Lithium South Announces PEA Estimate US$934 Million Dollar NPV with an IRR of 31.6% and a 2.5 year Payback for HMN Lithium Project

04.03.2024 | CNW

PEA HIGHLIGHTS

- After tax NPV of US$934 million with an IRR of 31.6%
- PEA based on a mine life of 25 years with a 2.5 year payback
- PEA based on a production rate of 15,600 tonnes of lithium carbonate technical grade per year
- Processing based on simple and proven solar evaporation technology

VANCOUVER, March 4, 2024 - Lithium South Development Corp. (the "Company" or "Lithium South") (TSX-V: LIS) (O LISMF) (Frankfurt: OGPQ) is pleased to announce positive results from an independent Preliminary Economic Assessr for its Hombre Muerto North Lithium Project ("HMN Lithium Project") near Salta, Argentina. The PEA was prepared by I Piésold Consulting ("KP") and JDS Energy and Mining ("JDS"), both of Vancouver, in accordance with the standards se National Instrument 43-101 Standards of disclosure for Mineral Projects ("NI 43-101"), and CIM's Best Practice Guideli Mineral Processing ("BPGMP").

Company President and CEO, Adrian F. C. Hobkirk is quoted, "We are very pleased that Lithium South has advanced t Lithium Project to a PEA based on 15,600 tonnes per year lithium carbonate technical grade production. The PEA resu attractive economics associated with the project, including a short payback and exceptional Internal Rate of Return. We forward to taking the HMN Lithium Project to the next stage of development as quickly as possible."

Resource Estimate

The resource estimate for this PEA was prepared in accordance with NI 43-101 and CIM Standards, and uses best pra methods specific to brine resources, including a reliance on core drilling and sampling methods that yield depth-specific and effective (drainable) porosity measurements. The technical report filed on November 6, 2023, is titled, Updated Mir Resource Estimate - Hombre Muerto North Project, NI 43-101 Technical Report Catamarca and Salta, Argentina, Mark P.Geo., Peter Ehren, M.Sc., MAusIMM, September 5th, 2023. The report was prepared in accordance with National Ins 43-101 - Standards of Disclosure for Mineral Projects, on behalf of the Company by independent consultants Groundwa of Halifax, Nova Scotia, Canada.

Capital costs (CAPEX) have been updated with quotations from current suppliers working in project construction and de in the Puna region of Argentina. CAPEX estimates include an Indirect Cost of 16.6% of Direct Costs, and a contingency Total Costs.

Project Location and Environmental Permitting

The HMN Lithium Project is located at the northern portion of the Salar del Hombre Muerto, at the boundary zone of the and Salta provinces, 170 km southeast of the city of Salta. The project area comprises a collection of properties or conc acquired under purchase options from the existing owner. The properties are held as "minas" (full mining licenses not s further area reduction requirements) by a wholly owned Argentine subsidiary of the Company. The HMN Lithium Projec six properties distributed over the Salar for a total of 3,237 hectares. All properties are subject to a mining license for bo area of the property is not subject to any known environmental liabilities.

Lithium Pricing

A lithium price of $US20,000/tonne (t) was assumed for the study, assuming a 2029 production start-up. The price of lit
been volatile in recent months, declining from a peak of approximately US$85,000/t in November 2022 and stabilizing t
US$13,000/t in 2024. The selected price was based on current published market analysis and by benchmarking the pri
assumptions found in multiple technical reports from similar brine lithium projects. The benchmarking exercise provided
price range of between US$20,000 and US$25,000/t, with an average of US$22,400/t over seven projects.

The assumption of US$20,000/t is deemed to be reasonable by the Qualified Person ("QP").

Processing

The PEA models process eco-system covers the following units:

The brine chemistry is similar to other brines in the region, which allows the brine to be processed using similar process
technology as existing producers. The nominal extraction rate of the design is 179 liters per second. After an initial
preconcentration, lime is added to the brine, which removes a large part of magnesium as magnesium hydroxide and th
gypsum. When the low magnesium and calcium brine is concentrated to about 0.75% it is fed to the lithium carbonate p
of the noxious impurities that are still left in the brine are removed by selective precipitation through the addition of a so
soda ash and slaked lime and a final ion exchange polishing. The impurity free brine is then sent to specially designed
precipitators. To produce technical-grade lithium carbonate, a soda ash solution is added at high temperatures, leading
precipitation of solid lithium carbonate. This solid is then subjected to a series of processes: it is filtered in a centrifuge,
repulped, centrifuged once more, and finally washed again. The lithium carbonate is dried and packaged in maxi bags,
transported to the client. The main consumption of reagents in the process is shown in a table below.

Increased Lithium Recovery

The report has an updated lithium recovery process for the HMN Lithium Project brine, which uses industry proven eva
adjustment in the processing sequence will reduce lithium loss as brine entrainments in harvested salts, in the magnesi
hydroxide, and in calcium sulfate solids, obtaining a lithium recovery of approximately 70%, an improvement from the p
recovery of 50%. Peter Ehren, M.Sc., MAusIMM, is the QP responsible for Mineral Processing.

About Lithium South

Lithium South owns 100% of the HMN Lithium Project located in Salta and Catamarca Provinces, Argentina, in the hea
lithium triangle. The Salar del Hombre Muerto has a history of lithium production, with Livent Corporation in operation fo
twenty-five years, in an area just south of the HMN Lithium Project. The HMN Lithium Project is surrounded by a US$4
lithium development under construction by POSCO (Korea) and the Sal de Vida Project under development by Allkem.
work to date has delineated a National Instrument 43-101 compliant 1,583,200 tonne Lithium Carbonate Equivalent ("L
Resource on the Alba Sabrina, Natalia Maria, and Tramo claim blocks, three of five non-contiguous blocks that make u
Lithium Project. With process work underway, Lithium South is transitioning from being a lithium explorer to becoming a
developer.

Qualified Person Statements

Peter Ehren is an independent Lithium Consultant. He has more than two decades of experience in the industry. He sta
interest in the lithium business during his master's thesis at Technical University of the Delft where he investigated for E
Minerals the recovery of lithium from geothermal brine (Salton Sea), applying a Direct Lithium Extraction ("DLE") techno
his thesis he worked for SQM as a process engineer and R&D manager till 2007. Since 2007 he started to work as inde
consultant in the lithium, boron and potassium industry. He is a world expert in solar evaporation systems, phase chem
process developments. Additionally, his experience covers product applications, OPEX and CAPEX estimation, proces
simulations, engineering, R&D and product development. He has worked in lithium basins and production facilities worl
a Chartered Professional (AusIMM) and QP for NI 43-101 and JORC.

Dr. Mark King, Ph.D., F.G.C., P.Geo., of Groundwater Insight, Inc., is the QP for resource estimation components of the

such term is defined by NI 43-101. Dr. King has extensive experience in salar environments and has been a QP on nur lithium brine projects, ranging from early exploration to production. Dr. King is independent from the Company and has and approved the technical information mentioned in this press release.

Richard Goodwin, P.Eng., Project Manager for JDS Energy and Mining, Inc., is independent of Lithium South and a QP under Canadian National Instrument 43-101. Mr. Goodwin is a mining engineer and study manager with over 30 years experience managing mining operation and projects in various commodities such as base metals, precious metals, PG diamonds in various domestic and international locations. Mr. Goodwin is responsible for the PEA results, participated the production of this press release, and directly related information in this press release, and approves of the technical scientific disclosure contained herein.

On behalf of the Board of Directors of Lithium South Development Corp.

Adrian F. C. Hobkirk
President and Chief Executive Officer
Investors / Shareholders call 1-855-415-8100 / website: www.lithiumsouth.com

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in policies of the TSX V Exchange) accepts responsibility for the adequacy or accuracy of this release. The TSX Venture Exchange has not rev content of this news release and therefore does not accept responsibility or liability for the adequacy or accuracy of the this news release.

This news release contains certain "forward-looking statements" within the meaning of Section 21E of the United States and Exchange Act of 1934, as amended. Except for statements of historical fact relating to the Company, certain inform contained herein constitute forward-looking statements. Forward-looking statements are based upon opinions and estim management at the date the statements are made and are subject to a variety of risks and uncertainties and other facto could cause actual results to differ materially from those projected in the forward-looking statements. The reader is cau place undue reliance on forward- looking statements. We seek safe harbor.

Photo - https://mma.prnewswire.com/media/2353502/Picture1.jpg
Photo - https://mma.prnewswire.com/media/2353503/Picture2.jpg
Photo - https://mma.prnewswire.com/media/2353504/Picture3.jpg
Photo - https://mma.prnewswire.com/media/2353505/Picture4.jpg
Photo - https://mma.prnewswire.com/media/2353506/Picture5.jpg
Logo - https://mma.prnewswire.com/media/1815015/4573781/Lithium_South_Development_Corporation_Logo.jpg

View original content to download multimedia:https://www.prnewswire.com/news-releases/lithium-south-announces-pea-estimate-us934-million-dollar-npv

SOURCE Lithium South Development Corp.