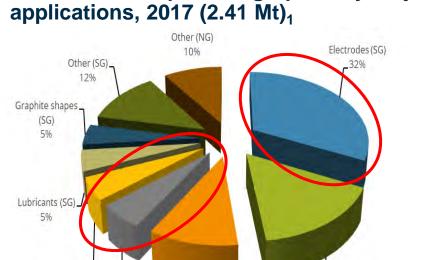
- Is already flaky and crystalline; "graphitisation" has already occurred over the course of millions of years under the influence of temperature and pressure in the Earth's crust
- Low cost compared to production of synthetic

Natural and synthetic graphite have unique and overlapping attributes; synthetic substitution is possible in certain applications, subject to quality







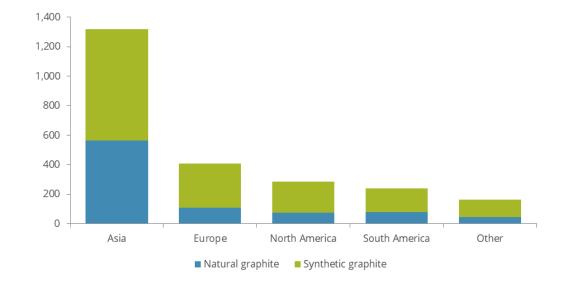


Recarburising (SG)

10%

Global Consumption of graphite by major

**Global World: Estimated consumption of natural and** synthetic graphite by region, 2017 (kt)<sub>1</sub>



Significant graphite demand drivers over next 10 years:

Battery demand of 22%<sub>2</sub> CAGR 

Refractories (NG)

16%

Electrodes for EAF furnaces 6-8%<sub>1</sub> CAGR 

1 – Roskill; Natural & Synthetic Graphite Report 2018.

Foundries (NG)

5%

Batteries (NG)

5%

2 – Benchmark Mineral Intelligence, October 2018; see A4.

# Graphite Target Markets for Hexagon

Depth and growth in energy storage and industrial sectors



Batteries: mobile & stationary storage



Industrial uses: egg EAF electrodes / steel additives.



# Hexagon is focused on high-growth, deep markets for natural graphite in:

**Batteries** – Electric vehicles (EV) & stationary storage (SS)

- Anode lithium-ion batteries (LiB)
- Conductivity enhancement materials (CEM) for all major commercial battery chemistries
- Coatings

#### **Industrial** – solid demand base dominated by:

- Increasing demand for higher purity and finer-grain graphite particles in a range of industrial applications (e.g. forging applications, paint and coatings)
- Electrodes in electric arc furnaces (EAF) comprised of synthetic graphite

Hexagon is testing the addition of high-quality natural flake graphite to synthetic graphite for enhanced performance

Ultra high purity, very fine particle size, product performance and consistency are key value drivers for downstream graphite consumers

### Graphite Target Markets – Strong Demand Growth

Major constraints down the supply chain (e.g. lithium-ion batteries)

### Key issues

- 1. Supply Concentration China currently produces 100% of all LiB anodes using domestic and increasing levels of imported graphite
- 2. Looming shortage of suitable flake concentrate (refer A1):
  - To meet 10-year forecast, LiB demand requires an additional 900 ktpa of natural flake anode material
  - Hexagon estimates a 1,350 ktpa concentrate shortfall (eq. to 675 ktpa of anode material) – assuming all ex-China advanced projects come online

### 3. Lack of downstream processing capacity

Planned downstream processing capacity – 120 ktpa (excluding China and HXG)

### Hexagon is well positioned along the supply chain:

- **Upstream** concentrate supply from Tier-1 jurisdictions
- **Downstream** efficient, low-cost processing for high-quality graphite products, including LiB natural flake anode material

#### **Emerging Downstream Processing Capacity** outside China (Scoping to Feasibility Study)<sub>4</sub>

Origin	Capacity
USA	40 ktpa
Australia*	30 ktpa
Other	40 ktpa
Total	120 ktpa

\*Excluding HXG Plans

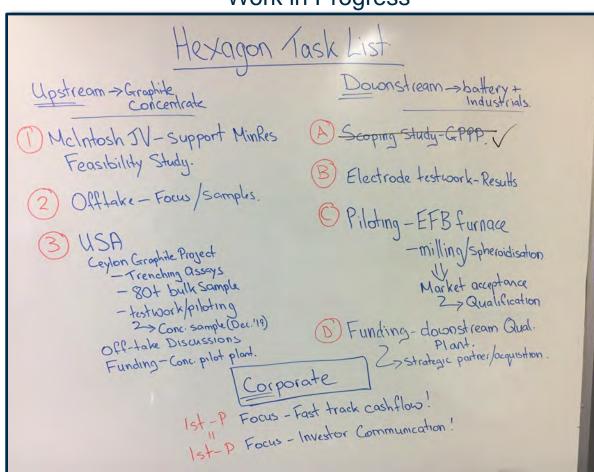
#### Assumptions (refer A4):

- 1. LiB anodes consist of approximately 50% natural and 50% synthetic graphite (with increasing utilisation of natural graphite in the past 3 to 5 years).
- Yield from concentrate to spherical (anode) graphite is approximately 50% (recent trend of improving yields from c. 30%).
- 3. Advanced project means at least Pre-Feasibility Study completed (status as at late 2018).
- 4. Roskill 2018 Natural & Synthetic Graphite Report



### Presentation Outline Follow the supply chain





#### Work in Progress

### **Presentation Outline**

#### Upstream (Natural Graphite Business)

- McIntosh Project & Joint Venture Australia
- Ceylon Graphite Project USA

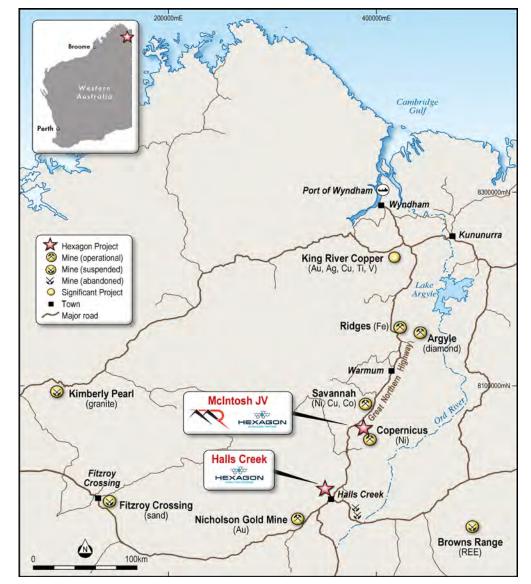
#### Downstream (Advanced Particle Business)

- Process Flowsheet
- Products premium quality
- Financial Outcomes

Offtake & Funding Hexagon – snapshot Investor Catalysts – 2019 Why Hexagon?

Located in a stable, established world-class mining region





### **Current Mineral Resources**

JORC	Tonnes	TGC (%)	Contained
Classification	(Mt)		Graphite (kt)
Total Indicated & Inferred	23.8	4.5%	1.1

Full Mineral Resources Table & Location Plan in Attachment 2

• 81% in Indicated category

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

Prospect	Tonnage Range (Mt)	Grade Range TGC (%)	
Total	50-100	2.0 - 5.0	

\**Cautionary Statement:* The potential quantity and grade of the Exploration Target 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.

Full Exploration Target Table & Location Plan in Attachment 3

Planned – conventional open-pit mines & flotation concentrator











**Upstream**: multi open-pit mining, simple flotation at c. 2.4M tpa to produce c. 100,000 tpa of high-grade (97-98% C) graphite concentrate, likely across 3 flake sizes, subject to completion of Feasibility Study (currently underway)

Funded by ASX-listed Mineral Resources Limited (ASX:MIN)



### **Earn-in Joint Venture Funding**

H a • TI • MINERAL RESOURCES



"The joint venture with MRL is a major de-risking event for Hexagon"

- Hexagon's JV partner Mineral Resources Limited (**MRL**) is a leading mine operator with a focus on battery minerals lithium and graphite in Western Australia; \$2.8B market cap
- The first JV of its kind in the junior graphite space
- MRL to fund all Feasibility Study work, capital development and ramp-up costs to achieve full commercial production to earn a 51% interest in the McIntosh Project (subject to a positive Feasibility Study)
- MRL to manage the McIntosh JV (MJV) to provide "pit-to-wharf" service to the MJV
- Next phase is completion of Feasibility Study, subject to metallurgical testwork to define flowsheet and product specifications

### **Risks Mitigated**

- No exposure to dilutive capital raisings to build upstream, mine and plant or ramp-up problems or delays
- Reduced operational risks
- No third-party project debt, convertible notes, securities, etc. simple financing at the project level

Graphite is not a commodity



Specifications and value for GOLD, LEAD, COPPER (i.e. commodities) are clear and well known Quality and value for GRAPHITE needs to be repeatedly demonstrated through extensive test work

### McIntosh natural flake graphite has a unique range of technical attributes, including:

- ✓ **Purity** high-grade concentrates c. 97-98% C from upstream
  - ultra-high purity 99.99% C (4Ns) flake is achievable at low cost in downstream
- HOPG-like rare, "highly ordered pyrolytic graphite" large, crystalline structures potential to displace synthetic graphite
- ✓ Large flake endowment and an expandable large flake (+60 mesh) component
- ✓ **Specific flake morphology** low-cost/high-yield spheroidisation and milling in downstream
- Excellent electrochemical and electrical properties via battery-graphite transformation technologies and performance characterisation and testing at leading US-based laboratory

### Hexagon's graphite is ideally suited to a diverse range of intermediate processors and end users

# Upstream – Alabama Graphite Belt

Hexagon owns an 80% interest in Charge Minerals LLC





### Hexagon's Alabama Initiative

### Alabama is a major high-tech manufacturing state

- There is NO domestic US natural graphite production (US imports all graphite)
- A critical mineral, graphite has numerous nonsubstitutable applications in the defence industries as well as more broadly in high-tech, energy-storage and industrial applications
- The State of Alabama
  - ✓ Tier-1 jurisdiction ideal for a vertically integrated business like Hexagon plans
  - ✓ Located in the historic, past-producing 'Alabama Graphite Belt'
  - ✓ Logistics close to source and customers with sophisticated transport network
  - ✓ Low-operating-cost environment e.g. power, transport and labour
  - ✓ Fast, transparent permitting in a pro-business, mining-friendly state offering significant incentives
  - ✓ No US federal permitting required; state-level permitting only
  - ✓ No First Nations claims
- Unique opportunities for funding capital development, also well supported by a range of possible US federal grants to develop manufacturing plants

Charge Minerals' activities and people create a platform to engage with end users and potential partners in this high-growth, industrialised region

### MADE IN ALABAMA

Jan. 25 2019: HUNTSVILLE, Alabama – Space flight company Blue Origin this morning kicked off construction on a \$200 million plant in Huntsville that will produce...

**Jan. 24 2019**: Alabama's auto workers built nearly 1.6 million engines last year, as the state industry continues to carve out a place in global markets with innovative, highperformance parts, systems and finished vehicles.

Jan. 16 2019: MOBILE, Alabama – Governor Kay Ivey joined leaders of <u>Airbus</u>, top local officials and others at the Mobile Aeroplex today for a groundbreaking ceremony to launch construction of the company's new A220 aircraft manufacturing facility.

Aug. 31 2018: MONTGOMERY, Alabama – Global Trade, a publication focusing on international business, has selected Alabama as the nation's top state for manufacturing in a new ranking. <u>Global Trade</u> cited the growth of Alabama's auto manufacturing industry and its leadership position in aerospace production, as well as job training provided by AIDT, the state's primary workforce development agency.

### 17

### Upstream – Alabama Graphite Belt

A potential fast track to market and brand acceptance

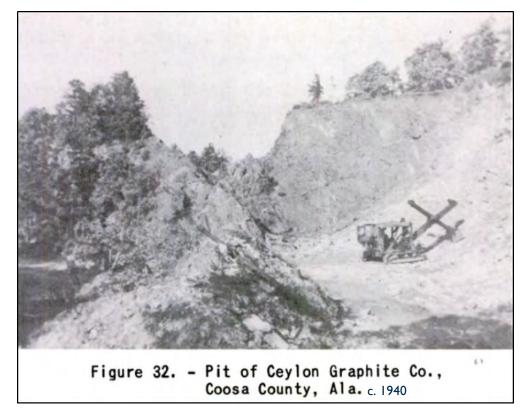


### **Charge Minerals LLC**

- Aspiring strategic supplier of <u>Sourced-in-USA</u> flake graphite from the historic 'Alabama Graphite Belt'
- 2 Mine Lease Agreements which includes the historic Ceylon Mine (600 kt of production)
- Experienced US management strong marketing relationships and expertise
- Private land, efficient permitting process with Alabama ۲ Department of Environmental Management (ADEM)
  - Drilling/Trenching Permits 3 weeks
  - Mining Permits 9 months

### **Development Program**

- Plan to have ~2 tonnes of concentrate available for marketing and downstream piloting in late 2019
- Produce ~1 to 1.5 tonnes of downstream product available for customer testing by Q1 2020
- Establish a 5 tph primary processing plant at site for qualification work and to supply downstream pilot plant





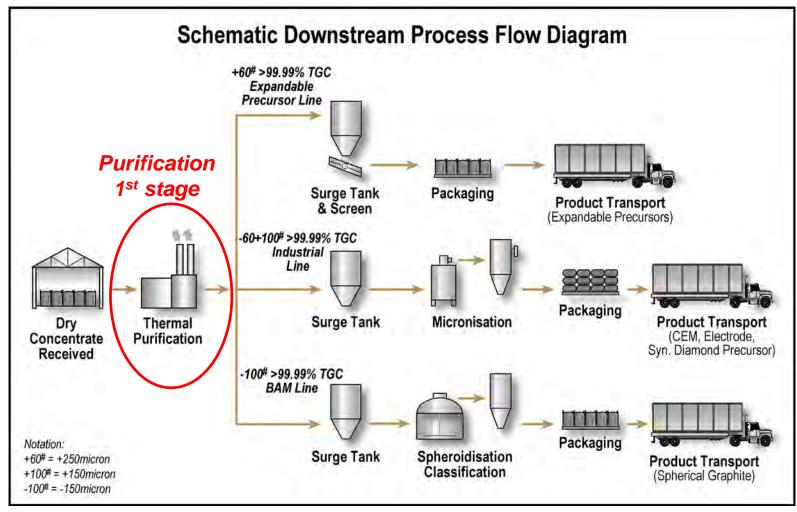




# Hexagon is looking to develop a standalone advanced downstream graphite processing business – *The Advanced Particle Business*

### Advanced Particle Business – Innovation

### Low-cost purification establishes a high-yielding, diverse flowsheet





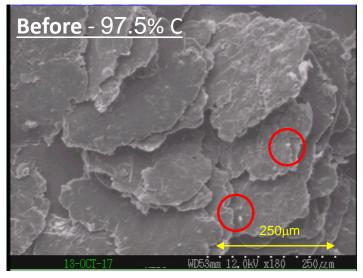
Initial planned output: A diverse, highpurity, high-value product range

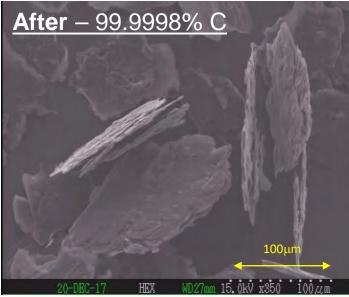
Initial processing focus will be on milling, classification and shaping (spheroidisation), consistent with testwork completed to date

# **Advanced Particle Business**

### Innovative downstream flow sheet leveraging off HXG's clean flake







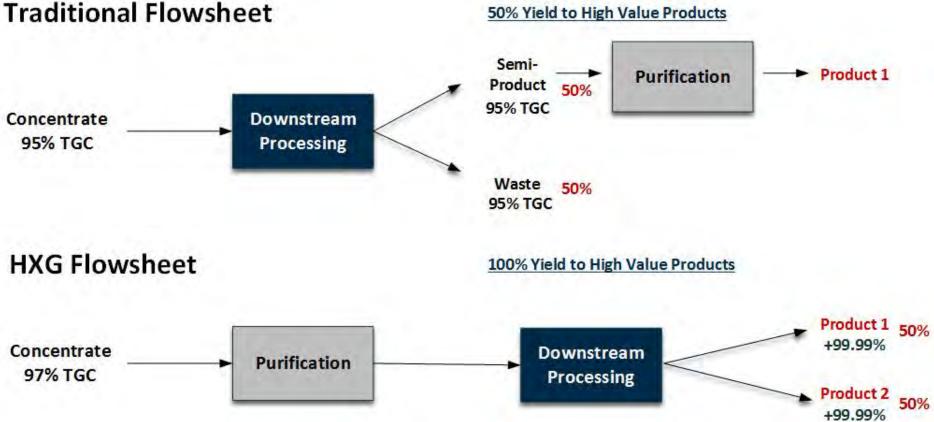
99.9998 wt.% C was achieved by a thermal purification technology

- Price Premium
  - ✓ 99.999% C (5Ns) is nuclear-grade purity
  - ✓ Battery-grade purity (>99.95% C) consistently command highest prices in downstream markets
- Low Cost
  - ✓ Surficial impurities require only "light" purification
  - ✓ HXG planning to adopt proprietary thermal furnace technology to purify graphite concentrate
- Low Environmental Impact
  - ✓ No HF acid leach
  - Less energy intensive compared to other thermal technologies

A premium is paid for ultra-high-purity materials in batteries and other high-end applications – the higher the purity, the better the battery performance



**Advanced Particle Business** 



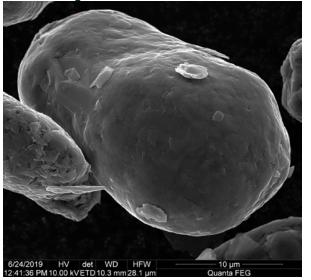


# Advanced Particle Business – Diverse Products

Recent testwork demonstrates range of premium high-end products



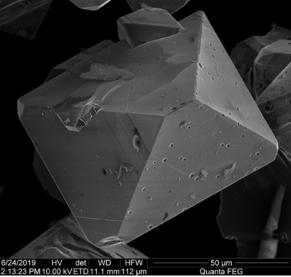
#### **Battery Line**



Examples: US\$/t

- CEM \$3,000 to \$19,000 (std to Prem)
- CEM-electrodes \$4,000 to \$14,000
- Uncoated BAM \$3,200 to \$3,800

#### Industrial-Tech Line



Examples: US\$/t

Precursor material for:

- Coatings \$15,000 to \$19,000
- Diamonds (tech grade) \$4,200 to \$10,000

#### **Expandable Line**



**Examples**: US\$/t Expandable precursor:

- Std +80#X \$3,000 to \$7,500
- Prem. +80#X \$3,500 to \$11,000

### **Scoping Study product suite targeting:**

- Battery materials (anode & cathode)
- Industrial applications (mould release, UHP-electrodes, synthetic diamonds, lubricants, premium refractories, and expanded graphite precursor for high-end foils and CEM)

#### Advanced Particle Business – Tier 1 jurisdictions Two sites considered: USA and Australia resources limited Ideally plant site is close to either the upstream $\checkmark$ **Natural Graphite Consumption\*** source or the major downstream customer North America. 73 kt 106 kt Europe Major considerations are power and logistics costs South America. 77 kt Natural Graphite Imports\* GREENLAND (DENMARK) Japan: 52 kt Sth Korea: 39 kt 39 kt India: RUSSIA China: 6 kt **R-SEA** 20 kt UNITED STATES OF AMERICA CHINA **Close to Markets** Low power costs **Close to Source** • & markets Moderate & BRAZIL INDEX SCORE uncertain power costs AUSTRALIA NO DATA STABLE UNSTABLE \*Source: Roskill MARSH POLITICAL RISK MAP 201 Natural & Synthetic graphite 2018 23 2017 Consumption and Import figures excludes spherical fines used in recarburiser.

## **Advanced Particle Business**

Scoping Study\* estimates – robust staged graphite business outline



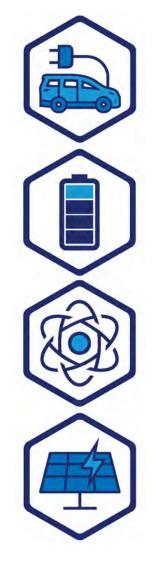
	Financial Highlights		
	Geraldton (Australia)	Chelan County (USA)	
Pre-tax NPV (10% discount)	A\$0.88 to A\$1.20 Billion	A\$0.92 to A\$1.24 Billion	
Post-tax NPV (10% discount)	A\$594 to A\$804 Million	A\$708 to A\$958 Million	
Pre-tax Internal Rate of Return	40% to 61%	40% to 58%	
Post-tax Internal Rate Return	32% to 48%	35% to 49%	
Operating Margin (EBITDA)	51%	54%	
Payback period from FID (post-tax)	4 years	4 years	
Payback period from full commercial production (post-tax)	2 years	2 years	
Operating Cost Product (life of project)	A\$2,618 / Tonne	A\$2,248 / Tonne	
Feedstock Price	A\$2,089 / Tonne		
Weighted Ave Basket Price of Products	A\$8,487 / Tonne		
Start-Up Capital Phase 1	A\$23 Million	A\$27 Million	
Start-Up Capital Phase 2	A\$118 Million	A\$135 Million	
Start-Up Capital Phase 3 (fully funded from operations)	A\$139 Million	A\$153 Million	

- A standalone business sourcing feedstock from third parties or possibly from McIntosh / Ceylon
- Impressive investment criteria-for preferred USA location:
  - ✓ High margins -54%
  - ✓ Post tax NPV<sub>10</sub> A\$708 to A\$958 million
  - ✓ Post tax IRR 35 to 49%
- Financial Model uses conservative price assumptions:
  - ✓ For feedstock (input cost) A\$2,089/t (US\$1,504/t)
  - ✓ Sales basket price of A\$8,487/t (US\$6,110/t)

\*Refer ASX Announcement 17 May 2019 "Positive Scoping Study for Advanced Graphite Processing". The Company is not aware of any new data or information that materially affects the information presented herein.

### Hexagon is focused on offtake and funding Strong marketing engagement in Asia and USA





### **Product Marketing**

- Asia Hexagon has established direct market contacts in Japan, Korea, Taiwan, and China
- **USA** Increasing focus through "Made & Sourced in the USA" initiative
- Engaged (under NDAs) with major battery, EV and industrial materials manufacturers, including specific interest from US-based customers

### **Funding Options**

Hexagon is pursuing a variety of funding initiatives, for its Advanced Particle Business and Charge Minerals developments, including:

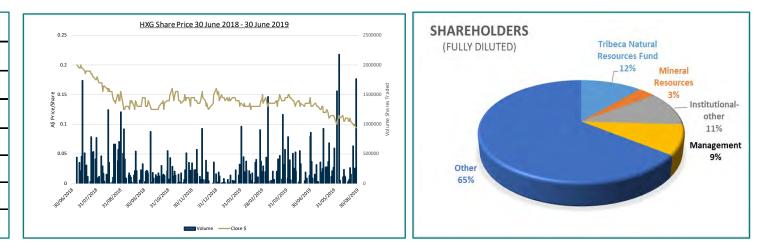
- ✓ Strategic acquisition or partnership
- ✓ Debt potentially as the business becomes more established
- ✓ Joint Venture potentially for both Advanced Particle Business and Charge Minerals
- ✓ Grants in US, several opportunities for federal grants to support strategic projects
- ✓ Equity via cornerstone investors etc.

# Hexagon Corporate Snapshot

An Australian listed graphite company



ASX Code	HXG
Shares on Issue	291.8M
Options on issue	24.4M (unlisted)
Share price (4 July 2019)	A\$0.10
12 Month high/low	A\$0.20/A\$0.094
Market Capitalisation	A\$29.2
Debt	Nil
Cash (30 June 2019)	A\$4.2M

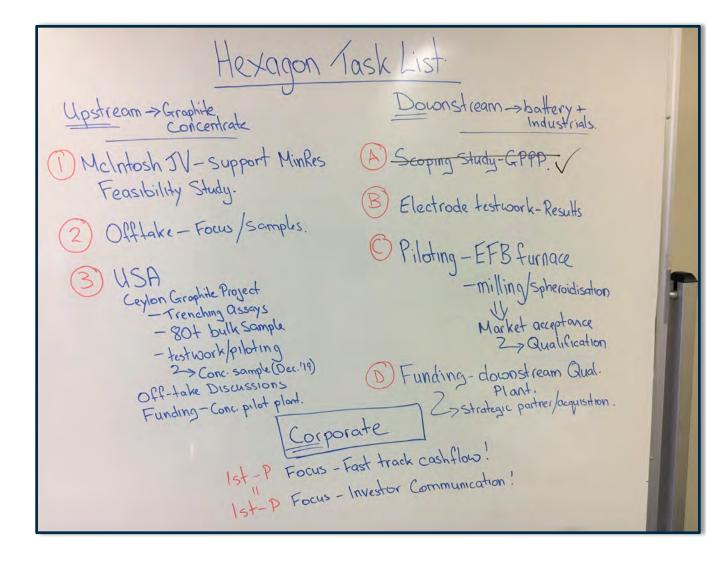


- Strong share register 25% Institutional holders with Tribeca Natural Resources Fund 12%
- Management 9%
- Strong capital structure for a junior 292M shares on issue
- Reasonable cash balance \$4.2M (sufficient for FY2020 Program)
- No debt or other exotic funding/equity commitments

# Key Milestones

### What's on the White Board?





### Catalysts for Investors in 2019

- McIntosh JV Feasibility Study updates
- Ceylon Graphite sampling results and metallurgical tests
- US concentrate marketing offtake
- Electrodes testwork results
- Offtake agreements
- Piloting of EFB furnace
- Advanced Particle Business funding updates

# Why Hexagon?

### as an investment or as a supplier of premium graphite materials



Building a world-class graphite company focused on supplying high-margin processed material to end users:

### Natural Flake Graphite Business (Upstream)

- High quality graphite source McIntosh Project
- Funded potentially fully funded to Commercial Production by Mineral Resources
- USA Ceylon Project as a fast track to markets and establishing the Hexagon graphite brand
- Tier 1, low risk jurisdictions Australia and USA

### **Advanced Particle Business (Downstream)**

- Ultra high purity (+99.99% C)
- Innovative flow sheet leveraging off efficient, low-cost purification technology
- Financially robust post tax NPV of \$708 to \$958M with IRR of 35% to 40% for preferred USA location
- Detailed graphite market expertise focused on the USA and Asia
- Engaged with customers and financiers to develop this business

Hexagon has the expertise to understand the graphite market and position itself in the high value segments of the supply chain, in the right markets, to fast track cash flow and maximise value

### Hexagon Resources Limited

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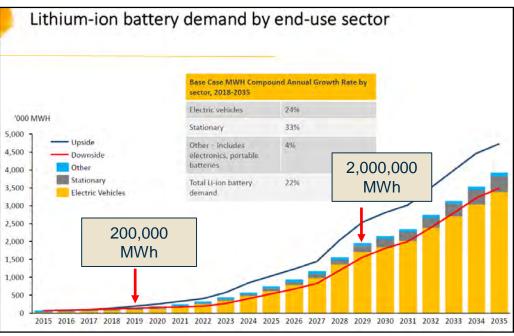




A1. Strong Graphite Demand growthA2. McIntosh Mineral Resource EstimateA3. McIntosh Exploration Target Estimate

# A1. Strong Graphite Demand Growth

Looking at just one graphite use – LiB, but a major growth driver



Benchmark Minerals Oct 2018.

### Where is that flake coming from?

### To meet just the LiB demand in:

### 2019: 200,000 MWh of LiB Demand, requiring

- ~100kt of natural flake anode1
- From ~200kt of natural flake concentrate<sub>2</sub>

#### 2029: 2,000,000 MWh of LiB demand, requiring

- extra ~900 kt of natural flake anode to meet 1,000 tpa of forecast demand
- From extra ~1,800 ktpa of natural flake concentrate to meet 2,000 ktpa of forecast demand.

### LiB Demand (alone) needs extra ~1,800 kt of flake concentrates online in the next 10 years

All "Advanced", Projects (excluding China) – have total forecast production of ~1,530 ktpa of natural flake concentrate:

- only 30 -50% of that increase will be suitable for batteries (currently 18-20%)
- assuming they all get into production, will generate an additional 450 to 750k tpa of natural flake concentrate Leaving a <u>DEFICIT</u> of 1,050 to 1,350 ktpa of natural flake concentrate. China capacity increase is unknown – but its already importing flake concentrates for anode production and other uses Assumptions: Please refer next page.



### Appendix 2: McIntosh Mineral Resource Estimate

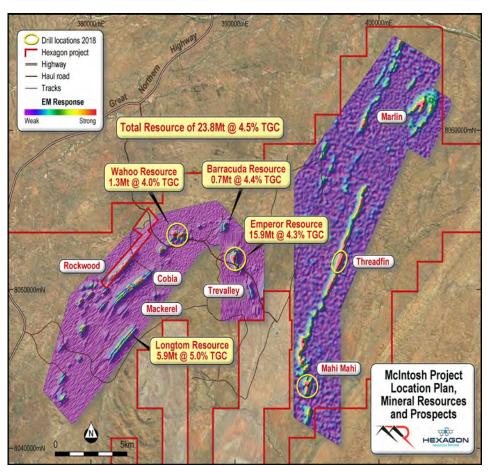
McIntosh Flake Graphite Project Mineral Resource as at 5 April, 2019 reported by deposit and above a 3% TGC cut-off grade. As per ASX Report dated 5 April, 2019

Deposit	JORC Classificatio n	Tonnes (Mt)	TGC %	Contained Graphite (Kt)
	Indicated	12.1	4.28	518
Emperor	Inferred	3.8	4.35	165
	Total	15.9	4.30	684
	Indicated	1.3	3.97	51
Wahoo	Inferred	-	-	-
	Total	1.3	3.97	51
	Indicated	5.1	4.93	253
Longtom	Inferred	0.8	5.25	40
	Total	5.9	4.97	293
	Indicated	0.7	4.40	32
Barracuda	Inferred	-	-	-
	Total	0.7	4.40	32
Total	Indicated	19.2	4.44	854
	Inferred	4.6	4.50	206
	Total	23.8	4.45	1,060

Note: Rounding may result in differences in totals for tonnage and grade.



Location Plan – McIntosh Mineral Resources. Background is EM conductors from VTEM and Xcite surveys



Mineral Resource Estimates – the Company is not aware of any new data or information that materially affects the information presented herein.

### **Appendix 3: McIntosh Exploration Target**



### *McIntosh Flake Graphite Project Exploration Target as at 5 April, 2019. As per ASX Report dated 5 April, 2019.*

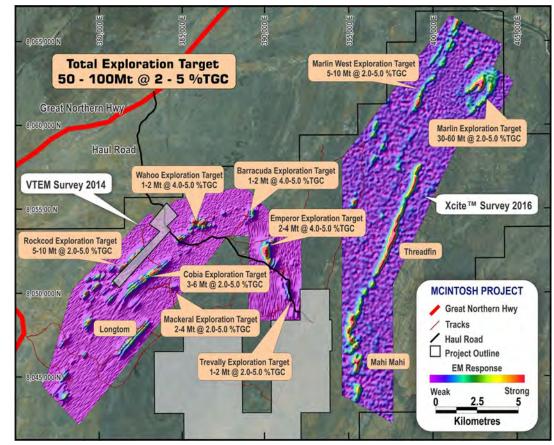
\**Cautionary Statement:* The potential quantity and grade of the Exploration Targets is conceptual in nature, there has been insufficient exploration work to estimate a mineral resource and it is uncertain if further exploration will result in defining a mineral resource.

Dreeneet	Tonnag	Grade Range	
Prospect	Minimum	Maximum	(%TGC)
Emperor <sup>1</sup>	2	4	4.0 - 5.0
Wahoo <sup>1</sup>	1	2	4.0 - 5.0
Barracuda <sup>1</sup>	1	2	4.0 - 5.0
Cobia	3	6	2.0 - 5.0
Marlin	30	60	2.0-5.0
Marlin West	5	10	2.0 - 5.0
Rockcod	5	10	2.0 - 5.0
Mackerel	2	4	2.0 - 5.0
Trevally	1	2	2.0 - 5.0
Total	50	100	2.0 - 5.0

Note: Rounding may result in differences in totals for tonnage and grade

### Location Plan – McIntosh Exploration Targets\* as reported to ASX 5 April, 2019.

Background is EM conductors from VTEM and Xcite surveys.



Exploration Targets - the Company is not aware of any new data or information that materially affects the information presented herein.