

LithiumBank Signs MoU With ZS2 Technologies to Capture and Permanently Sequester CO₂ and Co-Produce Magnesium and Calcium From Boardwalk Brine

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CALGARY, April 13, 2023 - [LithiumBank Resources Corp.](#) (TSX-V: LBNK) (OTCQX: LBNKF) ("LithiumBank" or the "Company") is pleased to announce it has signed a Memorandum of Understanding ("MoU") with ZS2 Technologies Inc. ("ZS2"). The MoU will enable ZS2 to deploy their proprietary and patented CO₂ Direct-Air-Capture ("DAC") technology to capture carbon dioxide emissions from the Boardwalk and Park Place projects in central Alberta, Canada. ZS2 will also further process treated brine to collect magnesium (Mg) and calcium (Ca) for use in their proprietary magnesium cement products.

Highlights

- Potential to capture and permanently sequester 100% of CO₂ emissions produced from LithiumBank's onsite power facility at Boardwalk
- ZS2 will co-produce magnesium and calcium onsite in a future integrated processing facility from treated brine after the lithium has been removed
- ZS2 will permanently sequester CO₂ emissions in magnesium and calcium carbonates (MgCO₃ & CaCO₃) that will be used in their proprietary magnesium cement products
- The ZS2 processing facility will generate acid and base biproducts that can cost effectively be used in the Company's lithium processing plant at Boardwalk
- The Mg and Ca stripping will consume treated brine and has the potential to reduce reinjection requirements by at least 10%

"In our view, partnering with the extraordinary team at ZS2 is truly a game-changer in the lithium brine industry," commented Paul Matysek, Executive Chairman, LithiumBank. "The potential to be a carbon neutral lithium producer in Alberta has been a goal of the Company from the outset and we now have a line of sight to achieving our goal. We are very excited to collaborate with ZS2 Technologies and enhance the economic and environmental benefits of our Alberta brine projects. Beyond just the value of carbon capture, we will be able to co-produce other critical minerals like magnesium as well as reducing our brine reinjection requirements. Our agreement will allow ZS2 to produce a high demand, low-carbon cement product among other by-products that can be used in our lithium processing facility further reducing our operating costs. We look forward to expanding and enhancing our partnership as we move towards a carbon neutral combined lithium-magnesium-calcium commercial production facility that will set LithiumBank apart from its peers."

The MoU is a mutually beneficial agreement where LithiumBank will:

- Supply approximately 25,000 cubic metres of brine annually from the Boardwalk Lithium Brine Project (or Park Place), during production, that would otherwise be re-injected back into the reservoir
- Supply direct source CO₂ from the proposed power generation facility
- Share a portion of carbon credits generated from carbon capture and sequestration
- Support piloting phase of Mg & Ca extraction system through to commercial production
- Support warehouse and in-field piloting of the Mg & Ca extraction
- Explore joint funding opportunities

And ZS2 Technologies will:

- Implement their CO₂ technology on site to capture CO₂ emissions directly from the onsite power generation facility
- Receive 25,000 cubic metres annually of Mg-Ca rich brine for the purpose of permanently sequestering the captured CO₂ emissions and producing magnesium and calcium carbonate (MgCO₃ & CaCO₃) cement building products

- Work with LithiumBank engineering to design and build an 'add-on' Mg and Ca extraction plant as part of the Lithium extraction plant footprint
- Explore joint funding opportunities

"This is an exciting partnership between two leading companies in the emerging cleantech industry in Alberta," Scott Jenkins, CEO and Co-Founder at ZS2 Technologies, said. "It's clear demonstration of how we can solve the world's biggest problems using the talent and resources that are abundant in our province. Working together to combine lithium extraction for green energy along with magnesium and calcium for carbon-neutral cement is a big step forward in diversifying our economy and supplying the materials the world needs."

About ZS2 Technologies Inc.

ZS2 Technologies Ltd. has developed innovative and proprietary cement products based on magnesium which are safer, healthier, stronger, more resilient, and sustainable as compared to conventional building products, materials, and coatings. ZS2 Technologies has also developed a proprietary and patented CO₂ DAC technology complimentary to its precast cement product production. ZS2 has established strategic and exclusive supply agreements with key partners and wishes to accelerate the commercialization of its Made-In-Canada suite of low carbon magnesium cement products. ZS2 seeks partners like LithiumBank to provide high quality magnesium and calcium from high salinity water sources in Western Canada. Further, ZS2's proprietary CO₂ capture technology is both suited for direct air capture DAC and point source capture in combination with the collection of magnesium, calcium and high-salinity brines at point source.

About Boardwalk Lithium Brine Project

The Boardwalk Project is located in west-central Alberta, approximately 85 km east of the City of Grande Prairie and 270 km northwest of the City of Edmonton (see Figure 2). The Project consists of 30 contiguous Alberta Metallic and Industrial Mineral permits covering an area of 572,237 acres. Boardwalk is covered by 100% Crown mineral rights and has no current operating oil and gas producers in the Leduc Formation. Highlights at Boardwalk in 2022 include:

- Completed hydrogeological studies of the Boardwalk reservoir that showed the 'Production Zone' within the Leduc Formation is capable of providing consistent, high volume brine production over a 20-year period. Of particular note, the Production Zone accounts for only 10% of the Leduc Formation by volume at Boardwalk.
- Results from DLE test work completed by Conductive Energy Inc. indicate that it was highly effective and scalable for extracting lithium chloride ("LiCl") from the Boardwalk brine.
- Highlights of this testing includes:
 - 93% Lithium Chloride ("LiCl") recovery achieved in under 60 minutes of extraction processing.
 - High purity lithium concentrates were achieved between 2,500 - 4,000 mg/L; and
 - DLE increased the lithium concentration of samples between 35-60 times over feed grade.
- LithiumBank announced the first brine project in Canada to include indicated mineral resources of 393,000 tonnes of Lithium Carbonate Equivalent ("LCE") at a grade of 71.6 mg/L and 5,808,000 tonnes of Inferred LCE at 68.0 mg/L lithium¹.
- A Preliminary Economic Assessment being led by Hatch is well underway and is expected to be completed in the near term.

The scientific and technical disclosure in this news release has been reviewed and approved by Mr. Kevin Piepgrass (Chief Operations Officer, [LithiumBank Resources Corp.](#)), who is a Member of the Association of Professional Engineers and Geoscientists of the Province of British Columbia (APEGBC) and is a Qualified Person (QP) for the purposes of National Instrument 43-101. Mr. Piepgrass consents to the inclusion of the data in the form and context in which it appears.

About LithiumBank Resources Corp.

[LithiumBank Resources Corp.](#) is a development company focused on lithium-enriched brine projects in Western Canada where low-carbon-impact, rapid DLE technology can be deployed. LithiumBank currently holds over 3.6 million acres of mineral titles, 3.33M acres in Alberta and 336k acres in Saskatchewan. LithiumBank's mineral titles are strategically positioned over known reservoirs that provide a unique combination of scale, grade and exceptional flow rates that are necessary for a large-scale direct brine lithium production. LithiumBank is advancing and de-risking several projects in parallel of the Boardwalk Lithium Brine Project.

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Cautionary Statement Regarding Forward Looking Statements

This release includes certain statements and information that may constitute forward-looking information within the meaning of applicable Canadian securities laws. All statements in this news release, other than statements of historical facts, including statements regarding future estimates, plans, objectives, timing, assumptions or expectations of future performance, including without limitation: that ZS2's DAC technology will capture carbon dioxide emissions from the Company's Boardwalk and Park Place projects, that the Company and ZS2 will construct an integrated processing facility to utilize treated brine following lithium removal and that the acid and base biproducts from such processing facility can be used in a cost-effective manner at the Company's Boardwalk project, potential reduction in reinjection requirements and the scale of that reduction, that the MoU will have a positive impact on the Company's operating costs and that the Company can operate a carbon neutral combined lithium-magnesium-calcium commercial production facility are forward-looking statements and contain forward-looking information. Generally, forward-looking statements and information can be identified by the use of forward-looking terminology such as "intends" or "anticipates", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "should" or "would" or occur. Forward-looking statements are based on certain material assumptions and analysis made by the Company and the opinions and estimates of management as of the date of this press release, including that: the partnership with ZS2 will allow for a reduction in carbon dioxide emissions, that the Company and ZS2 will complete construction of a processing facility and that the anticipated benefits of such facility are realized, the MoU and processing facility will create positive economic and environmental benefits for the Company's Alberta brine projects, and that construction of the processing facility and use of the processing biproducts can be done on a cost-effective basis. These forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking statements or forward-looking information. Important factors that may cause actual results to vary, include, without limitation, that: the partnership with ZS2 does not allow for a reduction in carbon dioxide emissions, that the Company and ZS2 fail to complete construction of a processing facility or that the anticipated benefits of such facility are not realized, that the MoU and processing facility fail to create positive economic and environmental benefits for the Company's Alberta brine projects, and that construction of the processing facility and use of the processing biproducts cannot be done on a cost-effective basis. Although management of the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking statements or forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such 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 and forward-looking information. Readers are cautioned that reliance on such information may not be appropriate for other purposes. The Company does not undertake to update any forward-looking statement, forward-looking information or financial out-look that are incorporated by reference herein, except in accordance with applicable securities laws.

¹ See "NI 43-101 Technical Report - Updated Indicated and Inferred Resource Estimates for [LithiumBank Resources Corp.](#)'s Boardwalk Lithium-Brine Project in West- Central Alberta, Canada. By D. Roy Eccles P. Geol., Jim Touw P. Geol., Egon Linton P. Eng. with an Effective date of 20 December 2022" The report is available on www.sedar.com and the Company's website.

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