



***Building an Australian
Mine to Market
Graphite Business***

www.gcminerals.com.au

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This document has been authorised for release by the Company's board of directors.

Investment Highlights

Tier 1 Location

McIntosh - **3rd Largest Graphite Resource** in Australia

W.A Ranked **Most Attractive Mining** Jurisdiction Globally

Flake Size

Top Quartile in Flake Size Distribution Globally

85% +80 Mesh
78% +60 Mesh

High Purity

Easily Purified to **Nuclear Grade Purity**
99.999% C

Low Impurities Leads to **Low Environmental Impact** Downstream Processing

Critical Mineral

Nationally **Strategic Critical Mineral** Project

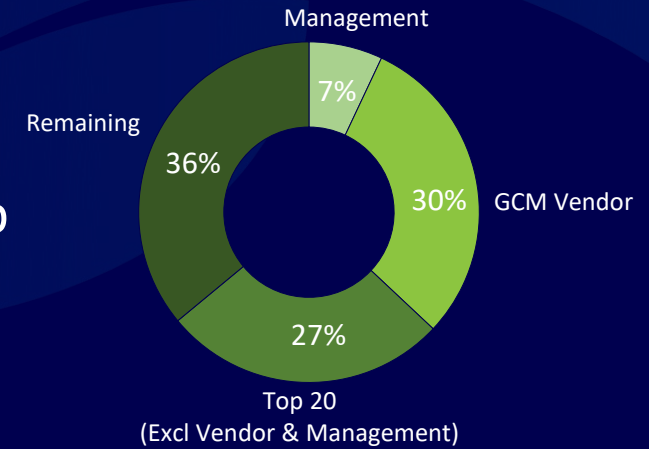
Targeting Multiple **Government Grants** and Incentives

Corporate Overview

GREEN CRITICAL MINERALS LTD (GCM) SHARE PRICE MOVEMENT



Ownership



Shares on Issue	971,478,629
Escrowed Shares (Nov 2023)	25%
Top 20 Shareholding	64%
Market Cap (@ \$0.016)	\$15.5M
Cash + Receivables	\$5.1M
Enterprise Value	\$10.4M

Board and Management Team

Green Critical Minerals (GCM)

Dr Leon Pretorius - Geochemist
CEO and Chairman

Julian Atkinson - Lawyer
Non-Executive Director

Charles Thomas – Corporate Finance
Non-Executive Director

Apex Geoscience – Geological
GM Exploration

Julian Woodcock - Geologist
Technical Consultant

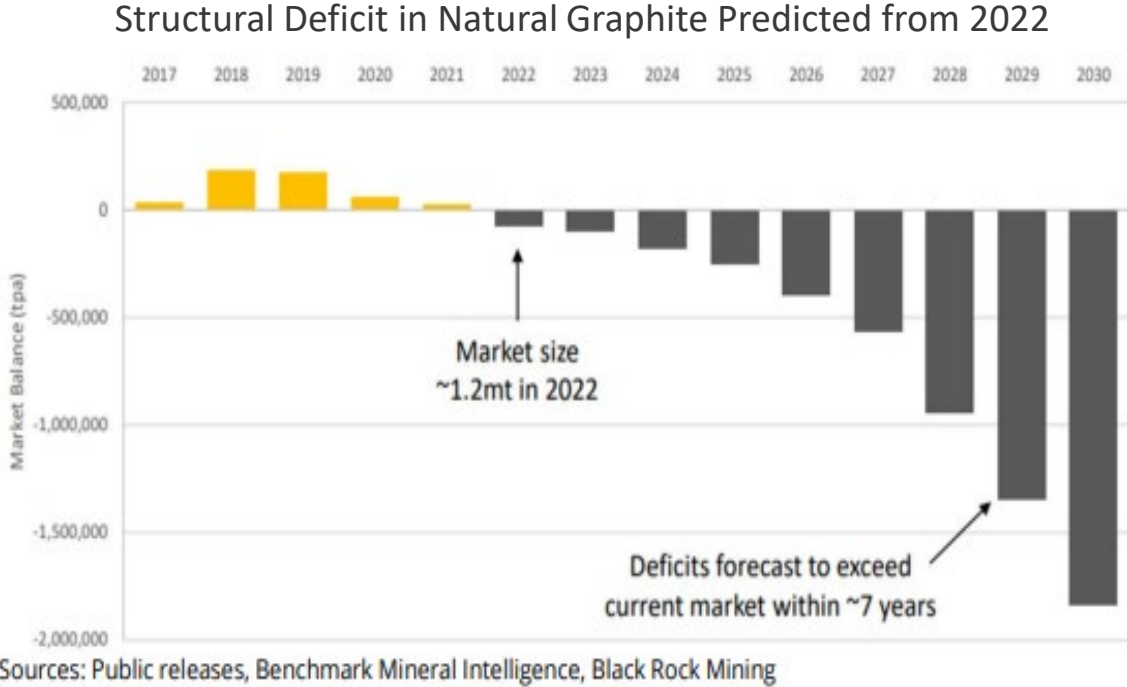
Graphite Advisory Team

Oliver Peters - Metallurgical
Metallurgist with over 23 years of mineral processing experience, including significant graphite experience having worked on over 28 graphite projects globally.

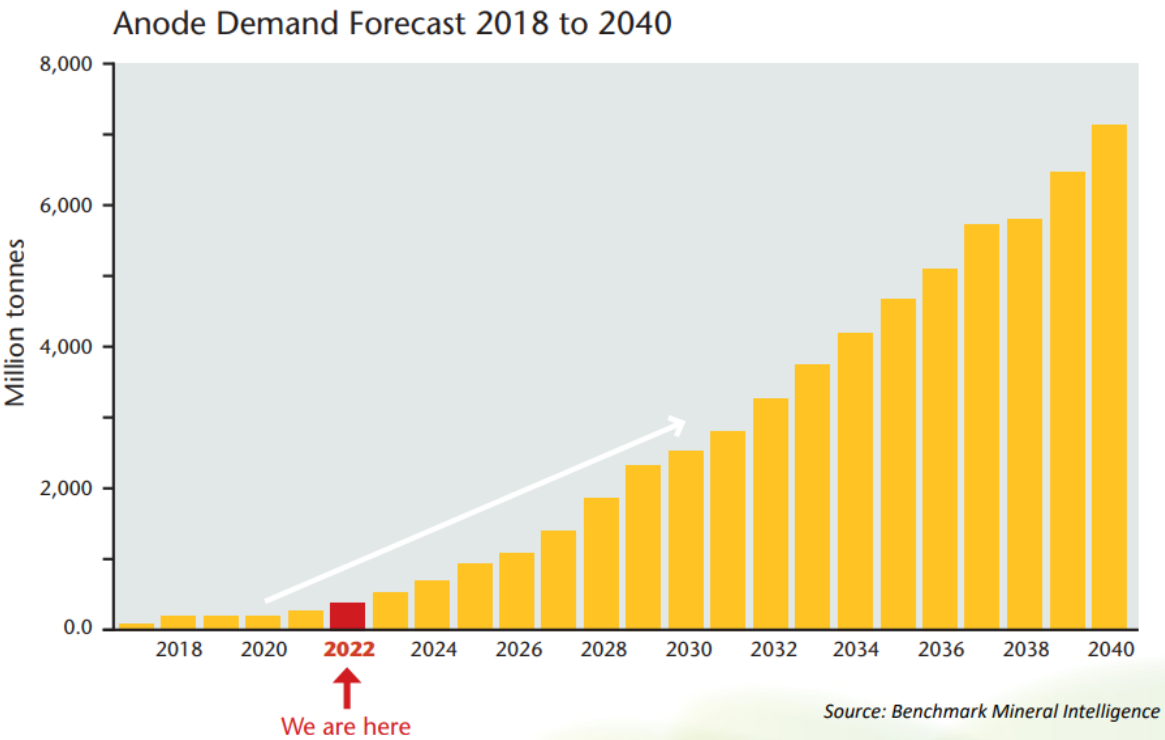
Christopher Whiteley - Sales and Marketing
Chris has over 30 years of graphite experience with a deep understanding around all aspects of graphite marketing and product development.

Graphite Market Hitting Inflection Point

Graphite Demand Forecast



McIntosh Graphite Confirmed Suitable for EV Battery Anodes



66.3 kg
Graphite

53.2 kg
Copper

39.9 kg
Nickel

24.5 kg
Manganese

13.3 kg
Cobalt

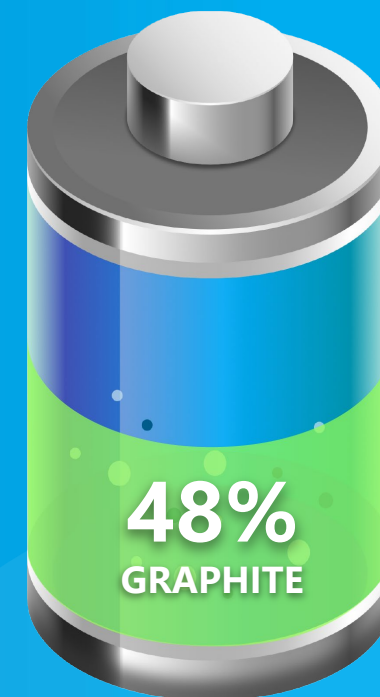
8.9 kg
Lithium

0.1 kg
Zinc

0.3 kg
Others

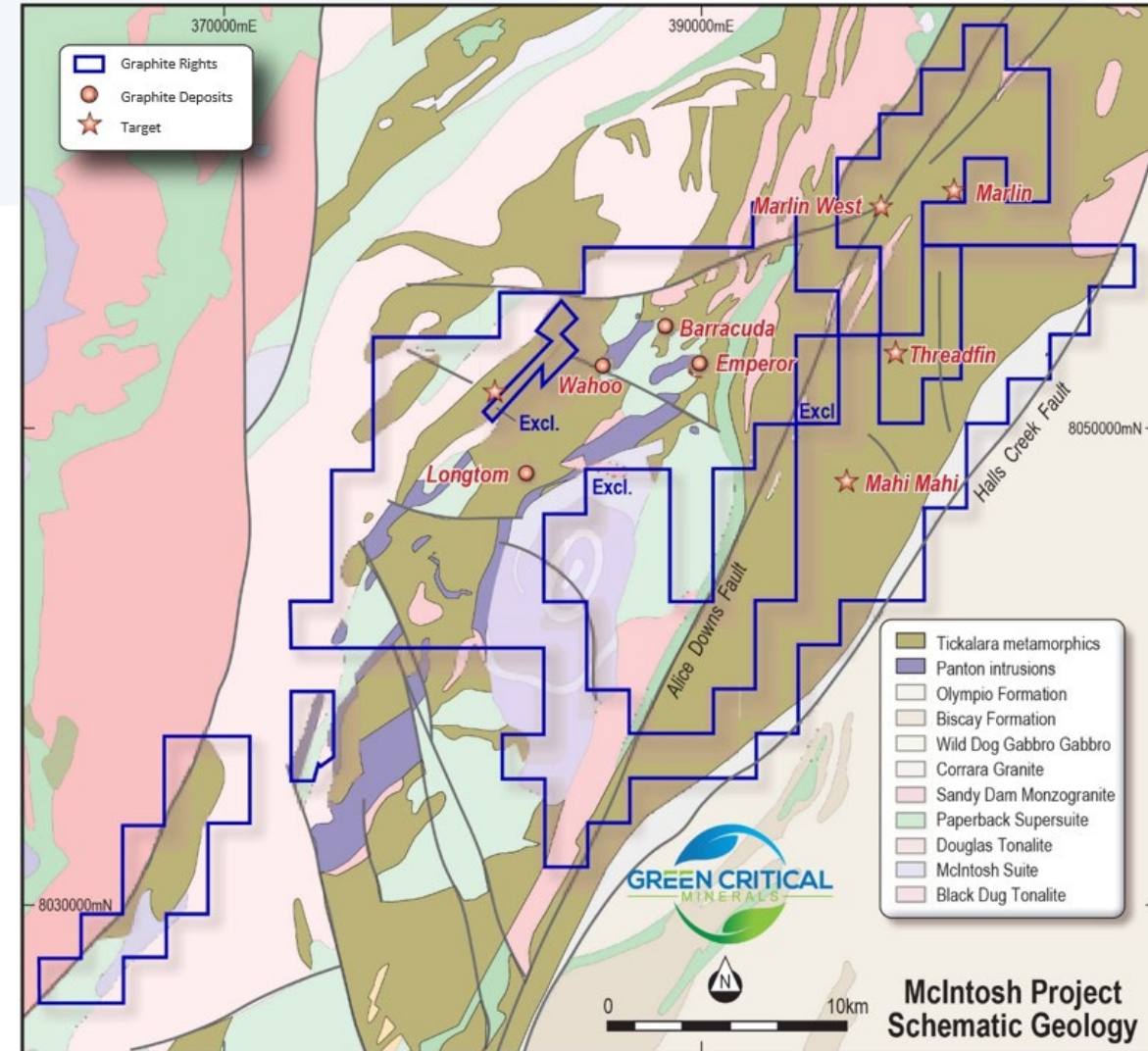
Minerals in Electric Vehicles

Graphite is the largest component in a Lithium-Ion Battery and requires the **largest production increase of any battery mineral**



The McIntosh Project

- ✓ GCM has the right to earn 80% of the Graphite rights of the 3rd Largest Graphite Resource in Australia with 1.1Mt Contained Graphite*
- ✓ One of Australia's Most Advanced Graphite Projects With Over \$14million spent on Drilling and Metallurgical Test Work
- ✓ Nationally Strategic Project - Graphite is a listed US, EU, JPN and Au Critical Mineral
- ✓ McIntosh Flake is a Unique High Purity Graphite Project
 - ✓ Extremely Low Impurities
 - ✓ Easily Purified to Nuclear Grade Purity - **99.999% C**
 - ✓ Globally Significant Flake Size Endowment
 - ✓ Excellent Crystallinity - "HOPG-like" (Extremely Rare)
 - ✓ Excellent Electrochemical Properties



McIntosh Project Location

- ✓ Tier 1 Location – Western Australia
- ✓ Sealed Roads - 12km to Great North Highway
- ✓ Proximity to Clean Energy - Ord River Hydropower
- ✓ Proximity to Port - 280km to Deep Water Port of Wyndham

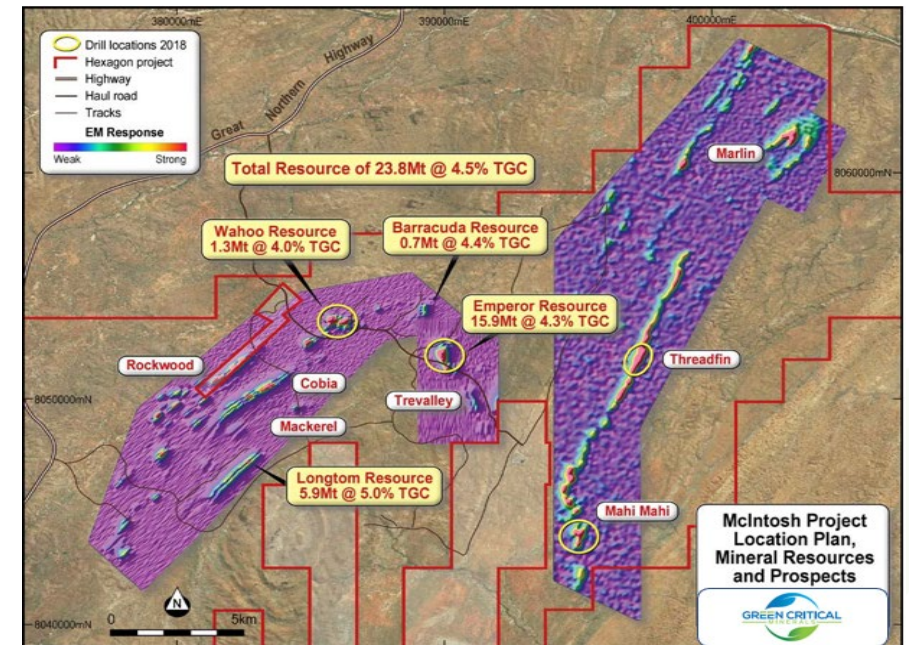
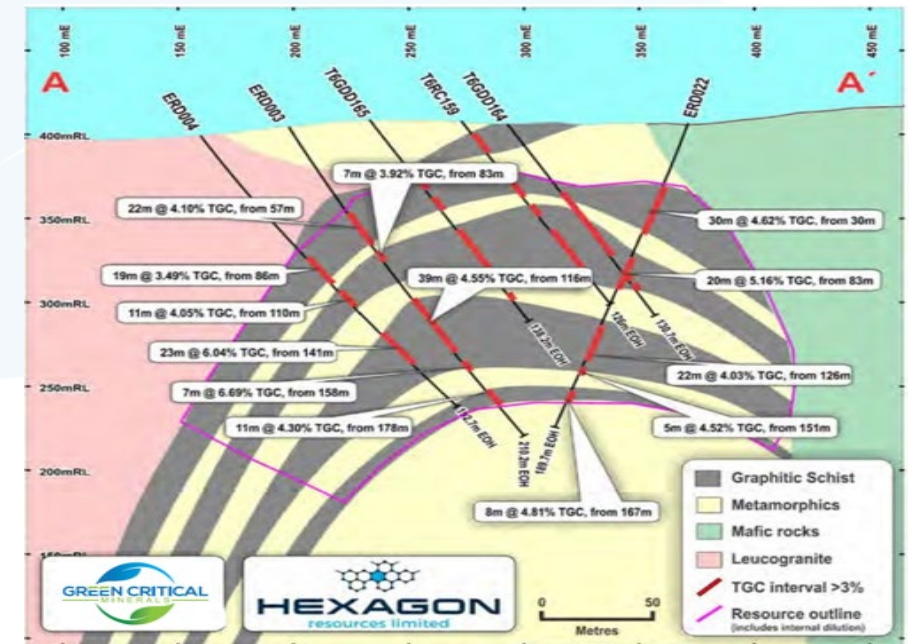
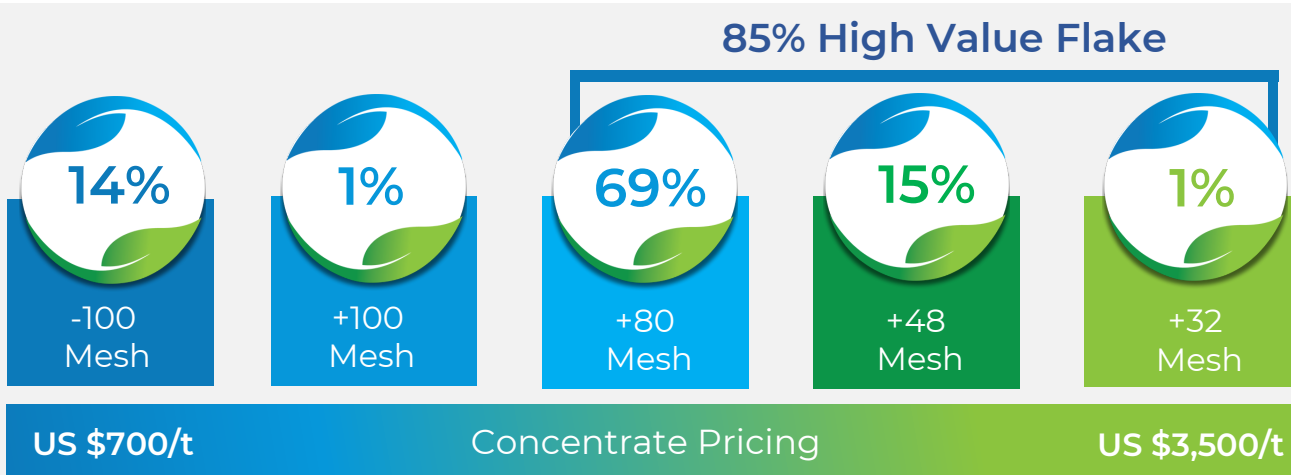
Location Benefits

- ✓ Attractive mining jurisdiction - Ranked the most attractive mining jurisdiction globally by the Fraser Institute
- ✓ Renewable (green) energy provided to Wyndham from Ord River Hydro, the **largest generator of hydroelectricity in Western Australia**
- ✓ Strong government support for development of critical mineral deposits
- ✓ Project is well positioned to deep water port and key customer groups in Asia, Europe and USA
- ✓ Tracking of carbon footprint throughout the supply chain (**Traceability**)
- ✓ Battery anode end users are attracted by supply from stable, reputable countries with good environmental practices (**Responsible Sourcing**)

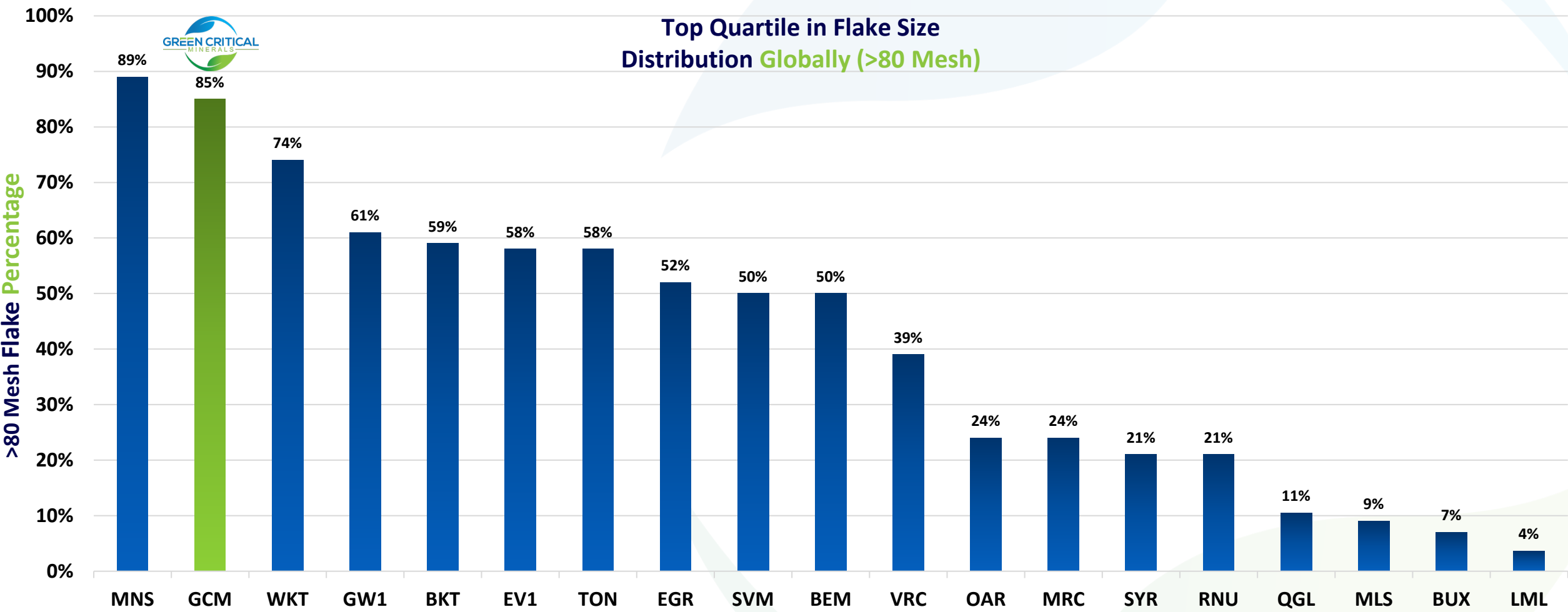


Emperor Deposit

- Emperor and Longtom comprise ~92% of the McIntosh resource
- Emperor ranks in the top quartile for flake size distribution globally, with over 85% in the high value large flake size (+80 Mesh)
- 81% of Resource is in the higher confidence Indicated category
- Metallurgical test work produced 98% TGC concentrate by simple flotation
- Confirmed ultrahigh purity flake with 5N purity 'easily' achievable
- Ample core available for further metallurgical test work



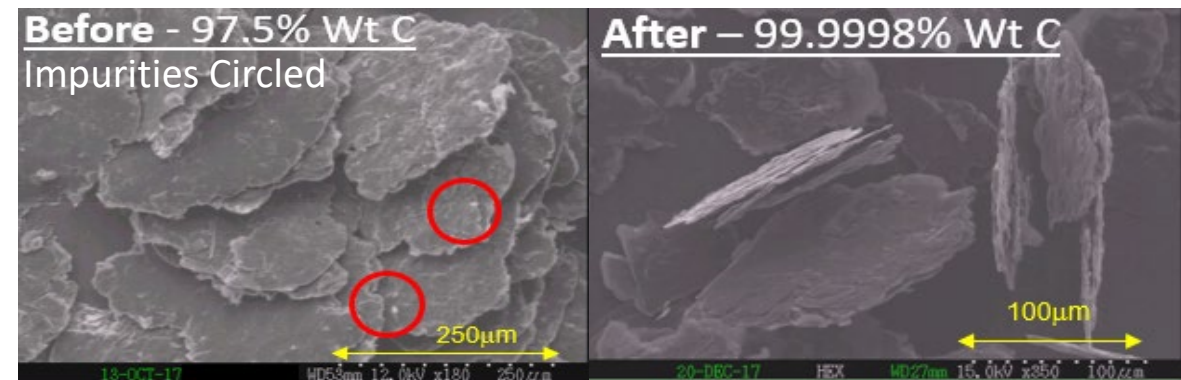
GLOBALLY SIGNIFICANT FLAKE SIZE DISTRIBUTION



Detailed Table in Appendix

Ultrahigh Purity Advantages

- Easily Purified to 5N (**99.999% C**) Nuclear Grade Purity
- Impurities occur on the flake surface, as opposed to being trapped in the flake
- Making it amenable to “light” purification methods
- Light purification results in lower environmental impact downstream process and;
- Lower cost of purification
- Ability to produce **Nuclear Purity** means targeting of the highest value graphite products up to US\$30,000/t
- Low-cost purification + high value markets = **High Margin**



Battery Anode Test Work

- ✓ Significant amount of battery anode test work completed to date, with sample material passing on all the key preliminary assessment criteria (Table 1)
- ✓ Purity of **99.999%** far exceeds the 99.95% required for battery anode material, allowing targeting of premium advanced battery markets – up to \$30,000/t

Only flake graphite with 99.95% purity can be used in batteries, however, **the critical question is:** What impurities exist in the remaining 0.05%?

- ✓ At McIntosh, all critical battery impurities were reduced magnitudes lower than advanced lithium-ion battery anode requirements after light purification (Table 2)
- ✓ No Hydrofluoric Acid required to purify - **HF Free**
- ✓ Material is easily micronised, spheroinised and milled



Battery Anode Test Work Results			
Excellent First Pass Electrochemical Results From McIntosh Concentrate Material			
Parameter Tested	Units	McIntosh Concentrate	Reference Material
Yield	%	58	c.55
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 (BET)	m ² /g	3.7*	2 - 5
Reversible Capacity ²	mAh/g	370	360

*Test work result after additional processing

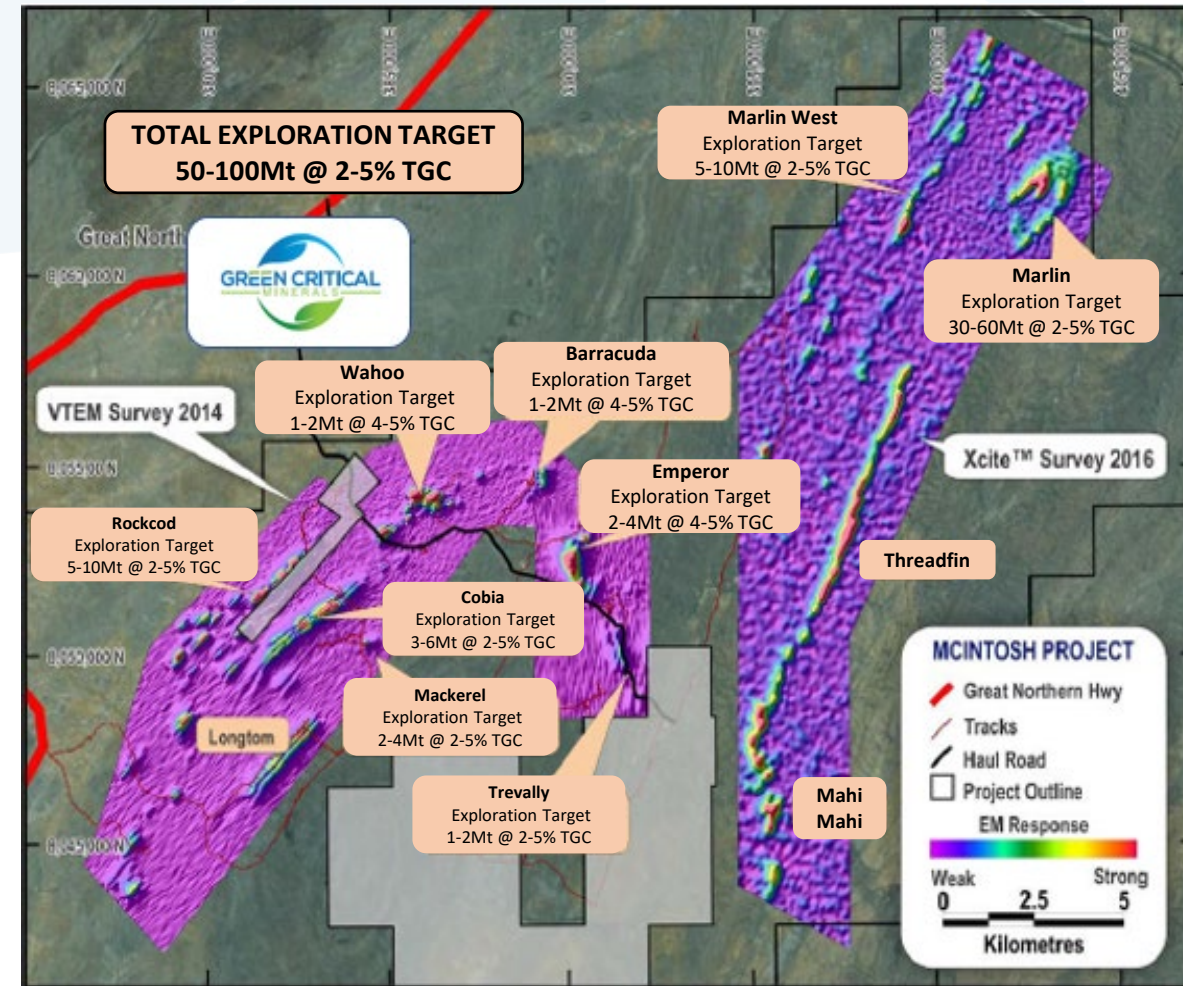
Table 1

Critical Battery Impurities		
McIntosh Purified Graphite vs Advanced Battery Grade Graphite		
	McIntosh	Battery Grade
Critical Elements	Concentration (ppm)	Common Max. Limit (ppm)
S	7.4	100
Si	0.57	200
Sn	0.49	2.0
Mo	0.15	2.0
As, Sb, Zn, Pb, Cd, Co, Ni, Fe, Mn, Cr, V, Cu, Ca, Al	0	1 - 30

Table2

Resource Expansion

- ✓ 50Mt – 100Mt Exploration Target*, not including current resource
- ✓ **Marlin and Marlin West high priority targets**
- ✓ The Marlin prospect is the largest exploration target, having a Mineral Exploration Target* of 30-60Mt
- ✓ At Marlin West **extensive graphite outcrops up to 21m wide** occur intermittently over a considerable strike length of 2.6km
- ✓ The Threadfin target was previously reported to have an exploration target of 25-50Mt* and is not included in the companies current Exploration Target due to small-fine flake size
- ✓ Petrography at Threadfin is being re-evaluated to access its suitability for the Purified Spherical Graphite market (PSG)
- ✓ 65 Rock chip samples have been collected over key EM target areas, with assays and petrography results due shortly
- ✓ GCM preparing for an **April** drill program at priority targets



*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 as determined by JORC 2012 guidelines.

PFS Key Enhancements Identified

- ✓ PFS was completed in 2017, prior to high value coarse flake endowment being recognised at Emperor

PFS Key Issues Identified

- ✓ Flowsheet used in 2017 PFS took a high value coarse flake size and pulverized it to a lower value small flake in order to target the Purified Spherical Graphite market (PSG)
- ✓ Pulverization results in:
 - Higher energy cost due to excessive crushing and grinding in circuit (OPEX)
 - Higher upfront capital due to excessive crushers in circuit (CAPEX)

PFS Key Opportunities Identified

- ✓ Updated PFS will have a key focus on coarse flake size preservation in the flow sheet in order to target the higher value Advanced Battery and Nuclear Industry, resulting in:
 - Lower CAPEX and OPEX due to fewer crushers in circuit
 - Higher value coarse flake being produced, allowing targeting of premium markets

Small Flake (2017 PFS Focus)

- Purified Spherical Graphite (PSG) - \$3,500/t

Coarse Flake (2023 PFS Review Focus)

- Advanced Battery Industry - \$8,000 - \$30,000/t
- Nuclear Industry – Up to \$30,000/t

PFS Financial Outcomes	Unit (Aud)	2017 PFS (LOM)	2023 PFS Update
Site Operating Costs	Conc/t	987	?
Realisation Costs (FOB)	Conc/t	51	?
Total Operating Costs	Conc/t	1,038	?
Start-up Capital (15% Contin)	Mil	148	?
Sustaining Capital	Mil	24.9	?
Revenue	Mil	1,197	?
Revenue	Conc/t	2,087	?
EBITDA	Mil	654	?
EBITDA Margin	%	51	?
Pre-tax NPV (Disc rate:8%)	Mil	261	?
Pre-tax IRR	%	46	?
Payback Period	Years	3	?



Targeting a Low Carbon, **Green Mine** to Market Process

Tier 1 Mining Jurisdiction
(Responsible Sourcing)

High Purity Flake Leads to
Lower Environmental Impact
Downstream Process

Targeting **Low Carbon**
Footprint Operation

Processing facilities in
proximity to **Green**
Hydro Power

Full Chain of Custody in
Australia – **CO₂** Traceability

Sustainable Development
Focus with **ESG Commitment**

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Appendix

ASX:GCM

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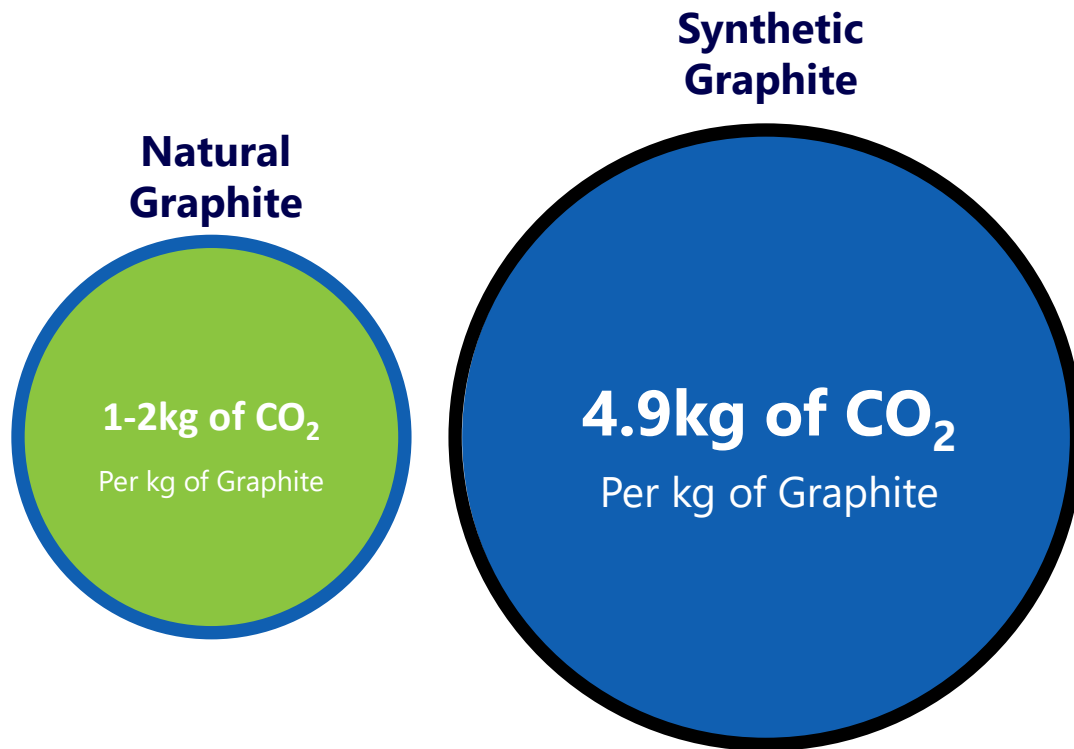
Graphite The new Strategic Minerals

- China controls **70-80%** of world graphite supply and western alternative sources are needed
- China makes almost **100%** of the graphite anode material for lithium-ion batteries/EVs
- Both the EU and USA have named graphite a **supply critical** mineral
- Graphite production must **more than double over** the next five years based on announced investments by LiB and automobile manufacturers
- Graphite is the largest component in a Lithium Ion Batteries and requires the **largest production increase** of any battery mineral

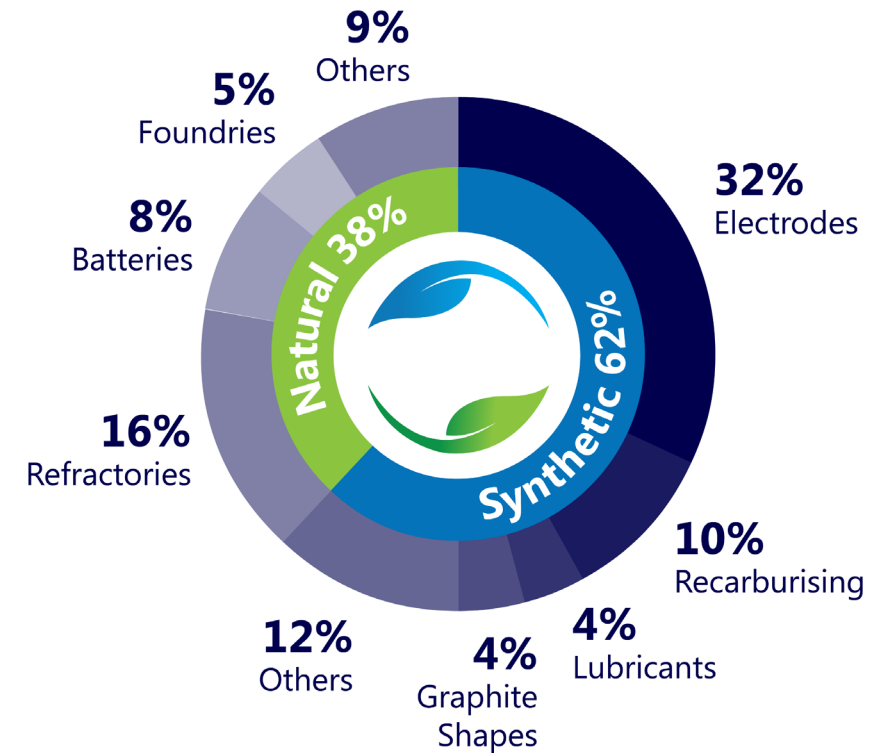


Natural vs Synthetic

Carbon Footprint



Graphite Global Uses 2020



Coarse Flake Size Peer Comparison

Ticker	SYR	RNU	MNS	EGR	BKT	SVM	WKT	QGL	EV1	MRC	GW1	VRC	TON	BEM	MLS	BUX	GCM	LML	OAR
Jumbo Flake +32 Mesh >500µm	-	-	-	2%	5%	5%	15%	-	11%	-	0%	1%	10%	3%	2%	0%	1%	0%	0%
Extra Large Flake +48 Mesh >300µm	9%	4%	66%	18%	18%	19%	35%	11%	21%	7%	20%	11%	25%	17%	4%	0%	15%	0%	8%
Large Flake +80 Mesh >180µm	12%	17%	22%	31%	36%	26%	25%	-	27%	17%	12%	27%	23%	30%	3%	7%	69%	4%	16%
>80 Mesh	21%	21%	89%	52%	59%	50%	74%	11%	58%	23%	32%	39%	58%	50%	9%	7%	85%	4%	24%
Deposit Flake Size Distribution Quoted	Balama	Sivour	Nachu	Epanko	Maheng	Malingunde	Lindi Jumbo	Uley 2	Chilalo	Munglinup	Graphmada	Bunyu	Ancuabe	Maniry	Lac Rainy	Yalbra	Emperor	Kookaburra Gully	Oakdale
Project Location	Mozambique	South Australia	Tanzania	Tanzania	Tanzania	Malawi	Tanzania	South Australia	Tanzania	Western Australia	Madagascar	Tanzania	Mozambique	Madagascar	Quebec	Western Australia	Western Australia	South Australia	South Australia
Source	Announcement 29/3/2019 and 31/1/2022	ASX announcement- 4 March 2021 and 11 November 2019	Website	ASX announcement - 31/7/2017 and 21/6/2017	Website and ASX Announcement 25/7/2019	Announcement 19/7/2018 and 7/11/2018	Website and ASX Announcement 07/03/19	Announcement 10/2/2022	Announcement 25/02/2022 and GPX Announcement 29/1/2020	Announcement 8/1/2020 and 26/5/2021	Announcement 9/11/21	Website and ASX Announcement 30/7/2018	Presentation - 22 June 2019 and ASX Announcement 15/12/17	Announcement 7/12/21	Announcement 28/2/2022 and 3/2/2021	Announcement 9/7/2015	Internal	Announcement 27/11/17	Announcement 2/12/2015

Exploration Target Table

Exploration Target* (Additional to Mineral Resource)			
Prospect	Tonnage Range (Mt)		Grade Range TGC (%)
	Minimum	Maximum	
Emperor	2	4	4.0 – 5.0
Wahoo	1	2	4.0 – 5.0
Barracuda	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

Mineral Resource Table

Deposit	Resource Classification	Tonnes (Mt)	%Total Graphite Content (TGC)	Contained Graphite (kt)
Emperor	Indicated	12.1	4.28	517
	Inferred	3.8	4.35	165
	Total	15.9	4.30	683
Wahoo	Indicated	1.3	3.97	51
	Inferred	0.0	0	0
	Total	1.3	3.97	51
Longtom	Indicated	5.1	4.93	252
	Inferred	0.8	5.25	40
	Total	5.9	4.97	293
Barracuda	Indicated	0.7	4.40	31
	Inferred	0.0	0	0
	Total	0.7	4.40	31
TOTAL	Indicated	19.2	4.44	853
	Inferred	4.6	4.50	205
	Total	23.8	4.45	1,060