Lithium Universe Ltd: Test Program Update for Lithium Carbonate Refinery

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Melbourne, Australia - Lithium Universe Ltd. (ASX:LU7) (OTCMKTS:ESMAF) is pleased to announce that the ongoing testwork program shows that battery-grade (>99.5% Li2CO3) lithium carbonate can be produced from the various types of spodumene concentrate from around the world using the Becancour Lithium Refinery (Becancour) design.

Recently, the Company's key lithium Board members and CEO visited the Definitive Feasibility Study (DFS) metallurgical testing at the Linyi University Lithium Research Centre (Linyi), a world-class research centre with in-house analysis facilities. The ongoing test work program of various spodumene ores is an integral component of the DFS being conducted by Hatch Ltd (Hatch) for the Company's Becancour Lithium Refinery.

The Refinery is a multi-purpose battery-grade lithium carbonate refinery designed to a production capacity of 16,000 metric tons per annum, assuming a spodumene feed grade of approximately 5.5% Li2O. Within the scope of this program, spodumene samples, ranging from 5.0% to 6.0% Li2O with diverse particle sizes (See Photo 1*), are being subjected to comprehensive testing.

The objective of establishing a downstream standalone lithium refinery is to design it with the robust capability to process spodumene feedstock from any part of the world. Samples from Australia, Brazil, and Africa, featuring various lithium grades, were sourced and are currently undergoing process testing at Linyi. The proposed refinery will have the capability to efficiently process spodumene feedstock from diverse sources worldwide. This adaptability ensures that the lithium production operation remains robust and flexible, offering optionality in spodumene feedstock while the Canadian supply chain continues to develop. This strategic approach positions the Becancour Lithium Refinery to navigate fluctuations in the global spodumene market, maintaining operational continuity and stability.

LU7 is pleased to announce that the second batch of lithium batteries tested at the Linyi has successfully met battery-grade specifications. Furthermore, all streams involved in the testing process have been fully analyzed, ensuring a comprehensive understanding of the lithium extraction and battery production processes. So far, test work shows that the Becancour Lithium Refinery design can handle all types of spodumene concentrate. The design has cyclone preheaters at the feed to the calcination kiln which will allow the process to handle these finer ore types. Cyclone preheating, alike Jiangsu, will improve the calcination of fine spodumene feed, enhancing the efficiency of the extraction process.

In addition to the spodumene samples displaying different particle sizing, the samples also presented varying levels of key impurities including magnesium, calcium, and iron. The Jiangsu plant (on which the Becancour design is based upon) was the first plant to implement ion exchange technology for the removal of calcium impurities, a groundbreaking achievement that has set new standards in lithium purification. Additionally, the utilization of a CO2 purification circuit has resulted in remarkably low levels of sodium and sulfate impurities, well below industry cutoff thresholds. Metallurgical studies so far, have demonstrated that the Becancour process is highly robust, capable of handling various spodumene ore types from around the world with ease, resulting in the production of battery-grade lithium carbonate.

Discussion of Results

The primary concern in battery-grade lithium carbonate is sodium, with a specification of less than 250 ppm. The Becancour process demonstrates its capability to yield an even higher quality product, boasting sodium levels below 100 ppm. Additionally, calcium content is notably low, below 13 ppm compared to the 50 ppm specification. Another significant advantage of lithium carbonate derived from hard rock sources over brine-based alternatives is its remarkably low chloride levels, measuring less than 2 ppm as opposed to the 200 ppm found in brine grades.

Commenting on the test work, Chairman, Iggy Tan said that "Based on the Lithium Dream Team's experience and network, the Company is able to use one of the best lithium research and test facility in the world. One of the Professors (Dr Jie Gao) who heads the research institute started her lithium career at the Jiangsu Lithium Carbonate plant under the guidance of LU7's Non-executive Director, Dr Jingyuan Liu. We are very pleased with the one-pass success of producing battery-grade lithium carbonate. Our experience

with other laboratories around the world is that they cannot achieve such a result in such a short time period.

"The results demonstrate the validity of the process design when processing multiple types of spodumene feedstock from all around the world. This places LU7 in a unique position; due to the design not being tied solely to a single spodumene mine but having the flexibility to produce battery-grade lithium carbonate from spodumene feedstocks all around the world."

*To view photographs, please visit:
https://abnnewswire.net/lnk/56BW83JX

About Lithium Universe Ltd:

Lithium Universe Ltd. (ASX:LU7) (OTCMKTS:ESMAF), headed by industry trail blazer, Iggy Tan, and the Lithium Universe team has a proven track record of fast-tracking lithium projects, demonstrated by the successful development of the Mt Cattlin spodumene project for Galaxy Resources Ltd..

Instead of exploring for the sake of exploration, Lithium Universe's mission is to quickly obtain a resource and construct a spodumene-producing mine in Quebec, Canada. Unlike many other Lithium exploration companies, Lithium Universe possesses the essential expertise and skills to develop and construct profitable projects.

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