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NEWS RELEASE: 10-12

Lithium One Reports High Grade Lithium and Potassium in Brine Over more than 150 km² from First Core Holes at Sal de Vida Project, Argentina

Highlights

- 523 metres of core drilling in five holes widely spaced across more than 150 km² of the salar.
- Favourable and confirmatory initial brine assays - core drilling averaged: **680 mg/l Li** and 0.62 wt % K (**7,303 mg/l K**), with continued favourably low: Mg:Li ratio = 2.2; SO₄:Li ratio = 11.9.

Lithium One Inc. (the "Company") (TSX-V: LI), is pleased to report results from the first five core holes of a planned thirty hole program at the Sal de Vida lithium and potash brine project at Salar del Hombre Muerto, Argentina. The results of drill sampling confirm the high grades of lithium and potassium, and favourably low concentrations of magnesium and sulphate, as established in the surface sampling and test well drilling program. The average values of all the drill samples to date are: **680 mg/L lithium** and **7,303 mg/L potassium**, with the lithium content in some geologic units exceeding 750 mg/L over significant intervals.

The core holes reported in Table 1 below (drill holes SVH10_05 through SVH10_09) are widely spaced across the central portion of the property. Core drilling to date tests approximately 150 km² of the more than 250 km² of prospective salar, on average spacing of approximately 5 to 8 km between holes. Every drill hole has intersected thick porous sequences with potentially economic brine. The drilling revealed multiple brine-bearing units with expected changes in thickness and geologic facies around the basin.

Lithium One President and CEO Patrick Highsmith commented, *"The Company is very excited with the first results from the core drilling program at our Sal de Vida Project. These summary values include all brine assays in the drill program to date, subject to no cut-off grade filtering. The high grades of lithium and potash at depth, positive overall chemistry, and consistency of the results over great distance increase our confidence that the Sal de Vida project has the potential to be a large brine resource and low-cost lithium and potash producer. In the coming weeks we will be testing the central portion of the main basin and the highest grade surface targets in the north basin as we continue to advance the project towards resource definition this year and feasibility next year."*

The purpose of the core drilling is to collect depth-specific brine data along with total and effective porosity determinations for the hosting sedimentary units. These data will help determine the total brine volume and facilitate an estimate of the volume of potentially recoverable brine, from which an inferred brine resource will be calculated. The drilling employs triple-tube core equipment with a proprietary sampling method designed to collect depth-specific brine samples with minimal contamination by fluid from shallower or deeper fluid-bearing portions of the section.

Three main brine-bearing stratigraphic units have been identified from the drilling to date. The composition of the upper unit varies laterally, but generally consists of interbedded porous sand and silt with lesser clays ("Upper Unit"). The middle unit is comprised dominantly of halite (common salt), some of which is fractured or cavernous ("Halite Unit"). Prior to the commencement of drilling, a significant halite unit was not expected; and its areal extent remains to be determined. The lower stratigraphy appears to be dominated by porous sandy sediments, which are often pressurized with high density brine ("Lower Unit").

Analytical results from drilling indicate that the brine chemistry is consistent both laterally and across the different geologic units. Approximately 83% of the brine analyses from the drill samples fall between 500-900 mg/L lithium. Isolated lower lithium values occur in the shallower portions of the drill holes and are interpreted to reflect mixing with fresh surface water. Higher lithium values (to date up to 916 mg/L) are typically reported from the deeper samples.

Table 1. Summary of Core Drilling Data – No Cutoff Grade Applied, Grouped by Geologic Unit

Hole no	Host unit	From (m)	To (m)	Li mg/l	K mg/l	Mg mg/l	Mg:Li	SO ₄ :Li
SVH10_09	Upper	0.00	32.30	327	3068	758	2.32	17.50
SVH10_06	Halite	15.80	79.90	807	9538	1077	1.33	11.23
SVH10_07	Halite	9.70	83.08	608	6196	1060	1.74	14.51
Halite Unit Average				707	7867	1069	1.51	12.47
SVH10_05	Lower	0.00	40.41	641	6714	1393	2.19	12.93
SVH10_06	Lower	79.90	109.21	* 801	8685	898	1.12	12.81
SVH10_07	Lower	83.08	108.36	839	8883	2133	2.54	10.02
SVH10_08	Lower	15.00	135.00	* 604	6044	1562	2.59	11.29
SVH10_09	Lower	32.30	113.45	* 746	8873	2665	3.20	NA
Lower Unit Average				726	7840	1730	2.33	11.64
All drilling average				680	7303	1515	2.23	11.90

* (End of hole)

The triple-tube coring has resulted in a consistently high core recovery rate. Select intervals are collected in plastic sleeves that are sealed and shipped to Core Laboratories in Houston, TX for porosity testing and the Company has received the first of the porosity results. Determinations for total porosity on the first 20 samples average approximately 16%. Preliminary measurement of effective (or drainable) porosity from three samples by the nuclear magnetic resonance (NMR) technique averaged 22%. These results are considered reasonable and in agreement with field observations. The porosity of the unconsolidated sands tends to be highest, while the massive halite tends to have the lowest porosity. The vuggy halite containing silt and sand has intermediate porosity values. Work continues at Core Laboratories to refine the testing methodology for both total and effective (or drainable) porosity. Porosity measurements are being conducted using gravimetric and centrifuge techniques; and the results are pending. The results of these effective porosity determinations will be used in the ongoing resource modeling.

Quality Control

The drilling, sampling, and core handling is being guided by Lithium One Argentina-based field staff in conjunction with hydrogeologists of Montgomery & Associates Water Resource Consultants.

The liquid samples from Sal de Vida have been analyzed by Alex Stewart Assayers of Mendoza, Argentina by dilution and direct aspiration atomic absorption. Alex Stewart's Mendoza lab is accredited to ISO 9001:2008 and ISO14001:2004 for its geochemical and environmental labs for the preparation and analysis of different sample media, including waters and brines. Analytical quality is monitored through the use of randomly inserted quality control samples, including standards, blanks and duplicates, as well as check assays at an independent lab. A new set of standards was recently implemented and round-robin testing completed using six laboratories in Argentina, Chile, Bolivia and Canada.

The performance of the standards, blanks, and duplicates associated with these data indicate acceptable analytical quality. Please refer to the NI 43-101 Technical Report dated March 5th, 2010, titled "Technical Report on the

Sal de Vida Lithium Project, Salar de Hombre Muerto, Catamarca Argentina” and filed on SEDAR, for further discussion of quality control procedures and other information regarding the Project.

Please refer to the Lithium One website (www.lithium1.com) for additional discussion of these results, maps and figures, as well as photos from the field.

Review by Qualified Person

The contents of this news release, analytical data, and quality control procedures have been reviewed and approved by Mr. Michael Rosko of Montgomery & Associates Water Resource Consultants (M&A). Mr. Rosko is a Registered Geologist in Arizona, California, and Texas and a qualified person (QP) as defined in NI 43-101. Mr. Rosko and M&A are completely independent of Lithium One, owning no securities of any kind in the Company.

M&A is a leading water resource consulting firm with major offices in Tucson, Arizona and Santiago, Chile. In addition to a client list including most of the world’s leading mining companies, M&A is involved in all aspects of water resources, including innovative modeling and measurement technologies. The Sal de Vida Project team has over 120 years cumulative experience, including relevant experience at Salar de Atacama and other salars in Argentina and Chile.

About Lithium One:

Lithium One Inc. is a Canadian-based explorer and developer of mineral properties with a specific focus on lithium. The Company has two major established lithium projects: the brownfields Sal de Vida lithium brine deposit in Argentina and the James Bay bulk tonnage spodumene deposit in Quebec. Korea Resources Corporation (KORES) is earning a 30% interest in the Sal de Vida Project by carrying Lithium One through US\$15 million of exploration and resource development work and delivering a Definitive Feasibility Study. KORES will also secure the debt portion of project construction costs and purchase 30 to 50 percent of future lithium production. The Company continues to advance both its projects toward resource definition, expecting NI 43-101 compliant resource estimates before the end of 2010.

ON BEHALF OF THE BOARD OF DIRECTORS,

Patrick Highsmith, M.Sc.
President and Chief Executive Officer

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Forward-Looking Statements

This document may contain “forward-looking information” within the meaning of Canadian securities legislation (hereinafter referred to as “forward-looking statements”). All statements, other than statements of historical fact, included herein including, without limitation statements relating to; the completion of a Feasibility Study, securing of debt for future project construction, purchase of future mine production, the timing for completion of an NI 43-101 compliant resource and other matters related to the exploration and development of the Project, are forward-looking statements. These forward-looking statements are made as of the date of this document and the Company does not intend, and does not assume any obligation, to update these forward-looking statements. Forward-looking statements relate to future events or future performance and reflect management’s expectations or beliefs regarding future events. By their very nature forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Factors that could cause actual results to differ materially from those in forward-looking statements include unsuccessful exploration results, changes in metals prices, changes in the availability of funding for mineral exploration, unanticipated changes in key management personnel and general economic conditions, title disputes as well as those factors detailed from time to time in the Company’s interim and annual financial statements and management’s discussion and analysis of those statements, all of which are filed and available for review on SEDAR at www.sedar.com. In certain cases, forward-looking statements can be identified by the use of words such as “plans”, “expects” or “does not expect”, “is expected”, “budget”, “scheduled”, “estimates”, “forecasts”, “intends”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words and phrases or statements that certain actions, events or results “may”, “could”, “would”, “might” or “will be taken”, “occur” or “be achieved” or the negative of these terms or comparable terminology. Although the Company 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. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward looking statements.