Neo Lithium Expands and Optimizes Pilot Ponds at 3Q Project

written by Raj Shah | April 26, 2021
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- *The Company completed five years of pilot pond evaporation and design to be able to bring the latest technology to the new pilot pond system*
- *Results confirm less than one year of evaporation from in-situ brine to final ~3.6% lithium brine concentration prior to shipment to the carbonation plant*
- *The new pilot pond system will test different technologies to lower total cost of industrial scale ponds by making ponds smaller and more efficient*

Neo Lithium Corp. ("Neo Lithium" or the "Company") (TSXV: NLC) (OTCQX: NTTHF) is pleased to provide an update on pilot pond expansion and operation at its Tres Quebradas lithium brine project ("**3Q Project**") in Catamarca Province, Argentina. The operational work continues to demonstrate the Company's single-minded commitment to project-level advancements towards operations in the fastest time possible.

The Company has been pumping brine to evaporation pilot ponds since late 2016. Two sets of pilot evaporation ponds have been built. The first set of pilot ponds were 1:1,000 scale and were build in the alluvial fan near the salar. Operations in these pilot ponds were discontinued in 2018 and a new set of pilot ponds were built in the core of the salar (its ultimate location). The new pilot ponds were larger, 1:600 scale, with a different design and had a thickener system to separate the

calcium chloride crystals at the end of the process and a physical parameter 24/7 automated monitoring system. These pilot ponds operated for three years and produced concentrated brine to run all the experimental tests and produced an excess of 20 tonnes of concentrated brine, equivalent to approximately two tonnes of lithium carbonate that remains to be processed through the pilot plant. Since the capacity of the pilot ponds exceeds the pilot plant for now, the concentrated brine is stored until the pilot plant starts to run in continuous mode.

Currently, the Company is taking one step further in optimizing the pilot pond system by building 20% more pond capacity and changing the initial design to emulate the future operation to final pond design. This step will firm up operations and ramp up times in the future mine and result in specific employee training towards operation of production scale ponds.

We also confirmed with this operation that the ponds will take the raw brine from the wells from 1000 mg/l Lithium to 4000 mg/l Lithium in 200 days by solar evaporation in the pre-concentration ponds. From this composition the brine achieves the final 3.6% Lithium concentration in less than 60 days thanks to a process called “Reactive Dehydration”. Reactive Dehydration is a process whereby water is lost by crystallization of calcium chloride with six molecules of water as the main driver, rather than evaporation. The process is so efficient at cold temperatures in the salar that it is expected that less ponds would be required than those described in the pre-feasibility study (“PFS”)[1]. This system accelerates dramatically the residence time of the brine in the ponds. This process is unique to the 3Q Project due to the chemical composition of the brine.

“As we get closer to completing the Definitive Feasibility Study, we move our pilot system to a final piloting system that is efficient, lower cost, consumes no fresh water or reagents

and requires less capital cost to produce than other comparable projects," stated Gabriel Pindar, COO and Director of Neo Lithium.

This pilot pond expansion is also designed to deliver the volumes of lithium concentrate required by the system to have the pilot plant operating on a continuous basis.

Pond Operation

Neo Lithium has been filling and operating a pilot pond system in the 3Q Project for five years now, providing invaluable information to complete the Definitive Feasibility Study ("DFS") under execution (please see new image gallery showing pond construction in https://www.neolithium.ca/news.php and https://www.neolithium.ca/project.php).

The pilot ponds built in 2016 were the first attempt to understand the evaporation and crystallization of the 3Q Project brine and provided valuable information to design the second generation of pilot ponds, built in 2018.

The 2018 pilot ponds were constructed to test different materials and orientation to the wind. After this period of operation and with detailed analysis of different conditions the Company is now able to use the information gathered to improve the design, quality, performance, and durability of future ponds. The new design is expected to lower costs while increasing evaporation even further and reducing the residence time of the brine in the concentration ponds.

The Company also obtained vital information on evaporation, wave formation in the ponds due to wind, geo-mechanical conditions of the ground, construction materials, and wind impact over evaporation in large ponds and liner resistance. All this

information is applicable to the DFS work that is in currently in progress.

The new pilot pond design captures the latest advancements in continuous pond operation where the brine flows through the system achieving the required concentration. The Company also continues to expand personnel, with operating rosters for the pilot ponds covering a 24-hour operation cycle and expanding its in-situ analytical facilities with the purchase of ICP analytical equipment and hiring expert personnel for quick delivery of results on piloting.

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[1] The Company filed an amended technical report for the 3Q Project entitled "Preliminary Feasibility Study (PFS) – 3Q Project, NI 43-101 Technical Report Catamarca, Argentina" with an effective date of May 7, 2019 and amended as of May 8, 2019, and subsequently amended as of April 1, 2021

About Neo Lithium Corp.

Neo Lithium Corp. has quickly become a prominent new name in lithium brine development by virtue of its high quality 3Q Project and experienced team. Neo Lithium is rapidly advancing its 100% owned 3Q Project – a unique high-grade lithium brine lake and salar complex in Latin America's "Lithium Triangle".

The 3Q Project is located in the Catamarca Province, the largest lithium producing area in Argentina covering approximately 35,000 ha including a salar complex of approximately 16,000 ha.

Additional information regarding Neo Lithium Corp. is available on SEDAR at www.sedar.com under the Company's profile and at its website at www.neolithium.ca, including various pictures of ongoing work at the project.

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to the Company's prospects, properties and business detailed elsewhere in the Company's disclosure record. Although the Company believes its expectations are based upon reasonable assumptions and has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to be as anticipated, estimated or intended and undue reliance should not be placed on forward-looking statements.