



**SARYTOGAN**  
GRAPHITE

**THE**

**ULTRA HIGH PURITY**

**KAZAKH GIANT**

28 August 2023

INVESTOR PRESENTATION



ersonal use only





Giant and exceptionally high-grade Indicated and Inferred Mineral Resource of 229 Mt @ 28.9% TGC<sup>1</sup> with low mining costs.



Ultra-high-purity of 99.99% TGC<sup>2</sup> achieved by flotation, alkaline roasting and thermal purification, far exceeds battery grade.



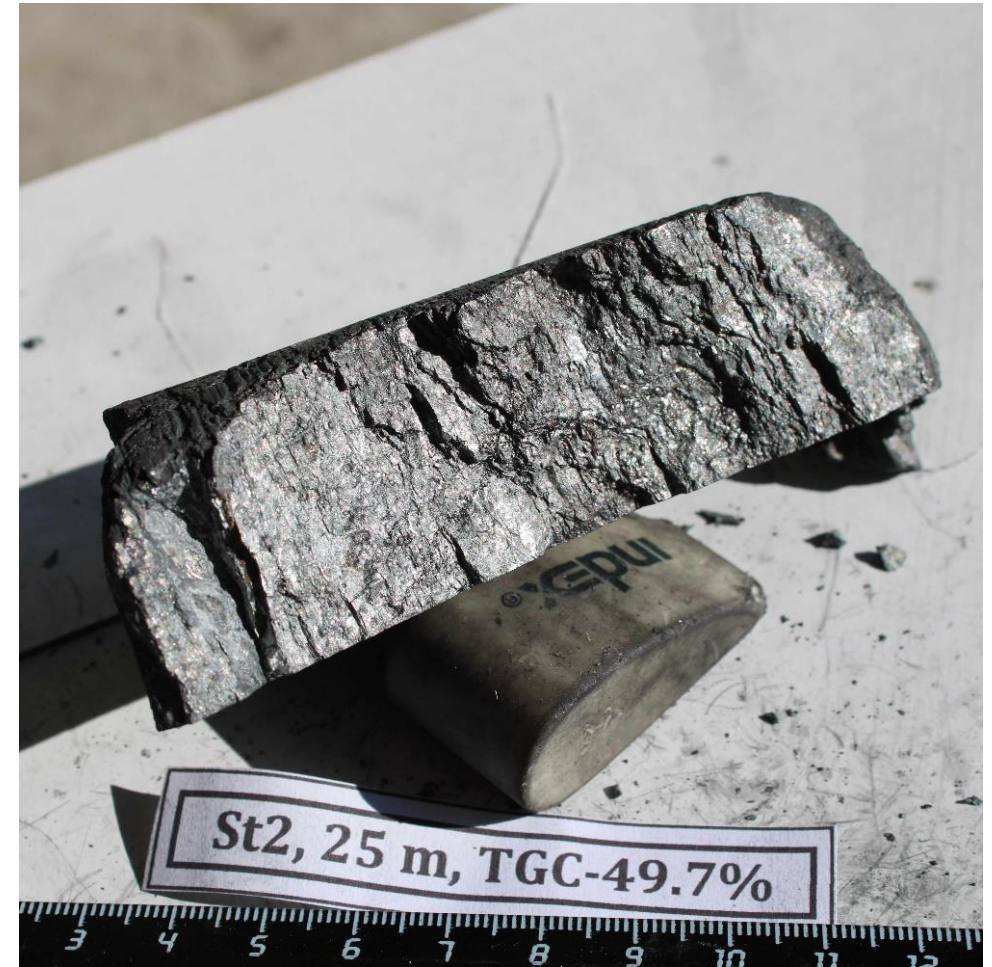
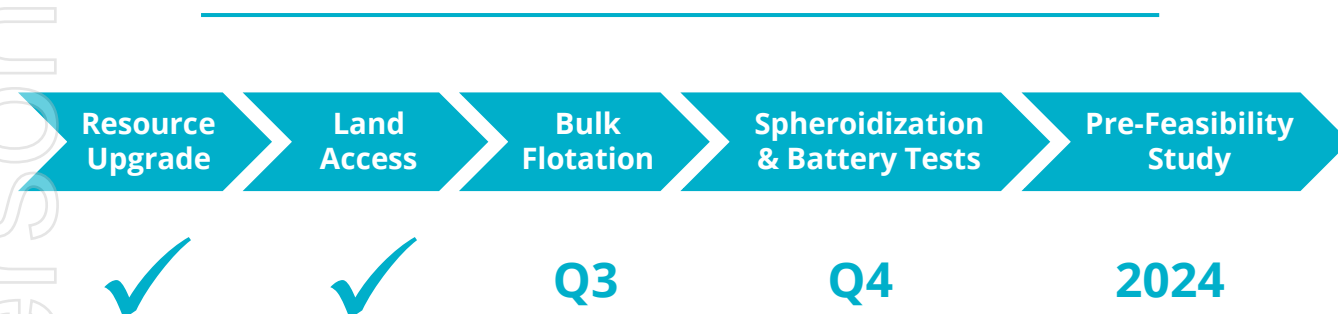
Kazakhstan is an established mining jurisdiction ideally located between the largest battery manufacturers in Europe and China.



Established in-country team progressing exploration and approvals.

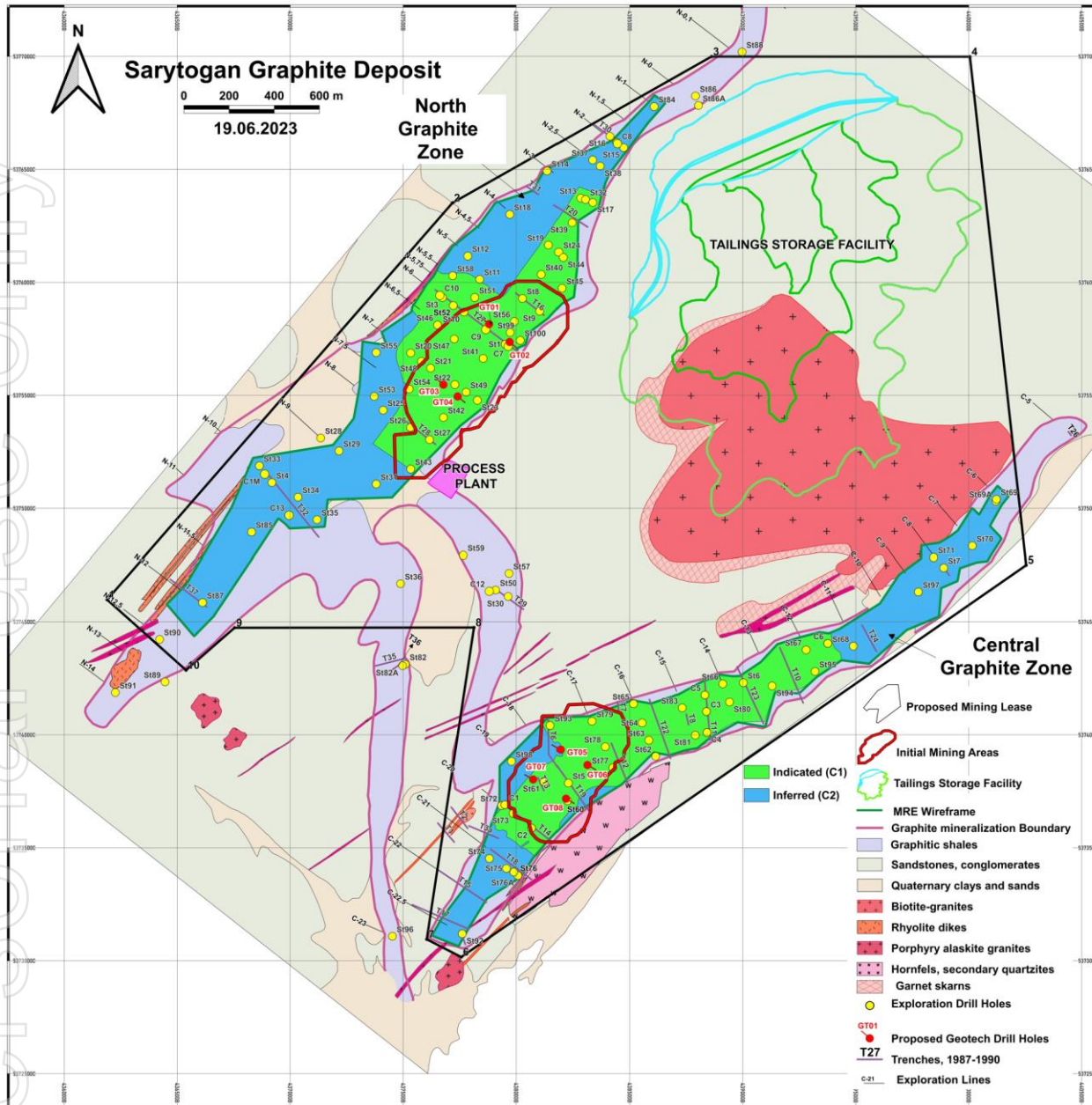


Test work scaling up and Pre-Feasibility Study (PFS) underway.



High grade sample from the Sarytogan Graphite Project

# The Project - Mineral Resource and Preliminary Mine Layout



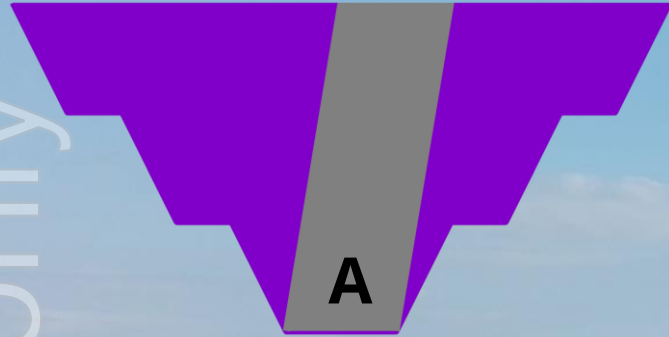
Zone (>15% TGC)	JORC <sup>1</sup> Classification	In-Situ Tonnage (Mt)	Total Graphitic Carbon (TGC %)	Contained Graphite (Mt)
North	Indicated	87	29.1	25
	Inferred	81	29.6	24
	Total	168	29.3	49
Central	Indicated	39	28.1	11
	Inferred	21	26.9	6
	Total	60	27.7	17
Total	Indicated	126	28.8	36
	Inferred	103	29.1	30
	Total	229	28.9	66

- Graphitic shales enriched by contact metamorphism from intrusion of granitic dome
- Mineral Resource is vast; project size will be determined by the market, not the resource
- Geotech and hydro drilling completed 2023

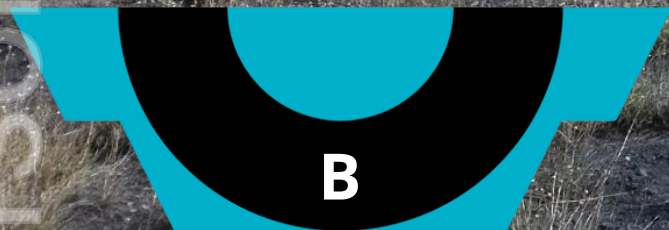
<sup>1</sup>Refer: ASX announcement 27/3/2023




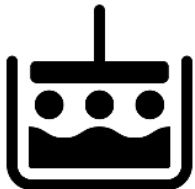



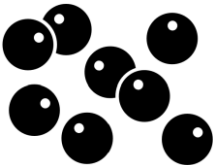

# The Project - Grade is King



Hypothetical	Mine A	Mine B
Grade	10%	30%
Strip Ratio	3:1	1:1
Process, Product	same	same
Mining Costs	\$ 6X	\$ X
Processing Costs	\$ 3Y	\$ Y



This example is hypothetical only and provided to illustrate the effect of grade and strip ratio on mining economics. There are many other factors that influence mining economics. The examples are not intended to represent the SarytoGAN Graphite Deposit or any other graphite deposit.

Mining	Grinding & Flotation	Alkaline Roasting	Purification Options	Spheroidization	Battery Market
 <p>229 Mt @ 28.9% TGC<sup>1</sup></p>	 <p>85.1% TGC<sup>2</sup></p>	 <p>99.70% TGC<sup>3</sup></p>	<p>Acid</p>  <p>99.87% TGC<sup>3</sup></p> <hr/> <p>Thermal</p>  <p>99.99% TGC<sup>4</sup></p>		 <p>99.95% TGC</p>

- Sarytogan has now demonstrated graphite purification to ultra-high purity.
- Ongoing test-work will optimise and simplify the flowsheet.
- To be evaluated in the PFS underway.

# The Project – Global Test Work Excellence



Engineering



Thermal



Chemical  
Physical  
Batteries



Exploration



Thermal



Flotation  
Engineering



Sarytogan is a global business working with experts in every field to scale up metallurgical and battery test-work to deliver a Pre-Feasibility Study in 2024

ersonal use only





## Mining in Kazakhstan

- Similar semi-arid land area to West. Aust.
- Mining code based on West. Aust.
- 40% of global uranium supply<sup>1</sup>
- 12<sup>th</sup> in global mining value<sup>1</sup>
- 13<sup>th</sup> largest oil producer<sup>1</sup>

Corporate income tax: 20%; mineral royalty: 3.5%; other taxes: 1.5%

Geopolitical alternative to China who dominates graphite mining (64%) and anode manufacture (89%)<sup>2</sup>.

Affordable containerized rail to Europe and China.

# Kazakhstan - Regional Infrastructure Advantages



170km by highway to the large industrial city of Karaganda.



6km from bitumen road to project.



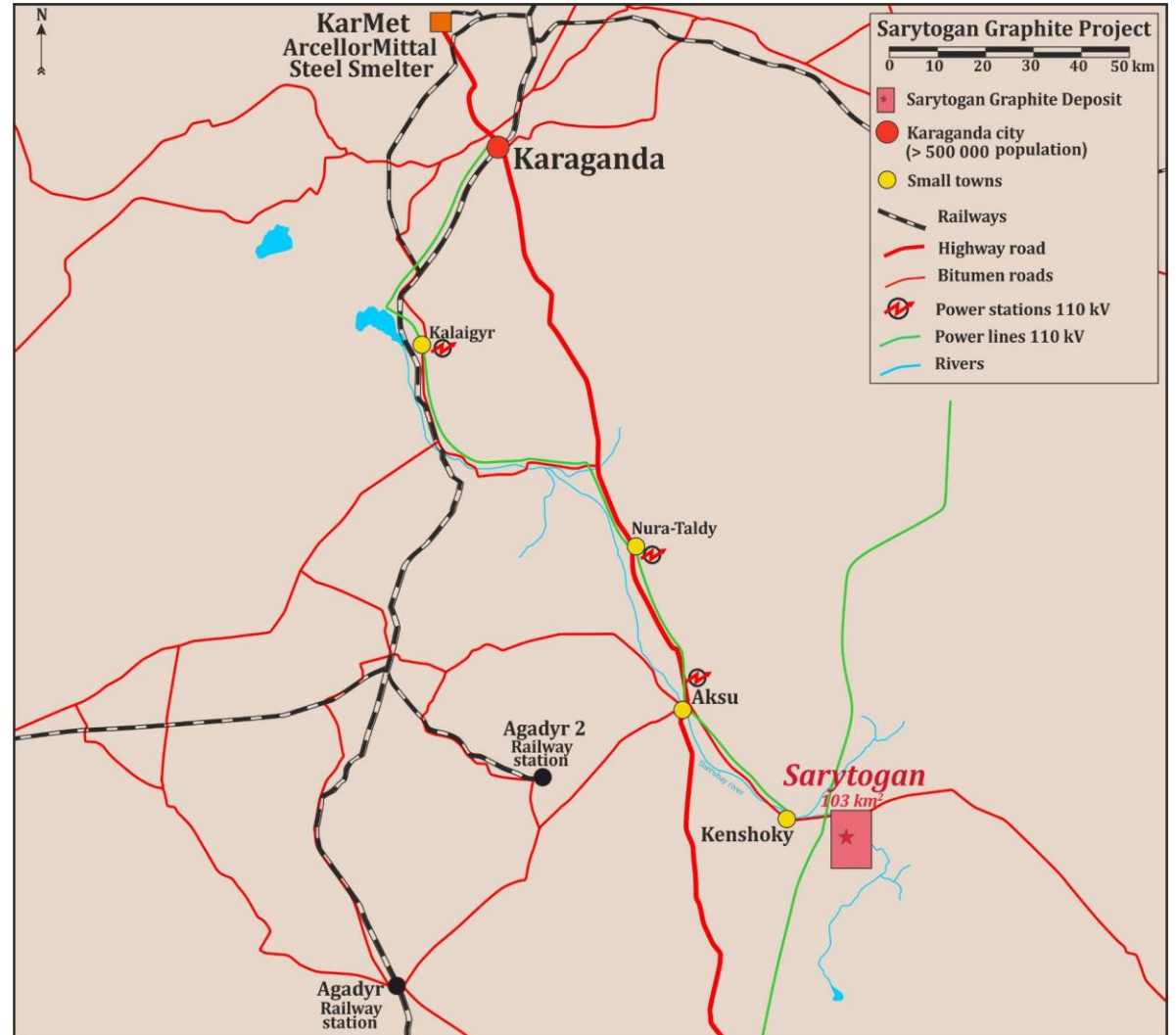
68km from nearest railway station.



Sufficient water supply available.



Skilled local workforce.

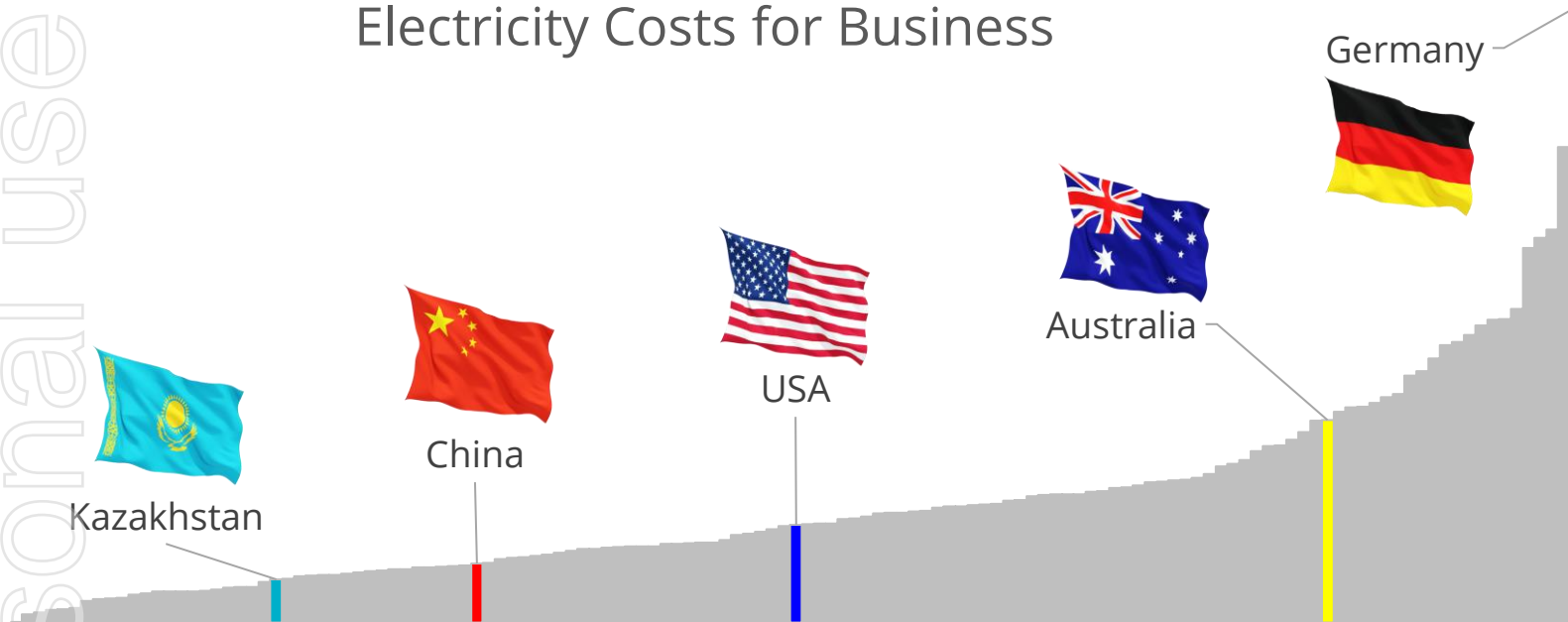




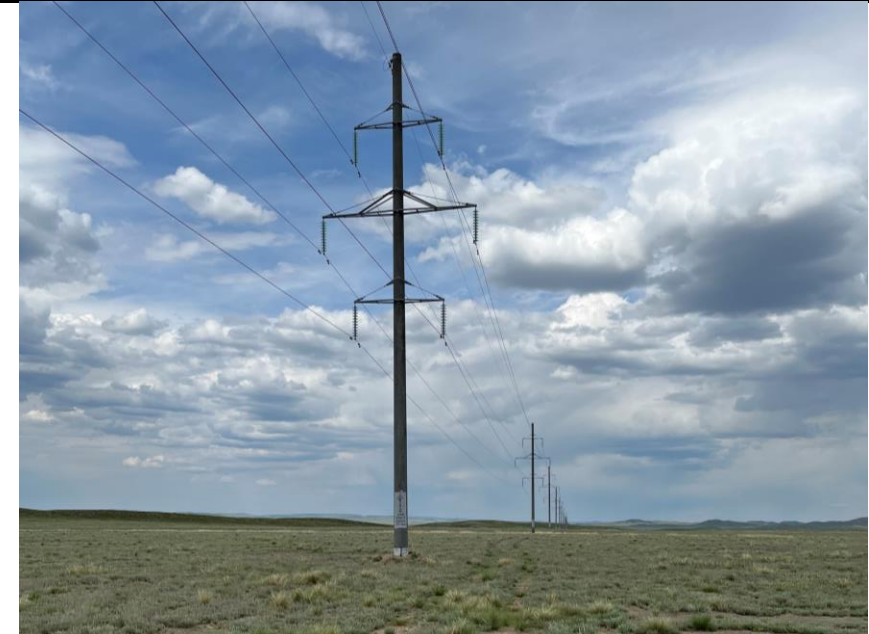
# Kazakhstan - Lowest Quartile Power Costs Including Renewables

- Kazakhstan's power cost is in the lowest quartile globally
- 110 kv powerline 2 km from the project (pictured)
- 35 kv powerline 15 km from the project
- 50 MW Solar farm is 100 km from the project (pictured)

## Electricity Costs for Business



133 countries - December 2022 - data source [www.globalpetrolprices.com](http://www.globalpetrolprices.com) - includes power, distribution and taxes



ersonal use only

# The Market - Graphite is the major raw material in all EV battery types



## THE KEY MINERALS IN AN EV BATTERY

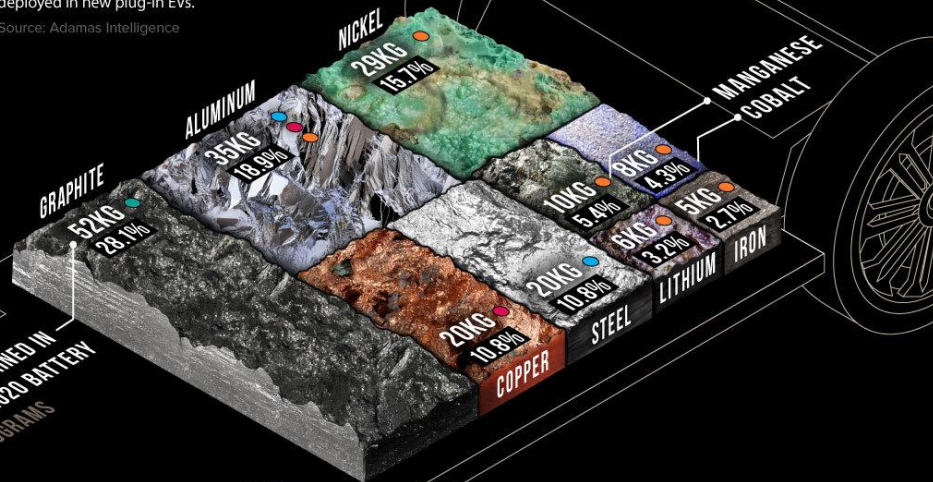
Lithium-ion batteries harness the properties of various minerals to power electric vehicles.

The cells in the average lithium-ion battery with a 60-kilowatt-hour (kWh) capacity contain around 185kg\* of minerals.

CELL PART: ANODE, CATHODE, CURRENT COLLECTORS, CELL CASING

In 2021, nickel-based cathodes powered 80% of the battery capacity deployed in new plug-in EVs.

Source: Adamas Intelligence



AMOUNT CONTAINED IN THE AVG. 2020 BATTERY IN ALL CATEGORIES

\*based on the weighted average of battery compositions on the market in 2020. Does not include materials in the electrolyte, binder, separator, and battery pack casing.

Source: Transport and Environment



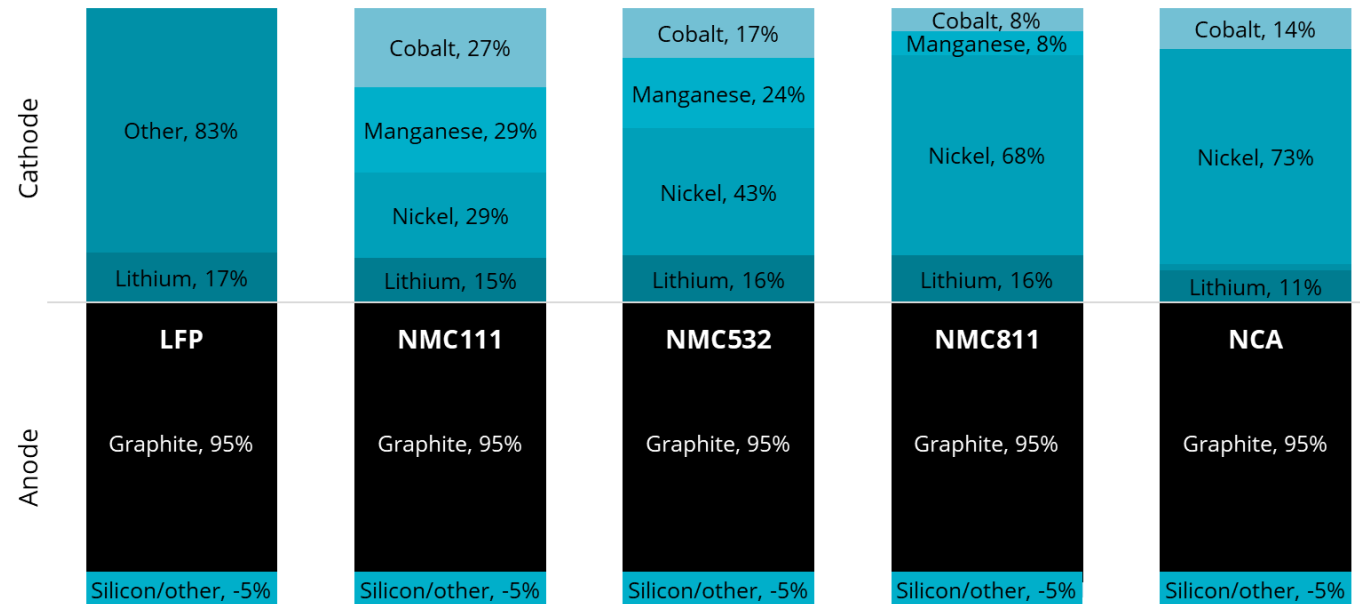
Aluminum and copper foils are typically used as current collectors for the cathode and anode, respectively.



Cobalt is the most expensive battery metal, increasing battery life and energy density.

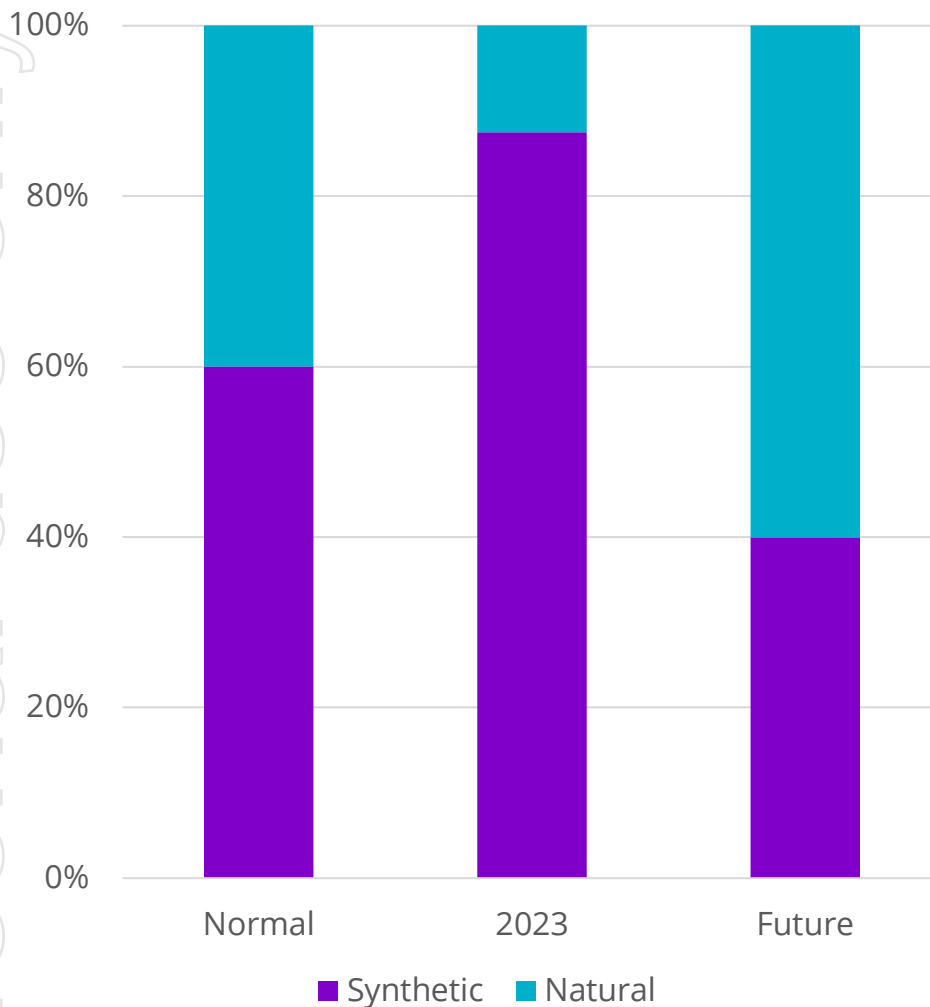
E

- Graphite is the major raw material in EV batteries.
- The EV battery anode is always graphite, regardless of battery chemistry.
- Silicon is limited to 5% as any anode performance gains are not matched on the cathode





## Active Anode Blend



- Natural graphite has been created by geological forces over millennia.
- Synthetic graphite requires expensive and CO<sub>2</sub> intensive treatment of fossil fuel by-products.
- China has rapidly expanded synthetic graphite production in 2023 to meet EV demand.
- Policies will mature and insist on greener, lower-cost and high-quality natural graphite.
- Natural graphite demand will be supercharged as a growing proportion of a growing market.

## HOW MANY MINES DO WE NEED?

As the lithium ion battery revolution gains momentum, **Benchmark** forecasts just how many mines need to be built to keep up with the exceptional volumes of demand for key raw materials expected by 2035.



■ 2022 Supply Vs 2035 Demand ■

Average Mine/Plant Size

No. of Mines/Plants Needed

Natural Graphite

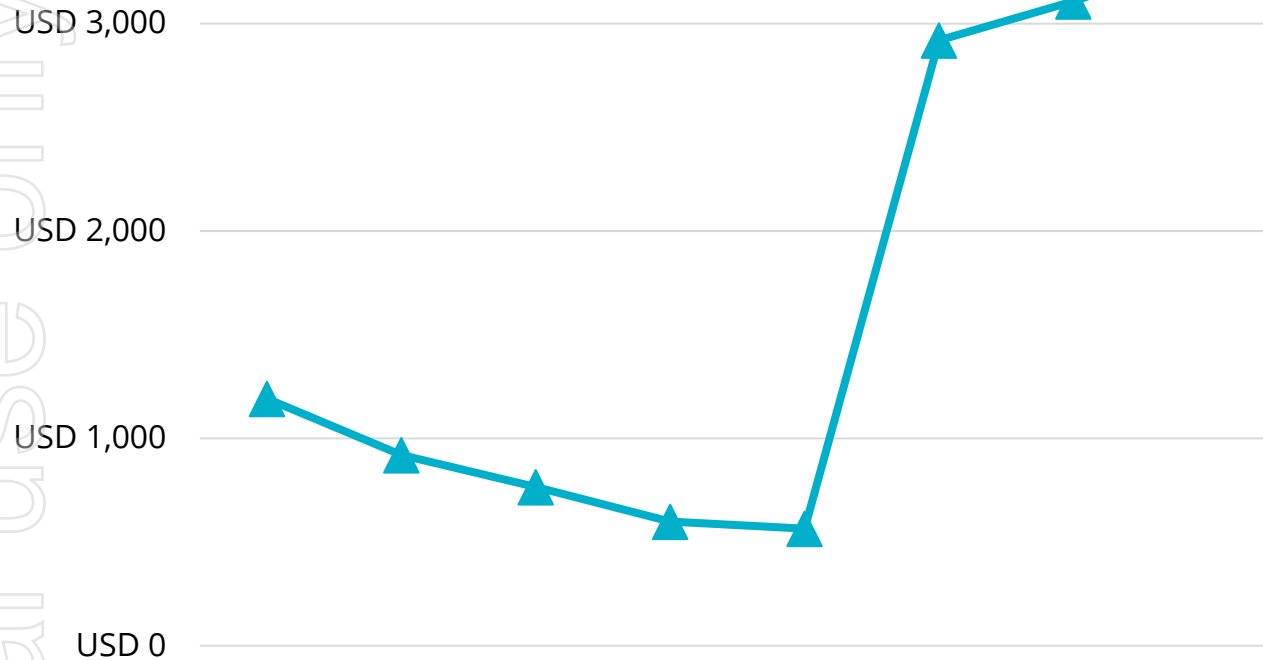


56,000 t

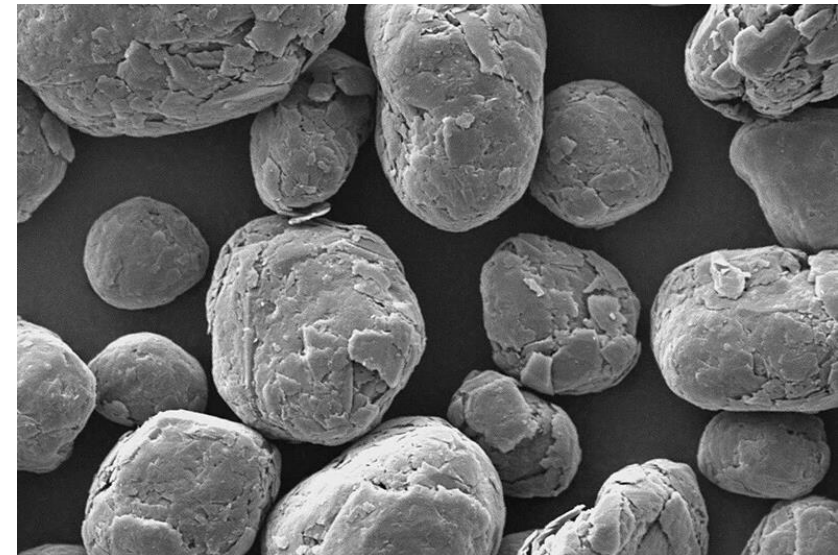




## Graphite Product Prices



- Traditional industrial uses requires coarse flake graphite (e.g. refractory uses, brake linings, lubricants etc)
- Li-ion batteries require ultra-fine high-purity spherical graphite (example below)

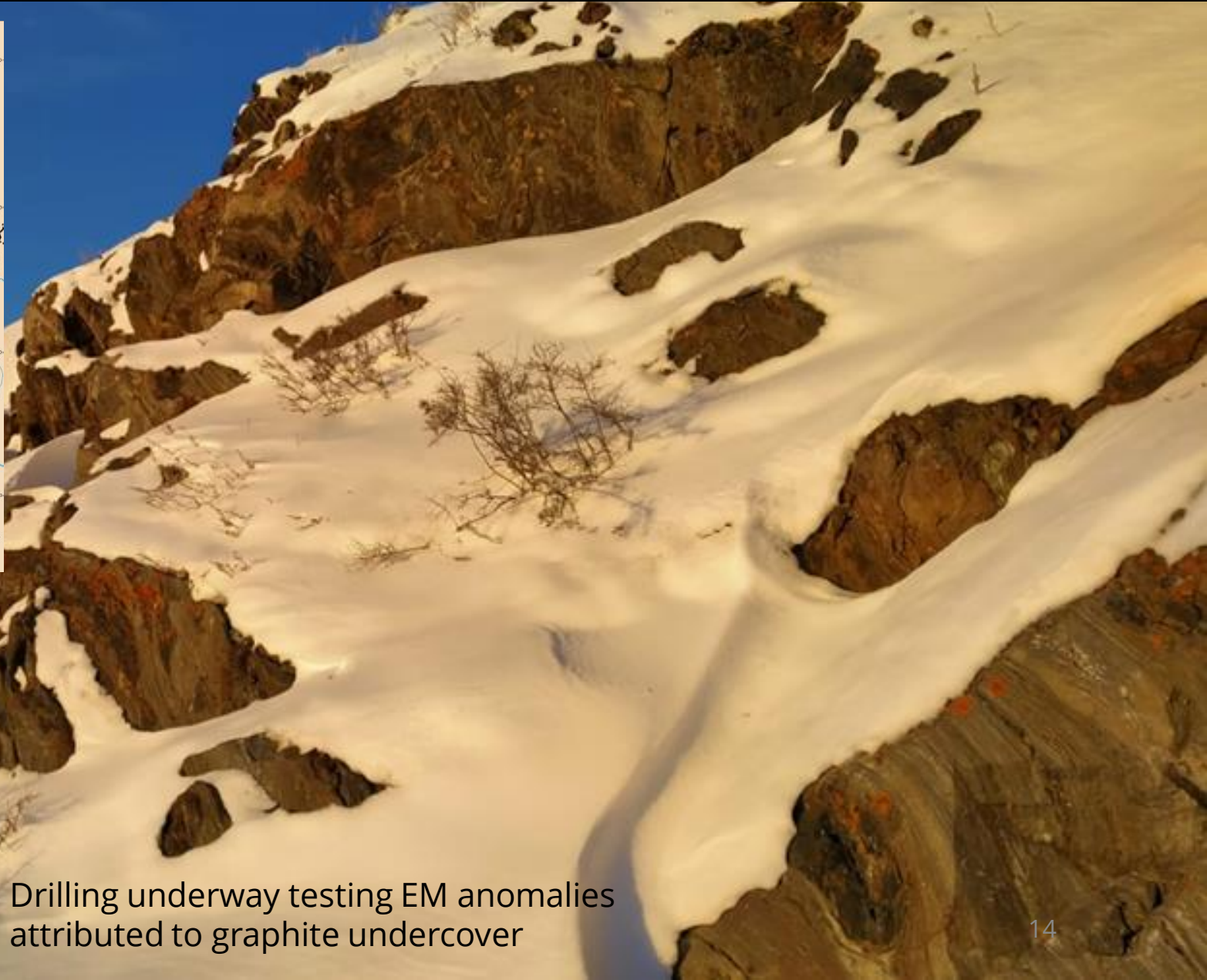


Product	Traditional Uses					Battery Anodes		
	Coarse	Medium	Fine			Uncoated Spherical (USpG)		
Size (µm)	< 180	< 150	< 75	< 75	< 75	20	15	10
TGC (%)	94	94	94	90	80	99.95	99.95	99.95
SGA Grade and Size			✓	✓	✓			✓

Source: 1Prices are FOB China from Benchmark Mineral Intelligence September 2022, supplemented by Fine -75um 80% TGC product from Fastmarkets reported at seekingalpha.com June 2022.

ersonal use only

# Exploration - Kenesar Graphite Project



Drilling underway testing EM anomalies attributed to graphite undercover

ersonal



ersonal use only

Milestone	2022	Mar 23	Jun 23	Sep 23	Dec 23	2024
Drilling – 3,000m HQ DD	✓					
Mineral Resource upgrade		✓				
Land access agreement for mining			✓			
Geotech and hydro drilling				✓		
Bulk flotation concentrate production						
Spheroidization tests						
Battery performance tests						
Pre-feasibility study						
Mining lease application						
Marketing discussions						
Kazakhstan exploration						

## Capital Structure

Shares on Issue (Undiluted)	147.7M
Escrowed Shares (until July 2024)	48%
Director Interests	36%
Options (25c, 49.5c, 60c, expiry '24, '26, '28)	45.2M
Performance Shares and Perf. Rights	23.1M
Market Capitalisation – Undiluted at 18.5c	\$27.3M
Cash – 30 June 2023	\$7.8M
Enterprise Value	\$19.5M



**Stephen Penrose** *Non-Executive Chairman, LLB, J.D.,*

Lawyer and Managing Partner of Tottle Partners, specialising in corporate and commercial litigation.



**Sean Gregory** *Managing Director, B.Sc.(Hons), MBA*

Geologist and Mining Executive with more than 20 years' experience in minerals exploration, development and mining in iron ore, lithium, cobalt, nickel, and gold in Western Australia and abroad.



**Dr. Waldemar Mueller** *Technical Director, PhD, M.AusIMM*

Geologist with more than 40 years' experience in exploration and valuation of mineral resources. He has held leadership positions German, Canadian and Australian companies working on projects in Brazil, Kyrgyzstan, Georgia & Kazakhstan.



**Brendan Borg** *Non-Executive Director, B.Sc., MSc, M.AusIMM*

Geologist, Hydrogeologist and Environmental Scientist specialising in the battery materials sector with more than 20 years' experience in exploration development and mining.



**Ian Hobson** *Company Secretary, B.Bus, FCA, Grad. Dip. (Cor. Gov.)*

Fellow Chartered Accountant and Chartered Secretary with more than 30 years' experience in the areas of corporate finance, governance, corporate accounting, company secretarial and restructuring advice.





ersonal use only



**SARYTOGAN**  
GRAPHITE

## CONTACT

**Sean Gregory**

**Managing Director**

E: [admin@sarytogangraphite.com.au](mailto:admin@sarytogangraphite.com.au)

W: [www.sarytogangraphite.com.au](http://www.sarytogangraphite.com.au)

+61 08 9388 8290





## Important Disclaimer

You must read this notice before reading or making any use of this Presentation (defined below) or any information contained in this Presentation. By continuing to read, use or otherwise act on this Presentation, you agree to be bound by the following terms and conditions, including (without limitation) any modifications to them.

This Presentation has been prepared by Sarytogan Graphite Limited (ACN 107 920 945) ("Sarytogan Graphite"). It is being supplied to you on a strictly confidential basis for the proposed initial public offering and Australian Securities Exchange listing of Sarytogan Graphite (or an associated entity). Neither this Presentation nor any copies of this Presentation may be circulated or disclosed (electronically or otherwise) to any persons who do not receive this Presentation directly from Sarytogan Graphite or its legal advisers. If you do not agree to be so bound, you should immediately return this Presentation to Sarytogan Graphite and destroy or delete any copies of it, without retaining any copies.

The information provided by Sarytogan Graphite management contained in and accompanying this presentation ("Presentation") has been prepared solely for information purposes only, and on the express understanding that it will only be given and used for the purpose of providing a summary overview of, and background information about, Sarytogan Graphite and its business ("Purpose") and may be superseded by any subsequent disclosure to the due diligence committee or in the prospectus lodged by Sarytogan Graphite with the Australian Securities and Investments Commission. This Presentation is not a prospectus, disclosure document or offer document under the Corporations Act 2001 (Cth) ("Corporations Act") or any other law. This Presentation does not constitute, and is not to be construed as, an offer to issue or sell, or a solicitation of an offer or invitation to subscribe for, buy or sell securities in Sarytogan Graphite. The information in this Presentation is general in nature and does not purport to be all inclusive or to contain all information that may be required to evaluate all of the factors that would be relevant to the recipient in considering the Purpose, or otherwise relating to Sarytogan Graphite. The information in this Presentation (including any statement of fact or opinion) is subject to change without notice and has not been independently verified by Sarytogan Graphite or any third parties (unless otherwise expressly specified).

This Presentation has been prepared as of October 2022. Sarytogan Graphite reserves the right in its absolute discretion to alter this presentation but does not undertake to update this Presentation (except to the extent required by law). To the maximum extent permitted by law, each of Sarytogan Graphite and its subsidiaries and controlled affiliates (together, the "Company") and each of their respective directors, officers and employees (together, the "Representatives") expressly exclude and disclaim any obligations or undertaking to release any updates, supplements, corrections or revisions to the information in this Presentation to reflect any matter arising or coming to their notice after the date of this Presentation which may affect any matter referred to in this Presentation.

## No Recommendation or Advice

This Presentation is not and should not be construed as a recommendation by Sarytogan Graphite or its Representatives to you to participate in any transaction. Neither Sarytogan Graphite nor its Representatives makes a representation that it has verified the information in this Presentation.

The information in this Presentation is of a general nature and does not constitute financial product advice, investment advice or any recommendation to acquire securities nor is it intended to form the basis of any investment decision. Nothing in this Presentation constitutes legal, financial, tax or other advice and should not be relied on by the recipient in considering the merits of any particular transaction. It has been prepared without considering the objectives, financial situation, tax situation or needs of individuals. Recipients should consider the appropriateness of the information having regard to their own objectives, financial situation, tax situation and needs and seek legal and taxation advice appropriate for their jurisdiction.

Neither this Presentation nor anything contained in it forms the basis of any contract or commitment and it is not intended to induce any person to engage in, or refrain from engaging in, any transaction.

## Third Party Information

Certain information in this Presentation has been derived from third parties or publicly available information and the accuracy of that information has not been independently audited or verified by Sarytogan Graphite or its Representatives. Accordingly, the accuracy and completeness of that information (and any other information in the Presentation) is not guaranteed. The Presentation Information may contain forward-looking statements with respect to the Sarytogan Graphite's businesses and operations, market conditions, results of operations and financial condition, funding requirements and risk management practices. Any forward-looking statements included in this Presentation involve subjective judgment and analysis and are subject to uncertainties, risks and contingencies, many of which are outside the control of, and may be unknown to, Sarytogan Graphite or its shareholders or any other person. In particular, they speak only as of the date of this Presentation, they assume the success of Sarytogan Graphite's strategies, and they are subject to significant regulatory, business, competitive and economic uncertainties and risks. Actual future events may vary materially from the forward-looking statements and the assumptions on which the forward-looking statements are based. Recipients of this Presentation ("Recipients") are cautioned to not place undue reliance on such forward-looking statements. Sarytogan Graphite makes no representation or warranty as to the accuracy, reliability or completeness of information in this Presentation and does not take responsibility for updating any information or correcting any error or omission which may become apparent after this Presentation has been issued. To the extent permitted by law, Sarytogan Graphite and its officers, employees, related bodies corporate and agents ("Agents") disclaim all liability, direct, indirect or consequential (and whether or not arising out of the negligence, default or lack of care of Sarytogan Graphite and/or any of its Agents) for any loss or damage suffered by a Recipient or other persons arising out of, or in connection with, any use or reliance on this presentation or information.

## Financial Information and Modelling

All amounts in Australian dollars unless stated otherwise. The financial information (and associated financial analysis) contained in or referred to in this Presentation is current as of the date of this Presentation but is in summary form and indicative only. It differs from statutory financial information and does not purport to be the level or type of information that would be required for financial reporting purposes or for any transaction. No representation or warranty (express or implied) is made as to the reasonableness of the assumptions made within, or the accuracy or completeness of, any such financial information, or associated modelling or financial analysis. Any future investor presentation, disclosure document or other material may include more comprehensive financial information (including a comparison between statutory and pro forma financial information).

## Compliance Statement

The information in this report that relates to JORC estimates of Mineral Resources was first published on the ASX on 27/3/23. The information relating to Exploration Results was first reported in ASX Announcements as cross referenced on the relevant slides. These reports are available at [www.asx.com.au](http://www.asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in relevant market announcements 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. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.