

20 May 2024

LI-ION BATTERY ENDURANCE

Sarytogan Graphite Limited (ASX: SGA, "the Company" or "Sarytogan") is pleased to report exceptional endurance in long-cycle performance of the first lithium-ion batteries made with Sarytogan Graphite.

Highlights

- Coin-cell batteries manufactured from Sarytogan Uncoated Spherical Purified Graphite (USPG) have now charged and discharged more than 140 times.
- 97.3% capacity has been retained after the benchmark 100 charges.
- Extrapolating performance to date suggests up to 1,000 charges to be possible until the typical useful threshold of 80% capacity.
- Li-ion batteries have also been made from Coated Spherical Purified Graphite (CSPG) and initial cycle testing will be reported shortly.

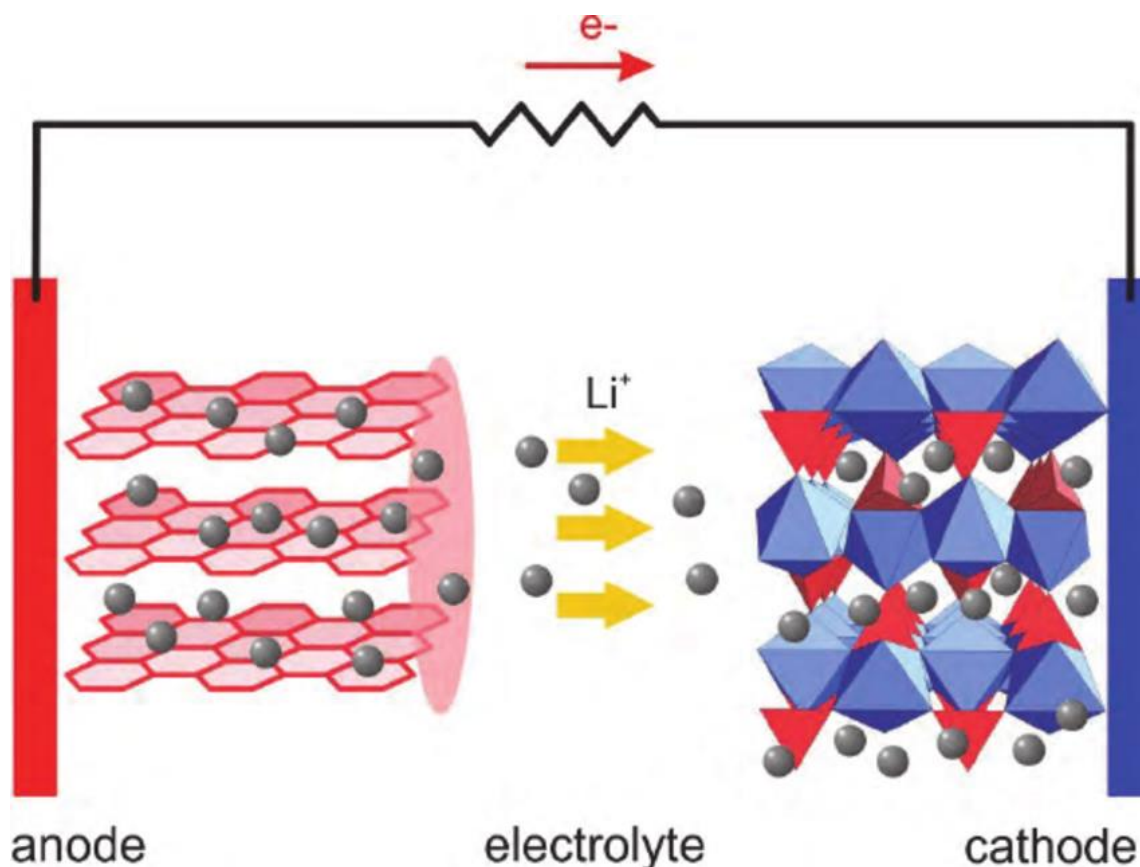


Figure 1 – Highly crystalline graphite anodes facilitate Inter-calation of Lithium Ions for battery performance.

Sarytogan Managing Director, Sean Gregory commented:

"We are delighted with the endurance demonstrated by Sarytogan Graphite in lithium-ion batteries. This high performance is only possible with highly crystalline graphite, validating Sarytogan Graphite's premium micro-crystalline nature. These results are all significant inputs into the Pre-Feasibility Study which is progressing well and is on track for completion in Q3 this year."

USPG Battery Performance

This announcement relates to lithium-ion coin cell batteries manufactured from Sarytogan USPG by our American technology partner. The performance of these batteries after nine cycles was previously reported as superior to many synthetic graphite products used as the anode in lithium-ion batteries for electric vehicles (refer ASX Announcement 8th February 2024).

Those coin cell batteries have continued to charge and discharge over a 10-hour cycle more than 140 times. 97.3% of the charge capacity has been retained after 100 cycles which is the industry standard observation point (Figure 2). By extrapolating the performance to date, up to 1,000 charge-discharge cycles may be expected before the typical 80% performance threshold is reached.

This performance is further remarkable, as coated graphite is usually required to attain this performance.

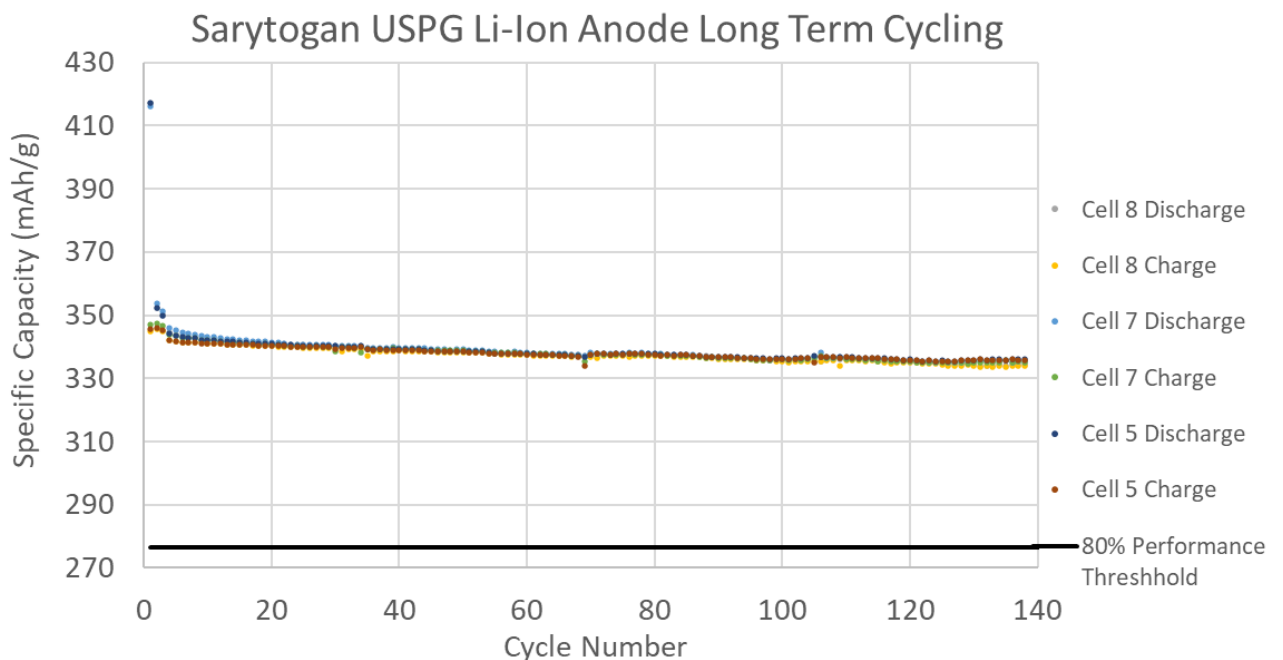


Figure 2 – Sarytogan USPG Li-Ion Anode Long Term Cycling.

Premium Micro-Crystalline Graphite

This high performance in electrochemical applications is only possible with highly crystalline graphite (Figure 1). Individual graphene layers are a very strong hexagonal lattice molecule of carbon atoms. These layers are held together by weaker Van-der Waals forces. High degrees of this crystallinity facilitate the intercalation of lithium-ions between graphite layers in batteries.

This result provides further validation that Sarytogan Graphite is best described as “premium micro-crystalline graphite”, and that classifications such as amorphous, flake and vein and even natural vs synthetic are over simplistic. Sarytogan Graphite is again demonstrating many of the best characteristics of each graphite type.

Next Steps

The Sarytogan USPG has now been coated to make CSPG. This is the value adding step of surface coating the USPG with carbon to reduce surface roughness further improve battery performance, particularly in the first cycle.

Another batch of lithium-ion coin cell batteries have now been manufactured using Sarytogan CSPG. Cycle testing has recently commenced, and initial results will be reported shortly.

These tests are all important inputs into the Pre-Feasibility Study which is on-track to be completed during Q3 (July-September) this year.

This announcement is authorised by:

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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 3).



Figure 3 - Sarytogan Graphite Deposit location.

The Sarytogan Graphite Deposit was first explored during the Soviet era 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). Sarytogan has upgraded the mineralisation up to **99.9992% C** "five nines purity" by thermal purification, without any chemical pre-treatment (refer ASX Announcement 5 March 2024). Furthermore, spheres of graphite have been made at a high yield (refer ASX Announcement 19 December 2023) and performance lithium-ion batteries has been demonstrated (refer ASX Announcement 8 February 2024). A Pre-Feasibility Study as part of its strategy to supply high-quality anode pre-cursor material for the rapidly growing electric vehicle battery market is well advanced and scheduled for completion in Q3 2024.

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 |

Compliance Statement

The information in this report that relates to other Exploration Results is cross referenced to the relevant announcements in the text. These reports are available at www.asx.com.au. The information in this report that relates to Sarytogan Mineral Resources was first reported in ASX announcement dated 27 March 2023.

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.