International Lithium Receives Proof of Concept Study for Lithium Recovery Using Membrane Separation

September 5, 2017 (Source) – International Lithium Corp. (TSXV: ILC) (the “Company” or “ILC”) is pleased to announce that it has received a final report, “Proof of Concept Study – Lithium Recovery Using Membrane Separation” (the “Study”) prepared by Synexus (Pty) Limited of South Africa (“Synexus”). The Study was conducted utilizing (filtered) raw brine from the Salar de Llullaillaico, location of the Mariana lithium brine joint venture project (“Mariana”) in Salta, Argentina. Results from the Study indicate that the selective recovery of lithium directly from raw (filtered) brine, with the simultaneous rejection of other cation and anion species, using a proprietary lithium selective separation process (the “technology”) is possible. Lithium was selectively recovered from the raw brine to produce lithium hydroxide (“LiOH”), a high value ingredient used directly in lithium battery manufacturing, as a final product.

Summary of Study Results:

- The use of the technology presents a possible alternative to the natural evaporation process currently proposed at Mariana.
- The technology could provide a process route to produce lithium hydroxide directly from the raw brine without the need to remove contaminants like magnesium by liming, as would be required in the natural evaporation
Based on initial estimates, the technology can achieve higher recoveries than natural evaporation even with relatively low concentrations of lithium.*

Use of technology has the potential to enable a considerable increase in production rate compared to evaporative ponds. Lithium is directly removed from the brine and the (spent) brine can be returned to the basin with little effect on the water balance.*

With further refining, the technology could also permit the recovery of potassium and other cations if desired.

* At present, the Mariana Project joint venture partners have not conducted any formal economic analyses on the project. Statements regarding comparisons of recoveries are based on initial bench scale tests for the natural evaporation process and for the selective membrane technology. Additional testing and scaling up of the process is required before any definitive statements regarding recoveries can be made, and projected capital and operating costs can be effectively modelled and compared. The information provided herein is to provide a minimum level of confidence that the selective membrane method presents a possible alternative to the natural evaporation method of lithium extraction from the brine and further study is warranted based on these results. The “Study” is not a preliminary economic assessment, preliminary feasibility study or feasibility study. Any economic analysis would have to be supported by a preliminary economic assessment, preliminary feasibility study or feasibility study. The reader is cautioned that the Mariana project is still at an exploration stage and there is no guarantee that an economic mining scenario will result and no mineral reserves have yet to be defined as per the standards of disclosure defined in National Instrument 43-101 Standard of Disclosure for Mineral Projects.

At Mariana, the current focus for lithium extraction is to
determine the break points of contaminants such as magnesium and sulphate in the natural evaporation process in order to define the timing of the liming process. Large quantities of lime and other reagents needed to neutralize the brine chemistry to prevent the loss of lithium through precipitation during the evaporation concentration process generally tend to have a severe negative impact on the economics of lithium brine operations.

In the case of the Mariana project, this new technology could provide an alternative to the currently adopted plan of using natural solar evaporation of producing a brine concentrate containing about 6% lithium that would be exported for refining.

This technology is proprietary to Synexus. It could be adjusted and configured for other brine deposits’ unique chemistry, alleviating the need for costly and time consuming solution purification and pre-concentration steps such as required by natural solar evaporation.

“We consider this report very encouraging news for the advancement of our Mariana Lithium JV Project,” commented Kirill Klip, Executive Chairman of ILC.

Jonathan Findlay, a “Qualified Person” for the purposes of National Instrument 43-101 – Standards of Disclosure for Mineral Projects, has reviewed and approved the scientific and technical information contained in this news release.

On behalf of the Board of Directors,

Kirill Klip
Executive Chairman

Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.
Cautionary Statement Regarding Forward-Looking Information

Except for statements of historical fact, this news release contains certain “forward-looking information” within the meaning of applicable securities law. Forward-looking information or forward-looking statements in this news release include: the timing and anticipated results of environmental impact studies and pump tests, timing of preliminary economic studies on the Mariana project, the expectation of feasibility studies, lithium recoveries, modelling of capital and operating costs, and the Company’s continued interest in the Mariana project. Such forward-looking information is based on a number of assumptions and subject to a variety of risks and uncertainties, including but not limited to those discussed in the sections entitled “Risks” and “Forward-Looking Statements” in the interim and annual Management’s Discussion and Analysis which are available at www.sedar.com. While management believes that the assumptions made are reasonable, there can be no assurance that forward-looking statements will prove to be accurate. Should one or more of the risks, uncertainties or other factors materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those described in forward-looking information. Forward-looking information herein, and all subsequent written and oral forward-looking information are based on expectations, estimates and opinions of management on the dates they are made that, while considered reasonable by the Company as of the time of such statements, are subject to significant business, economic and competitive uncertainties and contingencies. These estimates and assumptions may prove to be incorrect and are expressly qualified in their entirety by this cautionary statement. Except as required by law, the Company assumes no obligation to update forward-looking information should circumstances or management’s estimates or opinions change.