QUANTUM GRAPHITE

MEDIA RELEASE
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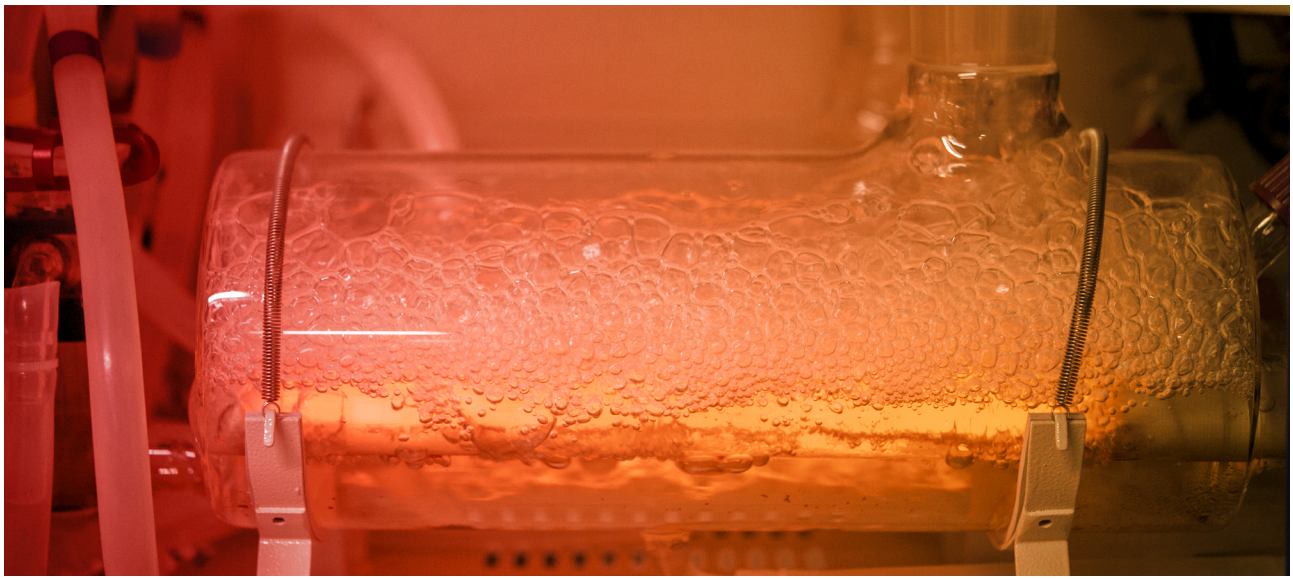
Uley 2 Flake Anode Application
Successful Completion of Initial Thermal Purification Treatment

The Company announces today the first phase of the thermal purification results of the test work program conducted jointly by INEMET, ProTherm Systems and QSP. A reference to Uley flake samples in this announcement is a reference to Uley +195 (purity of 95% graphitic carbon and mesh size of 150 microns).

The test work program highlighted the benefits of Uley flake's relatively clean geochemistry for use as anode material in Li-ion batteries, especially the lack of any material heavy element impurities. Outside Titanium (Ti) with a concentration of 224 parts per million (ppm) or 0.0224%, the presence of any other heavy element fell below the detectable limits of the test equipment.

The results confirm within the sensitivity levels of the test equipment that:-

- **Impurity boiling point excellent indicator of impurity removal** - There is an excellent correlation between predicted impurity element removal and actual removal of these elements based on the applicable boiling point data for Uley flake impurities
- **Efficiency of purification utilising heat treatment** - Impurity removal efficiency (IRE) utilising heat threatment is estimated to achieve 95% removal of impurity elements
- **Thermal treatment results at 2,200°C** - Thermal treatment of Uley flake samples at a temperature of 2,200°C eliminated all impurities with a boiling point of up to 2,200°C and achieved a purity of 97.59% graphitic carbon (**gC**)
- **Predicted thermal treatment results at 3,000°C** - Based on the correlation of boiling point data, thermal treatment at 3,000°C of Uley flake samples is predicted to achieve a purity ranging from 99.50% gC (80% IRE) to 99.86% gC (95% IRE)



ABOUT QUANTUM GRAPHITE LIMITED

QGL is the owner of the Uley flake graphite mineral deposits located south-west of Port Lincoln, South Australia. The company's Uley 2 project represents the next stage of development of the century old Uley mine, one of the largest high-grade natural flake deposits in the world. For further information, qgraphite.com.

ABOUT THE QUANTUM SUNLANDS PARTNERSHIP

QSP is our joint venture with Sunlands Co. for the manufacture of coarse natural flake based thermal storage media. The flake will be sourced exclusively from the QGL's Uley mine. The manufactured media will be fitted within Sunlands Co.'s long duration energy storage cells. https://www.sunlandsco.com/

A summary of the findings is illustrated in Figure 1.

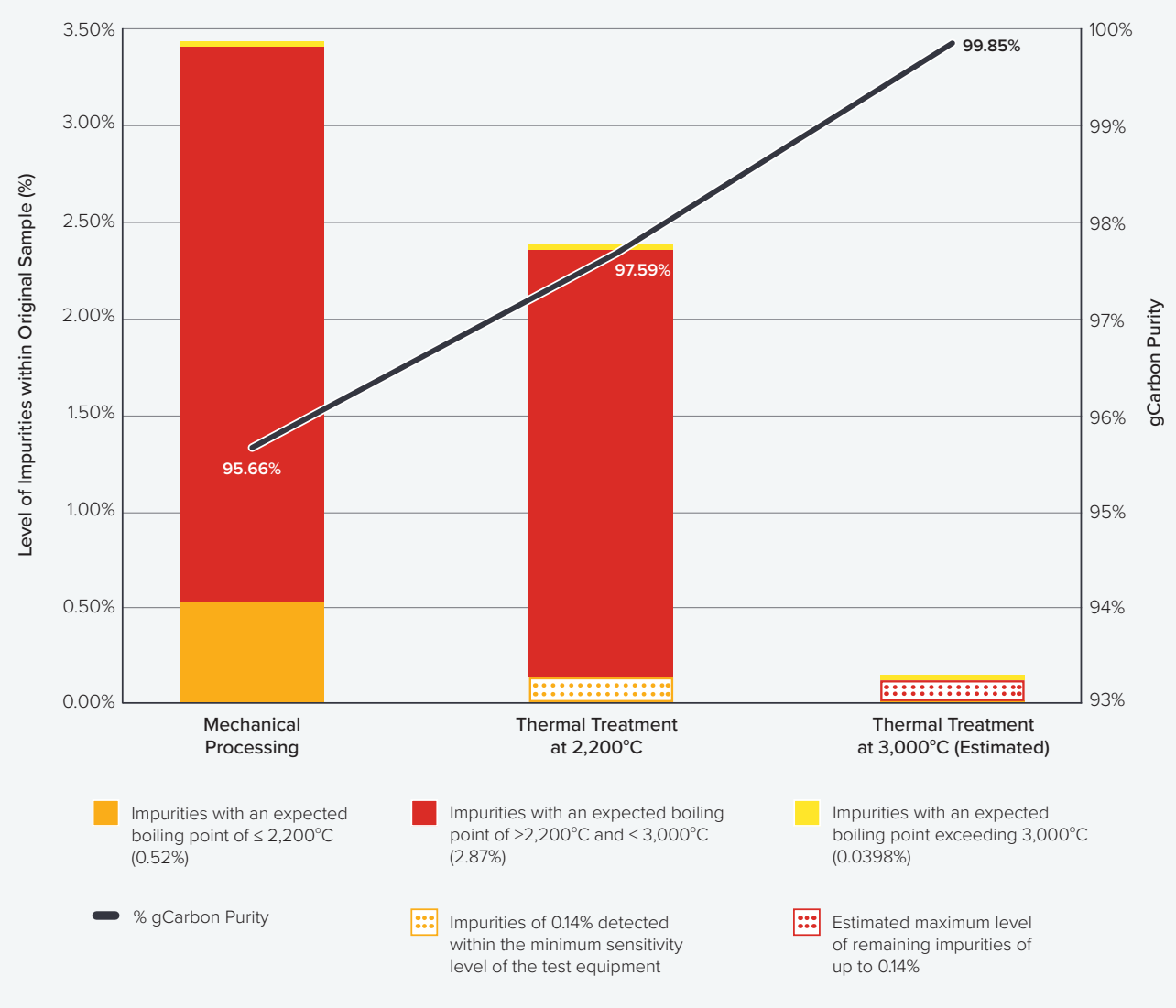


Figure 1: Summary of Findings

Chairman, Mr Bruno Ruggiero commented that, *"the Board's pursuit of our multi-pronged commercialisation strategy genuinely sets QGL apart from other graphite producers. Adding the potential supply of anode material to the Li-ion battery market will deliver on our commitment to build a globally diversified supplier of high-quality flake products. Together with our proprietary downstream market in long duration storage media and high end refractory supply, the production of anode material positions QGL to take advantage of two of the fastest growing markets in the broader industrial minerals sector".*

Thermal Treatment at 2,200°C

Following the thermal treatment conducted at INEMET's Freiburg facility (see announcement dated 28 November 2022), a comprehensive elemental analysis was performed in Australia at the ALS laboratories on the relevant samples of Uley flake. The most prevalent impurity elements were Sulphur (S), Aluminium (Al), Calcium (Ca), Iron (Fe), and Silicon (Si) with each reported as a percentage (%) and **representing more than 95% of all impurities**. The remaining, typically very low concentration elements, were reported in parts per million (ppm), equivalent to grammes per tonne (g/t). For ease of comparison all impurity elements are presented in ppm in Figure 2.

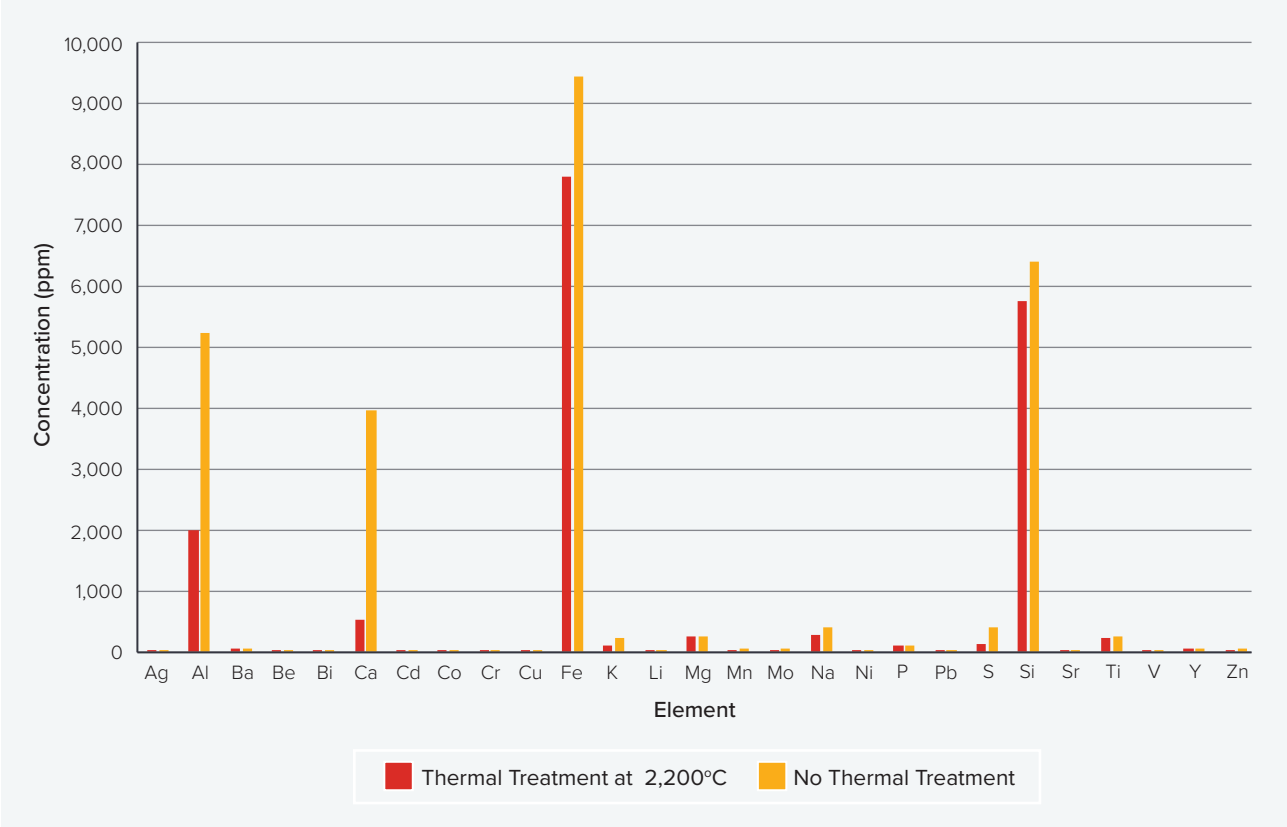


Figure 2: Elemental Analysis of Impurities

As expected, the presence of the four major impurity elements (Al, Ca, Fe and SiO2) indicates little discernible difference both before and after heating to 2,200°C. The exception to this is Ca which was removed from the Uley flake samples to typically less than detectable limits after heating to 2,200°C.

Element	Al	Ca	Fe	Si
Boiling Point, °C	2,470	1,484	2,862	2,355

Table 1: Boiling Point of Main Impurity Elements in Graphite

The removal of the majority of Ca together with Potassium (K), Magnesium (Mg), and sodium (Na) from the Uley flake samples following heating to 2,200°C is not unexpected as each of these elements has a boiling point significantly less than 2,200°C. Additional minor elemental impurities were also eliminated although the the majority of these were in such small quantities prior to the thermal treatment, that their removal did not materially impact the final gC purity.

Thermal Treatment at 3,000°C – Predicted Graphite Purity

The results from thermal treatment at 2,200°C indicate an excellent correlation between predicted removal of impurity element and actual removal of these elements based on the applicable boiling point data for particular impurities. If the Uley graphite samples are subjected to thermal treatment at 3,000°C, the removal of the majority of impurity elements, with the exception of titanium (Ti) is reasonably expected.

A summary of predicted Uley flake samples purity following thermal purification at 3,000°C, for various impurity removal 'efficiency' factors, is presented in Table 2. Four efficiency factors have been considered, 80%, 85%, 90%, and 95%. Since no process is completely efficient, a 100% efficiency factor has been excluded from the purity predictions.

Uley Flake Sample	Thermal Treatment Temperature					
	No thermal treatment	2,200°C	3,000°C Impurity Removal Efficiency			
			80%	85%	90%	95%
+195	95.3%	97.7%	99.5%	99.6%	99.7%	99.8%

Table 2: Predicted Graphite Purity after Thermal Treatment at 3,000°C

Next and Final Phase of Thermal Testwork - Treatment at 3,000°C

The next and final phase of the thermal test work program is the treatment of Uley flake samples at 3,000°C. The program design will be completed in the next few weeks and test work has been scheduled to commence in the second quarter of the 2023 calendar year. The successful completion of this program will deliver yet another market for Uley flake, in addition to the downstream supply to QSP for the manufacture of long duration thermal storage media and Uley flakes traditional supply to European and North Asian refractory manufacturers.

FOR FURTHER INFORMATION CONTACT:
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ABOUT PROTHERM

Protherm Systems, founded in July 1987, is a leading thermal process engineering company, based in South Africa. The Company designs and supplies a wide range of thermal and related thermal processing plant and equipment for industrial users world wide, such as Plate Heat Exchangers, Shell and Tube Heat Exchangers, Air Dryers and Evaporators.

ABOUT INEMET

The Institute for Non-Ferrous Metallurgy and High Purity Materials focuses on sustainable and innovative processes that rethink existing production processes and the handling of supposed waste products in the spirit of the circular economy and zero waste thinking. INEMET's dedicated team work toward a greener future and the revolutionizing of non-ferrous metallurgy. It develops existing processes within pyrometallurgy, hydrometallurgy and the semiconductor industry in working groups and in a variety of projects. https://tu-freiberg.de/en/fakult5/inemet