



LiTHOS Secures U.S. Patent, Paving the Way for Complete Lithium Refinery Operations with Broad Direct Lithium Extraction (DLE) Capabilities

VANCOUVER, BC, Oct. 28, 2024 /CNW/ - LiTHOS Group Ltd. ("LiTHOS" or the "Company") (CBOE CA: LITS), a company at the forefront of sustainable lithium brine extraction, is pleased to announce the allowance of its U.S. patent for the "Electro-Pressure Membrane Method for Recovery and Concentration of Lithium from Aqueous Sources" by the United States Patent and Trademark Office (USPTO). This patent secures LiTHOS's ability to operate across the full lithium extraction and refinement process, covering essential stages from pre-treatment through lithium concentration to final processing for Lithium Carbonate (Li₂CO₃) or Lithium Hydroxide (LiOH) production. It safeguards LiTHOS's flexibility to integrate any Direct Lithium Extraction (DLE) method, supporting an adaptable approach to refining.

The patent allowance protects all five steps in LiTHOS's lithium extraction and concentration process, marking a significant milestone for the company's intellectual property portfolio. This comprehensive protection enhances LiTHOS's capability to work with various DLE techniques, enabling seamless adaptation and integration with lithium carbonate or hydroxide production.

Scott Taylor, CEO of LiTHOS, commented, "This foundational patent broadens our ability to offer fully integrated lithium extraction and refinement solutions, from pre-treatment to the final stage of producing battery-grade materials. It provides LiTHOS with a secure framework for commercializing our AcQUA™ and TIERRA™ technologies, and for partnering with other DLE innovators to meet growing lithium demands sustainably."

Broad Patent Coverage Across All Stages of Lithium Extraction and Refinement

The patent's coverage across all five extraction stages enhances LiTHOS's flexibility to implement a full carbonate or hydroxide refinery and allows for integration with multiple DLE approaches. This adaptability is crucial for:

- **Pre-Treatment:** LiTHOS's AcQUA™ technology allows for the effective removal of impurities like magnesium, calcium, and boron, preparing brine for optimal lithium recovery.
- **Lithium Concentration and Refinement:** The patent protects the electro-pressure membrane process that drives lithium concentration, laying the groundwork for efficient downstream conversion to high-purity Lithium Carbonate or Lithium Hydroxide.
- **DLE Integration:** AcQUA™ can work with various DLE techniques, including absorption, solvent extraction, and electrodialysis, giving LiTHOS and its partners the flexibility to adopt the most suitable extraction technology.
- **Post-Treatment and Re-Injection:** TIERRA™ technology addresses the challenge of responsible brine management by conditioning spent brine for re-injection, reducing freshwater requirements and aligning with environmental best practices.

Strengthened IP Enables Market Expansion and Strategic Partnerships

With this foundational patent, LiTHOS is positioned to accelerate commercial opportunities, offering:

- **Strategic Licensing & Partnerships:** The patent opens the door to new collaborations with lithium producers and refiners seeking flexible, scalable solutions for battery-grade lithium.
- **Full Operational Control:** Securing all steps in the lithium extraction process protects LiTHOS's ability to operate independently or with industry partners in both refining and DLE stages, a critical factor in meeting industry demands.

Validated Technology and Industry Collaborations

- **Technology Validation with SQM:** In collaboration with Sociedad Química y Minera de Chile (SQM), AcQUA™ demonstrated high-purity lithium recovery and the removal of challenging impurities, positioning it as a viable choice for major lithium producers.
- **Partnerships with Leading Companies:** LiTHOS is actively engaged with global firms in the specialty chemicals and mining sectors, where AcQUA™ and TIERRA™ technologies are being evaluated for large-scale applications.

Sustainable Innovation in Lithium Extraction

LiTHOS's AcQUA™ technology combines an electro-pressure membrane process that concentrates lithium efficiently without requiring fresh water or harmful chemicals. TIERRA™ complements this by providing a closed-loop solution that re-injects conditioned brine, reducing the environmental impact and supporting long-term water conservation. Together, these technologies align with the industry's push for sustainable extraction and refining practices.

This patent solidifies LiTHOS's standing in the lithium sector by enabling a fully adaptable lithium refining model, setting the stage for further innovation and partnerships that support the industry's need for flexible, sustainable lithium solutions.

About LiTHOS

Lithos Group Ltd. is a mining technology company focused on selective extraction of aqueous minerals. The Company's AcQUA™ technology allows lithium to be extracted from continental brine reservoirs without the need for additional freshwater or any added chemicals or reagents. Lithium is now among the world's most in-demand metals as the world "electrifies" to reduce CO₂ emissions, led by continuing growth in EV sales and the installation of hundreds of gigawatts of intermittent solar power generation capacity requiring partial battery storage solutions.

The Company's mission is to produce sustainable lithium without evaporation ponds. AcQUA™ is LiTHOS's patent-pending technology that spans the complete value chain from the conditioning and pre-treatment of raw brines through the DLE phase into the polishing and purification of battery-grade lithium feedstock. LiTHOS has two processing facilities: a 4,000 sq ft lab in Denver, CO, and a 55,000 sq ft complex in Bessemer, AL.

LiTHOS is working with multiple strategic mineral resource owners, including brines from the largest Salars in Chile and Argentina and the Smackover reservoir in the Southeastern United States. Our wholly-owned subsidiary, Aqueous Resources LLC, is a US Department of Energy grant awardee and a Colorado Advanced Industries grant awardee. For more information, please get in touch with LiTHOS Investor Relations at 1-877-LITHOS1 / 1-877-548-4671 or via email at info@lithostechnology.com.

Stay up-to-date on LiTHOS developments by joining our online communities through [LinkedIn](#) and [X](#)

ON BEHALF OF THE BOARD

Scott Taylor - CEO

Forward-Looking Statements: *This news release contains certain forward-looking statements within the meaning of Canadian securities legislation, including with respect to: the plans of the Company; the proposed use of funds of the Second Tranche; and statements relating to the closing of additional tranches of the offering. Although the Company believes that such statements are reasonable, it can give no assurance that such expectations will prove to be correct. Forward-looking statements are statements that are not historical facts; they are generally, but not always, identified by the words "expects," "plans," "anticipates," "believes," "intends," "estimates," "projects," "aims," "potential," "goal," "objective," "prospective," and similar expressions, or that events or conditions "will," "would," "may," "can," "could" or "should" occur, or are those statements, which, by their nature, refer to future events. The Company cautions that forward-looking statements are based on the beliefs, estimates and opinions of the Company's management on the date the statements are made and involve several risks and uncertainties, including additional tranches of the offering may not close on the terms announced or at all; that the Company may use the proceeds of the Second Tranche for purposes other than those disclosed in this news release; adverse market conditions; and other factors beyond the control of the Company. Consequently, there can be no assurances that such statements will prove to be accurate, and that actual results and future events could differ materially from those anticipated in such statements.*

Important factors that could cause future results to differ materially from those anticipated in these forward-looking statements include: limited operating history; research and development activities; effect of general economic and political conditions; and other risk factors set forth in the Company's public filings which are available on SEDAR+ at www.sedarplus.ca. Accordingly, the reader is urged to refer to the Company's such filings for a more complete discussion of such risk factors and their potential effects. Except to the extent required by applicable securities laws and the policies of Cboe Canada Inc., the Company undertakes no obligation to update these forward-looking statements if management's beliefs, estimates or opinions, or other factors should change.

View original content to download multimedia:

<https://www.prnewswire.com/news-releases/lithos-secures-us-patent-paving-the-way-for-complete-lithium-refinery-operations-with-broad-direct-lithium-extraction-d>

SOURCE Lithos Group Ltd.

View original content to download multimedia: <http://www.newswire.ca/en/releases/archive/October2024/28/c8426.html>

%SEDAR: 00031668E

For further information: For more information, please contact: LITHOS Investor Relations Contact: 1-877-LITHOS1 / 1-877-548-4671, info@lithostechology.com

CO: Lithos Group Ltd.

CNW 07:00e 28-OCT-24