March 9, 2020

Standard Lithium Makes Better Than 99.9% Battery Quality Lithium Carbonate

VANCOUVER, British Columbia, March 09, 2020 (GLOBE NEWSWIRE) -- **Standard Lithium Ltd.** ("Standard Lithium" or the "Company") (TSXV: SLL) (OTCQX: STLHF) (FRA: S5L) an innovative technology and lithium development company, is pleased to report that it has produced its first >99.9% purity (also known as 'three-nines') battery quality lithium carbonate using the Company's proprietary 'SiFT' crystallisation technology. This optimisation work was performed at the University of British Columbia (UBC) and was partially funded by a grant of $300,000 awarded to the Company and UBC by Innovate BC (note to the reader: this lithium carbonate crystallisation optimisation work is separate from the ongoing commissioning of the Company's LiSTR Direct Lithium Extraction demonstration plant in south Arkansas).

The SiFT technology was re-run on solids that had been previously produced (see news release dated 09th Jan 2019), and involved a single additional re-crystallisation step. The resulting lithium carbonate crystals were analysed at UBC using low-detection-limit ion-chromatography techniques (similar to those used in the pharmaceutical industry to determine impurities at low levels). The lithium carbonate samples were analysed for the main suite of cation contaminants that are typically found in commercially sold products, and the results are provided in the table below.

Contaminant	Lithium Carbonate	
	Initial	**Re-crystallised**
Sodium	2,270 ppm	60 ppm
Calcium	145 ppm	<36 ppm
Magnesium	<22 ppm	<22 ppm
Potassium	<21 ppm	<21 ppm
Total Cation Contaminants	**<2,458 ppm (<0.246 wt.%)**	**<139 ppm (<0.014 wt.%)**

As seen in the table, the total cation contaminants in the lithium carbonate were reduced from less than 2,458 ppm (or <0.246 wt.%) to less than 139 ppm (or <0.014 wt.%), resulting in a purity of >99.9 %. Actual purity may be greater than this figure, but additional analyses will be required to definitively determine the total impurity profile (i.e. to quantify chloride, sulphate and boron concentrations at expected very low levels). Additional work is being completed by UBC, using the grant money, to optimise how the ion-chromatography system can be integrated into the overall SiFT process to provide real-time analytical data during crystallisation.

Dr. Andy Robinson, President and COO of Standard Lithium commented, *"this ongoing refinement of our SiFT crystallisation technology is emblematic of Standard Lithium's drive to bring lithium chemical processing into the 21st Century. We continue to improve the technology, in terms of performance, robustness and scalability. We are also finalising our*

efforts in terms of IP protection and the delivery of a full-scale crystallisation pilot plant to our South Arkansas Project site. The combination of the Company's SiFT and LiSTR technologies will provide a new platform for the production of battery quality lithium compounds for current and next generation lithium-ion batteries."

Quality Assurance
Dr. Ron Molnar, Professional Metallurgical Engineer (Ontario P.E.# 100111288), is a qualified person as defined by NI 43-101, and has reviewed and approved the scientific and technical information that forms the basis for this news release. Dr. Molnar is independent of the Company.

Grant of Options
The Company also announces that, subject to regulatory approval, it has granted a total of 4,450,000 incentive stock options ("Options") to certain directors and officers of the Company in accordance with the Company's incentive stock option plan, and as compensation for ongoing services rendered to the Company. The Options vest immediately and are exercisable at a price of $0.76 for a period of thirty-six months.

About Standard Lithium Ltd.
Standard Lithium (TSXV: SLL) is a specialty chemical company focused on unlocking the value of existing large-scale US based lithium-brine resources. The Company believes new lithium production can be brought on stream rapidly by minimizing project risks at selection stage (resource, political, geographic, regulatory & permitting), and by leveraging advances in lithium extraction technologies and processes. The Company's flagship project is located in southern Arkansas, where it is engaged in the testing and proving of the commercial viability of lithium extraction from over 150,000 acres of permitted brine operations. The Company is currently installing a first-of-its-kind Demonstration Plant that will use the Company's proprietary technology to selectively extract lithium from LANXESS' tailbrine. This Demonstration Plant will be used to prove commercial feasibility. The environmentally friendly process eliminates the use of evaporation ponds, reduces processing time from months to hours and greatly increases the effective recovery of lithium.

The Company is also pursuing the resource development of over 30,000 acres of separate brine leases located in southwestern Arkansas and approximately 45,000 acres of mineral leases located in the Mojave Desert in San Bernardino County, California.

Standard Lithium is listed on the TSX Venture Exchange under the trading symbol "SLL"; quoted on the OTC - Nasdaq Intl Designation under the symbol "STLHF"; and on the Frankfurt Stock Exchange under the symbol "S5L". Please visit the Company's website at www.standardlithium.com.

For further information, contact Anthony Alvaro at (604) 240 4793

On behalf of the Board,

Standard Lithium Ltd.
Robert Mintak, CEO & Director

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Source: Standard Lithium