

7 April 2025

## PILOT MILLING REVEALS ORE MUCH SOFTER THAN PFS ASSUMPTIONS

Sarytogan Graphite Limited (ASX: SGA, "the Company" or "Sarytogan") is pleased to provide an update on pilot milling tests at the Sarytogan Graphite Project in Kazakhstan.

### Highlights

- 24 tonne sample at 33% TGC collected from the trial mine last year.
- 10 tonnes milled at pilot scale at Kazakhstan laboratory.
- Sarytogan graphite shown to be very soft and much softer than the PFS assumptions.
- Benefits to be quantified in the DFS should include a 65% reduction in installed mill power and a 36% reduction in power for comminution as well as many other operational benefits.
- 700kg is now to be airfreighted to Australia for pilot flotation and regrinding tests.
- This will generate product samples for potential future customers.



Figure 1 – Pilot Milling at Kazakhstan laboratory

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Sarytogan Managing Director, Sean Gregory commented:

*"This pilot scale milling test has demonstrated the low milling costs of our very soft Sarytogan Graphite Ore. It highlights one of the main strategic advantages of Sarytogan; being able to go straight to fine microcrystalline graphite without expensive regrinding. Furthermore, the proper conservatism of the PFS is evident, with these measurements expected to support cost reductions to be incorporated into the DFS."*

## Trial Mine

A 24 tonne trial mining exercise was completed at Sarytogan during in September 2024 (Figure 2). The sample was free-dug with a back-hoe excavator from the Central Graphite Zone (CGZ) where Ore is exposed at surface and mining is scheduled to commence at very low strip ratios. The top 3m of the soil profile was temporarily cast aside and lumpy high-grade graphite was bagged for dispatch, before the pits were rehabilitated.



Figure 2 - Samples from trial mining being loaded for trucking to Karaganda

Each 1 tonne bulk bag of Ore was grab sampled and assayed. Individual assays ranged from 27% to 41% Total Graphitic Carbon (TGC), averaging 33% TGC, consistent with the early years of the mine schedule. 8 tonnes were set aside as reserve and 16 tonnes were blended to provide feed for pilot scale milling tests.

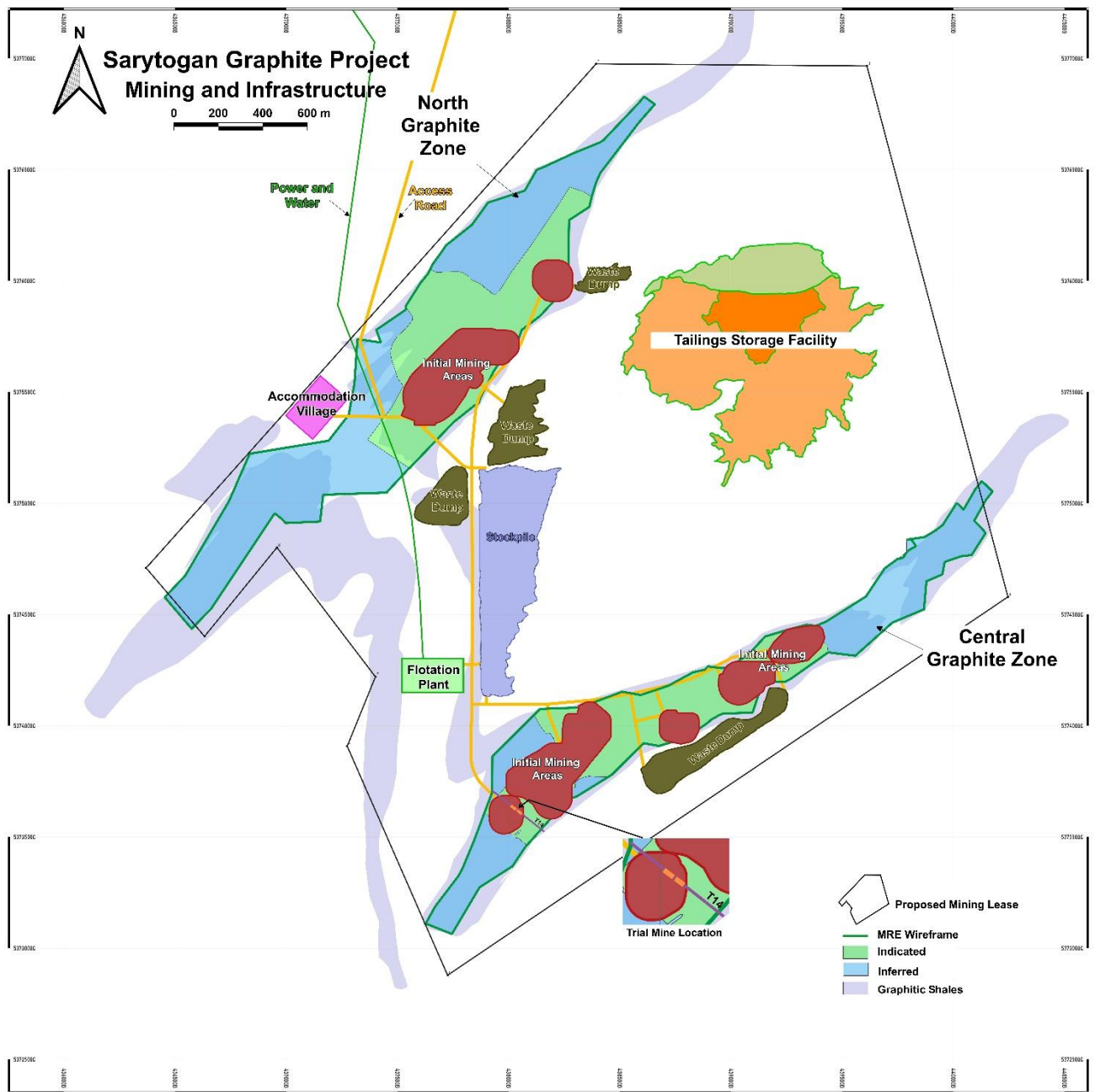


Figure 3 - Trial mine location over geology and Mineral Resources.

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Central Graphite Zone  
 Line C-20

Cross-Section Through DDHs St72-C1-St73-C2, Trench 14

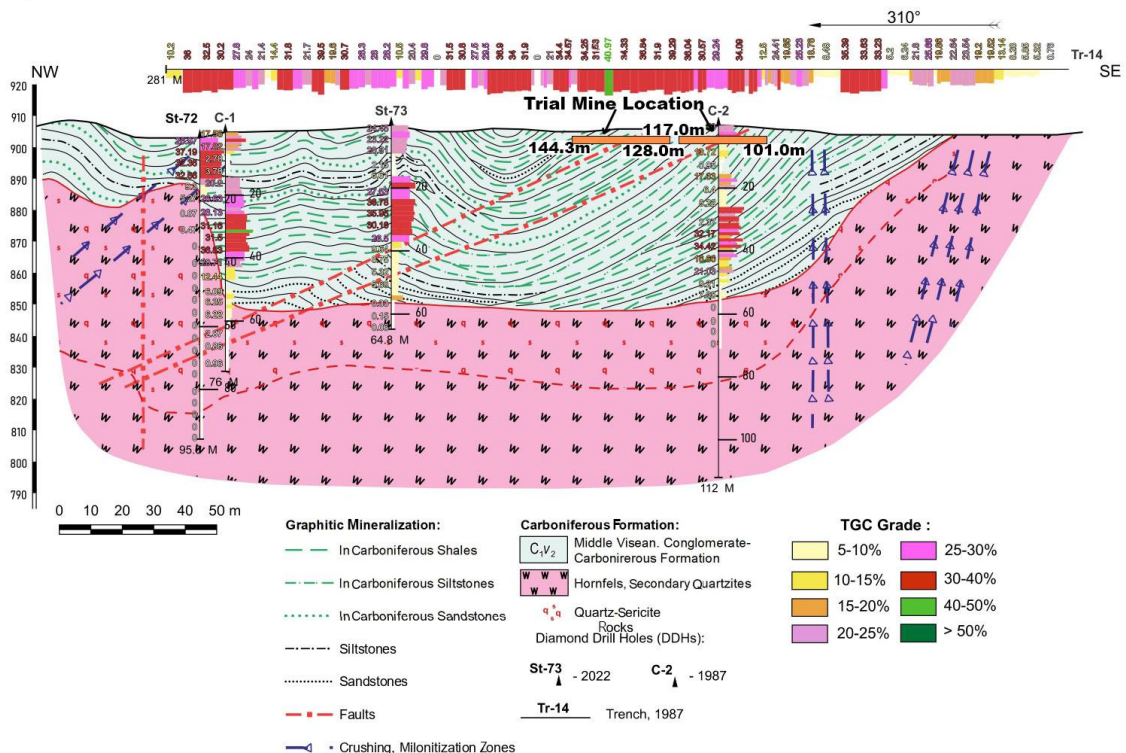


Figure 4 - Geological cross section at trial mine location

## Pilot Milling Tests

Testing was carried out at the KazHydroMed LLP laboratory in the city of Karaganda, which is the capital of the Karaganda region where the Sarytogan deposit is located. The laboratory is well equipped with bench and pilot scale test equipment and is operated by a team with excellent mineral processing capability. The tests were supervised from Australia by comminution expert Dean David (FAusIMM CP Metallurgy).

The 16 tonne ore sample was crushed to -5 mm and homogenised. Grinding tests were performed in a 780 x 950 mm (internal dimensions) ball mill which was operated in closed circuit with a hydrocyclone. Steady state power measurements were made of the operating empty mill (no-load power) and during each milling trial. Products from each milling trial were collected and measured for size distribution.

An initial testing program was carried out at 300, 500, 700 and 800 kg/h of feed. Plotting these results allowed a pilot mill feed rate of 317kg/h to be chosen as optimal to achieve the target sizing of 95% finer than 106µm (Figure 5).

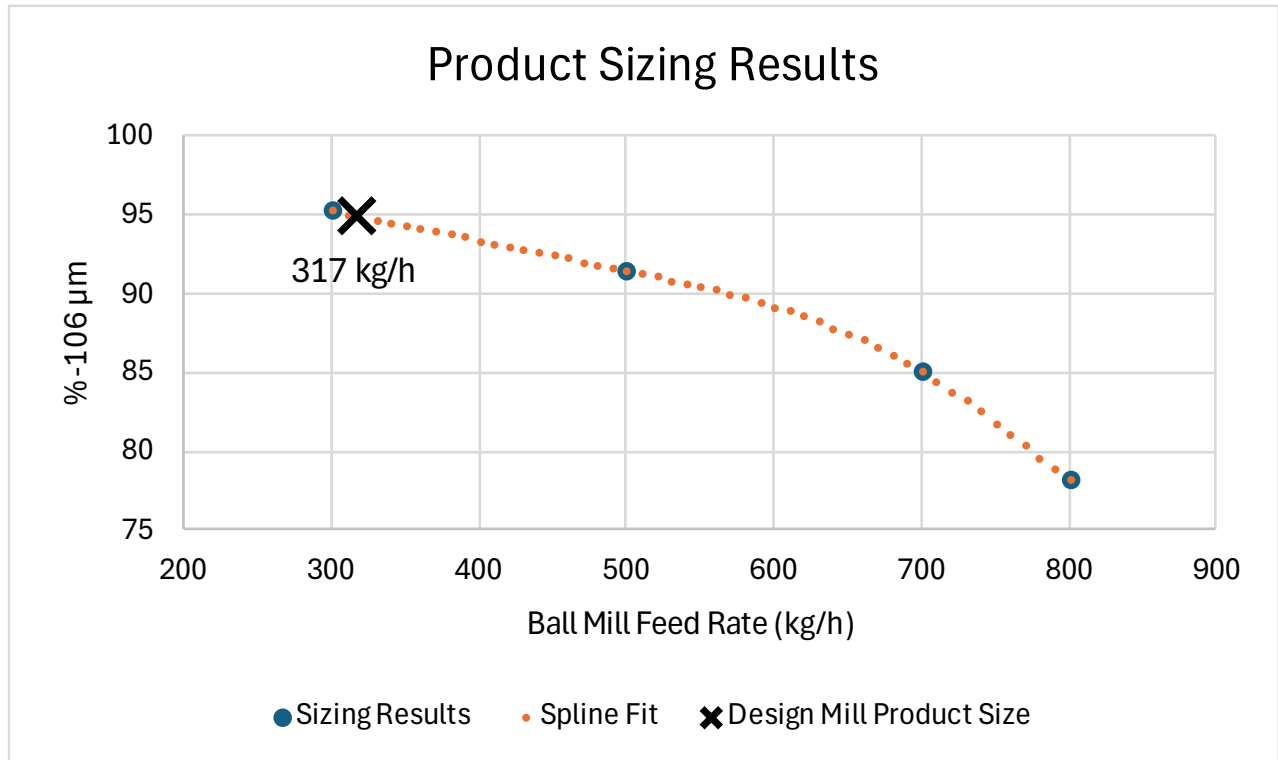


Figure 5 - Product sizing results from milling tests at different rates vs the target P95 of 106μm.

The pilot mill was then run at the selected rate of 317 kg/h and, again, measurements of power and product size were made. The results from this trial were taken as definitive for the test sample and used to calculate the Operating Work Index (OWI) of the ore. For Sarytogan Ore, the OWI achieved in this pilot mill setup is a much more reliable measure of comparative ore hardness (grindability) than can be achieved by the generally accepted practice of conducting Bond Ball Mill Work Index (BBWi) testing. The unreliability of the standard test is due to dry milling behaviour of graphite, where it thickly coats the surface of the grinding media, and the use of screening during the test. Pilot testing is performed using wet milling in combination with a hydrocyclone to classify the product, rather than a screen. Hydrocyclone classification is proposed for the PFS design.

The OWI value calculated for the ore, grinding to 95% -106 μm (and a P<sub>80</sub> of 52 μm), was 6.05 kWh/t. This result confirms that the ore is very soft and is much softer than all previous assumptions.

In the Prefeasibility Study (PFS) the installed power of the ball mill in the capital expenditure estimate is 500 kW and, in a separate calculation related to a lower selected grinding work index, the required pinion power (or net power) is 233 kW. This 317 kg/h test result suggests that a much smaller ball mill should be selected with an installed motor power of about 175 kW and a net power of 150 kW. These are reductions of 65% and 36% respectively compared to the PFS.

The soft nature of the ore also lends itself to reconsideration of the selected crushers. The ore does not require the jaw and cone crushers that have been selected for the PFS and these can be replaced with appropriate light duty units, such as toothed roll crushers.

In addition to these quantifiable benefits, there are other significant qualitative benefits, including reduced maintenance, lower risk associated with achieving the planned grinding circuit utilisation, and feed preparation that is performed using optimal equipment which will enhance downstream performance.

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## Next Steps

Approximately 700 kg of the milled ore will now be shipped to Australia for generation of additional bulk flotation concentrate, much like the 60kg previously treated to produce 20kg (refer ASX announcement 13 November 2023), except at a larger scale.

After flotation testwork is complete, final concentrate samples will be available in the first instance for vendor test-work with machines designed for thermal purification, size classification, and spheronisation.

Secondly and most importantly, the samples will be available for customer qualification.

**This announcement is authorised by:**

**Sean Gregory**

**Managing Director**

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## About Sarytogan

The Sarytogan Graphite Deposit is in the Karaganda region of Central Kazakhstan. It is 190km by highway from the industrial city of Karaganda, the 4th largest city in Kazakhstan (Figure 6).



Figure 6 - Sarytogan Graphite Deposit location.

The Sarytogan Graphite Deposit was first explored in the 1980s with sampling by trenching and diamond drilling. Sarytogan's 100% owned subsidiary Ushtogan LLP resumed exploration in 2018. An Indicated and Inferred Mineral Resource has recently been estimated for the project by AMC Consultants totalling **229Mt @ 28.9% TGC** (Table 1), refer ASX Announcement 27 March 2023.

Table 1 - Sarytogan Graphite Deposit Mineral Resource (> 15% TGC).

Zone	Classification (JORC Code)	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

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Sarytogan has produced bulk flotation concentrates at higher than **80% C** and further upgraded the concentrate up to **99.9992% C** "five nines purity" by thermal purification, without any chemical pre-treatment (refer ASX Announcement 5 March 2024). Sarytogan envisages three product types:

- Microcrystalline graphite at 80-85% C ("Micro80C") for traditional uses,
- Ultra-High Purity Fines (UHPF) for advanced industrial use including batteries, and
- Spherical Purified Graphite (USPG and CSPG) for use in lithium-ion batteries.

A Pre-Feasibility Study (PFS) was completed in August 2024 that outlined a staged development plan to match market penetration, minimise initial capital expenditure and deliver attractive financial returns.

An Ore Reserve of **8.6 Mt @ 30.0% TGC** (Table 2) was estimated using the Guidelines of the 2012 Edition JORC Code (refer ASX announcement 12 August 2024).

Table 2 - August 2024 Sarytogan Probable Ore Reserve estimate

Ore mass	TGC	Concentrate mass	Concentrate grade	TGC in conc. Mass
kt	%	kt	%	kt
8,587	30.0	2,654	81.4	2,160

Notes:

- Tonnes and grades are as processed and are dry.
- The block mass pull varies as it is dependent on the TGC grade, concentrate grade (fixed) and process recovery (fixed) resulting in a variable cut-off grade, block by block. The cut-off is approximately 20% TGC with minimal mass below 20% TGC contributing.

Sarytogan is also progressing copper porphyry exploration at its Baynazar and Kopa projects across the highly prospective Central Asian Orogenic Belt.

## Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Dr Waldemar Mueller, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Mueller is a full-time employee of the Company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Mueller consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## Compliance Statements

The information in this report that relates to Sarytogan Mineral Resources was first reported in ASX announcement dated 27 March 2023. The information in this report that relates to Sarytogan Ore Reserves was first reported in ASX announcement dated 12 August 2024.

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 and Ore Reserves, 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.

Note that the potential cost savings identified in this announcement, while significant, are considered immaterial in the context of the overall project financials reported in the PFS. A Definitive Feasibility Study (DFS) will quantify the economic effect of a range of improved assumptions including the ones identified in this announcement.

The Company confirms that all the material assumptions underpinning the production target, or the forecast financial information derived from the production target, in the initial public report (12 August 2024) continue to apply and have not materially changed.

## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<p><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></p> <p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i></p>	<p>An excavator was used to dig a trench in the centre of the main pit at the Central Graphite Zone (CGZ) where outcropping mineralisation of suitable grade was known from previous drilling, trenching and the Mineral Resource model.</p> <p>The top 3m of weathered Ore was set aside and the sample was taken of competent Ore from 3 to 3.5m below surface.</p> <p>The sample was loaded into 25 bulk bags, totalling 24 tonnes when weighed at the laboratory.</p>
Drilling techniques	<p><i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</i></p>	Not applicable.
Drill sample recovery	<p><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></p> <p><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></p> <p><i>Whether a relationship exists between sample recovery and grade and whether</i></p>	The excavation recovery is considered to be 100%.

Criteria	JORC Code explanation	Commentary
	<p>sample bias may have occurred due to preferential loss/gain of fine/coarse material.</p>	
Logging	<p>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</p> <p>The total length and percentage of the relevant intersections logged.</p>	<p>Company geologists supervised the excavation and logged the trench.</p>
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</p> <p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</p> <p>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled.</p>	<p>Bulk bags were filled with graphite Ore. Individual bulk bags were grab sampled to confirm the identification of Ore. Each 1kg sample was crushed, split and milled at Sarytogan's in house sample preparation facility before the pulps were sent to the analytical laboratory.</p>
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</p> <p>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</p>	<p>All samples are dried, weighed, crushed and milled in accordance with the sample preparation scheme. Sample preparation control is carried out using blank samples, taking duplicates from crushing rejects. The quality control of the sample pulverisation is performed using the "dry" screening method through a sieve with a mesh size of 0.075 mm. Passing of the milled material is more than 95%. After preparing each sample, all tools and tables are thoroughly cleaned with compressed air. As soon as a batch of samples is prepared, glass is passed through the crushers. The pulverisers are cleaned with quartz sand. Quality of sample preparation is good.</p> <p>Analytical studies are carried out in the chemical-analytical laboratory of LLC Stewart Assay and Environmental Laboratories, located in Karabalta, Kyrgyzstan (Certificate No. RU 181163 of 10/21/2001 and Certificate No. RU 227186 of 08/25/2008). The main type of analytical method is to determine the content of graphite carbon. All samples are subjected</p>

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Criteria	JORC Code explanation	Commentary
		<p>to technical tests for the analysis of graphite carbon.</p> <p>Analysis of graphite carbon (SE / C11 analysis code) is performed on a Leco analyser after pre- treatment. The method of determination was developed by the laboratory in advance and provides reliable values for total graphitic carbon (TGC).</p> <p>Quality control (QC) samples were submitted with each assay batch (certified reference standards, certified reference standard blanks and duplicate samples). The laboratory inserted their own quality assurance/quality control (QAQC) samples as part of their internal QAQC. All assay results returned were of acceptable quality based on assessment of the QAQC assays.</p>
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes.</p> <p>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</p> <p>Discuss any adjustment to assay data.</p>	<p>Visual validation of mineralisation against assay results was undertaken.</p> <p>The assays agree with nearby exploration trenches, drill holes, and the Mineral Resource model.</p>
Location of data points	<p>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>The location of the trial mine was recorded by hand held GPS (+/- 5m).</p> <p>The trial mine paralleled historical trench Tr-14 at two intervals:</p> <ul style="list-style-type: none"> <li>• 101-117m, Start 438081mE 5373589 mN, End 438069mE 5373599 mN, and</li> <li>• 128-144.3m, Start 438061mE 5373604 mN, End 438048 mE 5373616 mN</li> </ul> <p>The grid system used at the deposit is the WGS84 UTM Zone 43 coordinate system, Baltic elevation system.</p>
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <p>Whether sample compositing has been applied.</p>	<p>The trial mine location was selected from an area of the CGZ where graphite outcrops at a grade representative of the early years of the mine plan.</p>
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>If the relationship between the drilling</p>	<p>The spatial position of the graphite zones is confined structurally to the western and southwestern limbs of the Shiyozek fold, complicated by the large curved Sarytoganbai syncline which trends in</p>

Criteria	JORC Code explanation	Commentary
	<i>orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i>	northeast and east directions.  The trench was oriented at 310 degrees to crosscut the geological strike.
Sample security	<i>The measures taken to ensure sample security.</i>	Control over the security of samples is carried out throughout the entire process. Each sample is assigned a unique number. The core samples selected after logging are transferred (with the corresponding orders and sample registers) to the Company's sample preparation facilities. In the sample preparation laboratory, each sample underwent the entire processing cycle in compliance with all necessary requirements for the preservation of samples and the prevention of their contamination.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits specific to the trial mine have been completed.

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i>  <i>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</i>	The exploration licence 1139-R-TPI (1139-P-TPI) was issued to Ushtogan LLP on 14/08/2018 and confirmed by 5406-TPI (5406-TPI) contract on 26/10/2018. The contract was extended in June 2022 for a further 3 year to June 2025. The exploration concession covers 70 km <sup>2</sup> .  The Sarytogan Graphite Deposit mining licence (155-NML) was issued to Ushtogan LLP on 26/12/2024. The mining licence covers 8.88 km <sup>2</sup> . The mining licence is valid for a term of 25 years, with right to extend for a further 20 years and then until the Mineral Resource is fully depleted.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	In the period from 1985 to 1987, geological exploration was carried out by the Graphite party of the Karaganda State Regional geological expedition.  Since 2019, exploration drilling is being carried out by Ushtogan LLP a 100% owned subsidiary of Sarytogan Graphite Limited.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	Structurally, the Sarytogan site is confined to the western and southwestern wing of the Shiyozek fold, complicated by a large curved Sarytoganbai syncline which trends in northeast and east directions.  In general, the Sarytogan site is a large, over-intrusive zone; the volcanic and sedimentary rocks developed here have undergone extensive contact metamorphism; volcanogenic and

Criteria	JORC Code explanation	Commentary
		<p>terrigenous rocks are transformed into quartz-biotite, quartz-sericite hornfels; carbonaceous rocks are either altered into hornfels, or underwent significant graphitisation, and along contacts with intrusive granite domes, quartz- tourmaline and tourmaline hydrothermal rocks of the greisen type are developed.</p> <p>The deposit belongs to the black shale regional-metamorphic type and represents a carbon-bearing conglomerate sequence with a greisen zone with a thickness of more than 80 m in the over-intrusive zone of the granite massif that compose the Sarytoganbai syncline. Host rocks include graphite siltstone and graphite shale.</p>
Drill hole Information	<p>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</p> <ul style="list-style-type: none"> <li>o easting and northing of the drill hole collar</li> <li>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>o dip and azimuth of the hole</li> <li>o down hole length and interception depth</li> <li>o hole length.</li> </ul> <p>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</p>	Not applicable
Data aggregation methods	<p>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <p>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</p> <p>The assumptions used for any reporting of metal equivalent values should be clearly stated.</p>	A weighted average of the individual bulk bag assays was calculated.
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	Not applicable.

Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	<p>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</p> <p>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</p>	
Diagrams	<p>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</p>	Refer to maps and sections in text.
Balanced reporting	<p>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</p>	Only one trial mine was excavated.
Other substantive exploration data	<p>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</p>	<p>Refer to the Mineral Resource report for exploration data summary (ASX Announcement 27 March 2023).</p> <p>Refer to the description in the text "Pilot Milling" for a description of the metallurgical tests.</p>
Further work	<p>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</p> <p>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</p>	Reserve definition drilling is planned within the initial mining areas selected by the Pre-Feasibility Study.

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